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Istanbul University
Faculty of Veterinary Medicine
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Faculty of Veterinary Medicine

SELF EVALUATION REPORT

(STAGE ONE)

for the European Association of Establishments for Veterinary Education

12-16 October 2015
Istanbul

Revised Version
August 2016

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Faculty of Veterinary Medicine

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This report was revised without changing actual content according to the suggestions given by the ECOVA on 11 May 2016.

The revision was made by:

The Dean of the Faculty:
Prof.Dr.Güven Kaşıkçı

Vice Deans:
Prof.Dr.Nuri TURAN
Prof.Dr.Hasret YARDİBİ

The Acreditation committee of the Veterinary Faculty of Istanbul:

Prof.Dr.Hüseyin YILMAZ
Prof.Dr. Mukaddes ÖZCAN
Prof.Dr.Hakan BOZKURT
Prof.Dr.Alper YILMAZ
Prof.Dr.Erman OR
Prof.Dr.Özge ARUN
Prof.Dr.Serkan İKİZ
Doç.Dr.Mustafa AKTAŞ

CONTENTS

LIST OF ABBREVIATIONS

IU	: Istanbul University
FVM	: Faculty of Veterinary Medicine
IU-FVM	: Istanbul University, Faculty of Veterinary Medicine
EU	: European Union
EAEVE	: European Association of Establishments for Veterinary Education
ECTS	: European Credit Transfer System
YÖK	: Council of Higher Education in Turkey (Yüksek Öğretim Kurulu)
CHE	: Council of Higher Education
TUBITAK	: Scientific and Technical Research Council of Turkey (Türkiye Bilimsel ve Teknik Araştırma Kurumu)
ÖSYM	: Centre for the Student Examination and Entrance for the University (Öğrenci Seçme ve Yerleştirme Merkezi)
YGS	: Exam for Enterance to Higher Education in Turkey (Yüksek Öğretime Geçis Sınavı)
LYS	: Exam for Entrance to Bachelor's Degree (Lisans Yerleştirme Sınavı)
KPSS	: Public Personnel Selection Examination (Kamu Personeli Seçme Sınavı)
BAP	: Scientific Research Projects Unit (Bilimsel Araştırma Projeleri)
HCS	: Istanbul University, Department of Health, Culture and Sports
CEC	: Continuous Education Centre
CGPA	: Cumulative Grade Point Averages
SPO	: State Planning Organization
LAC	: Large Animal Clinic
SAC	: Small Animal Clinic
VS	: Veterinary Surgeon
NVS	: Non-Veterinary Surgeon
FTE	: Full-Time Equivalent
MNY	: Minimum Numbers of Years
TIKA	: Turkish Cooperation and Coordination Agency (Türk İşbirliği ve Koordinasyon Ajansı Başkanlığı)
VISAD	: Association of Turkish Animal Health Industry (Veteriner Sağlık Ürünleri Sanayicileri Derneği)

INTRODUCTION

Please provide an outline of the main features of the history of the Faculty in the period since the last evaluation visit or, if there has not been a previous visit, in the last ten (10) years.

It should cover:
−the main organizational changes
−new regulations relating to teaching
−new buildings or major items of equipment
−main changes to the study programme
−important decisions made by the management of the Faculty, or by the authorities responsible for it
−major problems encountered by the Faculty, whether resolved or not

Scientific veterinary medicine education in Turkey has started in 1842 for the first time in Istanbul. The military veterinary academy which was established by the leadership of Prussian Military Veterinarian Godlewsky, took on a responsibility of training veterinarians only for rider cavalry. During that time animal breeding and health were not in a good situation. To improve this, lieutenant-colonel veterinarian Mehmet Ali Bey started working to open a civil veterinary academy again in Istanbul and this academy was finally opened in 1889. The military and civil veterinary academies were united as one academy named High Education Veterinary Academy in 1920 and until 1933 it threw up many students that were built up in Selimiye-Istanbul. This academy in Selimiye was moved to Ankara to establish a new High Agriculture Institute Veterinary Faculty which was going to be opened in 1933.

Veterinary Medicine education in Turkey was started in 1842 in Istanbul and continued for 91 years until 1933. It was then moved to Ankara which is the new capital city of the country. After World War II, increasing population in the country and the need of food originated from animals, alerted new Veterinary Faculties to be opened and therefore Istanbul University, Faculty of Veterinary Medicine started education again in the buildings in Selimiye once more in 1972. Until 1987, Istanbul University, Faculty of Veterinary Medicine kept up its education programme under limited conditions and in the buildings which were in Selimiye. In the end, it was moved to the Istanbul University, Avcılar Campus, in 1987 and also today veterinary medicine education is given in these buildings. Istanbul University, Faculty of Veterinary Medicine has been proud of letting almost 5000 veterinary medicine students to be graduated till present. The Faculty promoted practical and scientific input in education, animal breeding, animal and public health since 1977.

The buildings of the Faculty were seriously damaged in the "Marmara Earthquake", which hit the region on 17 August 1999. Following this catastrophe, all the departments in the main building were moved to clinics for reconstruction and had to carry on with their education and research under difficult conditions until early 2002.

Istanbul University, Faculty of Veterinary Medicine applied to the European Association of Establishments for Veterinary Education (EAEVE) for the accreditation of the Faculty and made modifications in the educational programmes accordingly. After the fulfilment of the necessary minimum conditions in this modification, the Faculty prepared a Self Evaluation Report (SER) and the first visit was held by the EAEVE in 2003. Because the necessary prerequisites and especially the educational programmes were fulfilled for accreditation, the application was accepted, but accreditation could not be completed due to the presence of some suggestions. Deanery made the necessary attempts for the second visit by admitting the fulfilment of the suggestions and this visit was held in March, 2008. At the end of the second visit of the EAEVE delegation to the Faculty on 24-26 March 2008, some deficiencies were specified for the accreditation of the Faculty in the report given on 10 April 2008 and they suggested the elimination of some deficiencies.

These deficiencies were;

- Inadequacy of the number of bovine animal clinical cases,
- Deficiency of the isolation related to bovine animal and quarantine room,
- Inadequacy of autopsy cases.

Positive opinions were submitted on the other improvements for accreditation and the implementation of the integrated educational system after the modification of the old curriculum. However, it was stated in the report that observation of these positive developments and implementations are needed.

After the visit, boxes that belong to different animal species and their infrastructures were renewed completely and quarantine and septic/non-septic areas were formed. Intensive clinical practices are established within the framework of the agreements signed with the Faculty Farm, private farms, crofts in the villages of Istanbul/Çatalca and the Jockey Club of Turkey. Serious improvements were made with the new equipment in the clinics of the Faculty's animal hospital. Emergency clinic was restructured and it continues its activities for 24 hours a day. Night shifts, in which students also participate, are kept regularly.

Regulations regarding the educational programme of the Faculty was renewed and put into practice under the name of integrated system in 2007, and students who began studying in the Faculty in 2007 started their education according to this system. However, the encountered problems, observations and simulations for the following years showed that this system would not be useful, so the old system was adopted in 2009. National and international developments were observed and a decision was made on a new modification for the curriculum by the Faculty Board in 2013. This last modification aimed the self-development of the students in certain tracks through the elective courses. Here, the structure and course hours were maintained for the obligatory courses; courses were moved from one semester to the previous and more practices were added to the last semesters to provide more practice and development.

Besides, elective courses were added in areas where students will orient from the first years onwards, ratios of the elective courses and practices were modified to fulfil the international criteria.

Consequently, significant increases have been achieved in the number of the cases and necropsy of both large animals and pets compared to the previous years after the improvement and reorganization in the clinics and as a result of the regular performance of the mobile clinic. These improvements have made important contributions to the development of the students' manual skills and one-to-one intervention in the clinical cases.

CHAPTER 1

OBJECTIVES

1.1. FACTUAL INFORMATION

Indicate whether there is an official list of the overall objectives of the Faculty.
If this is the case; please indicate these.

- *Who determines the official list of objectives of the Faculty?*
- *By what procedure is this list revised?*
- *Do you have a permanent system for assessing the achievement of the Faculty"s general objectives?*

If so, please describe it.
If there is no official list, please indicate the objectives that guide the Faculty"s operation.

Mission of Istanbul University Faculty of Veterinary Medicine is to train competent and researching veterinary surgeons with contemporary educational principles and produce information and service for the animal and public health with the development of the country's animal husbandry especially in Istanbul and its vicinity, which combines Europe and Asia. Its vision is to become a Faculty which pioneers the areas of research and public service and which is respected and preferred internationally.

Main objectives of the Faculty as an institution are:

- To make the education and teaching compliant to the main standards in the veterinary faculties of the European Union,
- to increase the number of administrative and academic staff member, especially the assisting personnel in the Faculty, and to develop them qualitatively and quantitatively,
- to increase the academic and administrative staff's will to work in a sense of belonging in a healthy, hygienic and safe work environment,
- to improve the Faculty's infrastructure opportunities for education and research and increase its international scientific prestige,
- to increase the input and resources of the Faculty and support the Faculty/campus social life.

Main goals of the Faculty:

- to obtain the accreditation approval of the Commission of Education for National and International Veterinary Medicine and bring the quality of the education up to the EU standards,
- to make the educational and service processes more regular and efficient in the Faculty,

- to strengthen the processes which evaluate and assure the health and environmental safety regularly,
- to achieve the best conditions for the work safety and health precautions in the Faculty,
- to develop the educational infrastructure and the usage of the Faculty farm more effectively for this purpose,
- to increase the number of projects supported by international and national sources and determine the primary research fields,
- to increase the number of the scientific articles published in SCI and/or SCI-expanded journals per academician,
- To develop the infrastructure of the service and research activities,
- to develop/strengthen the related ministry-approved research centre which can conduct animal experiments in compliance with the ethical rules,
- to increase the revolving resources incomes of the Faculty and
- to increase the popularity of the Faculty with the help of social awareness projects (2014 IU-FVM SWOT analysis).

During activities, the SWOT analysis is firstly conducted with the participation of the academic staff, administrative staff, graduates and external partners. Matters discussed in the General Academic Board, Faculty Board and Administrative Board are assessed by the Deanery after the opinions of the relevant commissions are received. If required, the Deanery deals with the execution of the decisions made in the Administrative Board and/or Faculty Board as per the area of interest pursuant to the related laws and regulations. Relationships with the Rectorate are maintained by the Deanery in writing and regular meetings. The Faculty is represented by the Dean in the University Administrative Board and by the Dean and Faculty Senator in the University Senate.

1.2. COMMENTS

In your view, to what extent are the objectives achieved?
What, in your view, are the main strengths and weaknesses of the Faculty?

We continue making an effort to make the education compliant to the main standards at the veterinary faculties of the European Union. At this point, our primary guidance comes from the EAEVE criteria. No serious problems are faced about the demands of the academic and administrative staff. But we need to increase the number of assisting staff members like laboratory workers, technicians, animal health officers and electricians. Central government and Rectorate are authorized for opening and filling the vacancies.

Significant progress has been achieved for providing a healthy, hygienic and safe work environment on the basis of the recently enacted laws after the infrastructure improvements made within the last 4 years and due to the European Union Acquits. The necessary procedures are carried out by the “Biosafety and Waste Commission” and “Occupational Health and Safety Board”.

The Faculty ranks at the top in Turkey in terms of the international scientific studies. Serious improvements have been achieved in the educational, training and research infrastructure opportunities of the Faculty over the last 6 years. No important changes has been made on the infrastructures of the Faculty and the campus. But inputs and sources of the Faculty have been increased.

Strong aspects of the Faculty;

- Being a part of Istanbul University, which is the most deep-rooted University of Turkey,
- Availability of units such as hospital, farm, slaughterhouse, blood and semen banks, cloning laboratory and osteo-archaeology museum, presence of qualified human resources and strong infrastructures in these units,
- Success of the conducted researches and service activities,
- Presence of large and sufficient physical capacity and the area appropriate for expansion,
- Having young, dynamic and powerful academic staff,
- Ranking within the hospital status of the clinics, appropriate infrastructure and equipment,
- Regular national and international scientific meetings attended by students and academic staff every year,
- Extensity of the opportunities to access the international publications, databases and libraries electronically.

Weak aspects of the Faculty;

- Some bureaucracy which results in delay of utilising the money in the budget allocated for the Faculty,
- Lack of number of technical staff members,
- A closer cooperation with the private cattle farms in the Thrace Region needs to be improved,
- Insufficient coordination between departments involving multidisciplinary studies during education and research,
- Less participation in international projects,
- Implementation of defined authorities and responsibilities with some inadequacy of internal control mechanisms
- Insufficient importance given to the in-service trainings
  (2014 IU-FVM SWOT analysis).

We carry on our efforts to obtain the accreditation approval of the Commission of Education for National and International Veterinary Medicine and bring the quality of the education up to the EU standards. For this purpose, the Commission of Accreditation, which was chaired by the Vice Dean, was established in 2009 and all the procedures, deficiency elimination activities and observation activities are held by this commission and its sub-commissions. The laboratories have been licensed, infrastructure work has been completed, revolving resources automation record system has been put into practice after a complete renewal, electronic document administration system has been initiated, the number of our vehicles has been increased, and although partially, academicians, who

attend the student practices and service activities, have been supported financially to make the educational and service processes more regular and efficient in the Faculty.

1.3. SUGGESTIONS

If you are not satisfied with the situation, please list your suggestions for change in order of importance and describe any factors which are limiting the further development of the Faculty.

An additional budget should be set aside in case of emergency needs.

CHAPTER 2

ORGANISATION

2.1. FACTUAL INFORMATION

Details of the Faculty:

Name of the University and Faculty: **Istanbul University, Faculty of Veterinary Medicine (İstanbul Üniversitesi Veteriner Fakültesi)**

Address: İstanbul Üniversitesi
Avcılar Kampüsü,
Veteriner Fakültesi Dekanlığı,
34320 Avcılar / İstanbul-TURKEY

Office:	*Telephone number:*	*Fax number:*	*E-mail address:*
Dean	+90 212 473 72 01	+90 212 473 72 40	ivfdek@istanbul.edu.tr
Vice Deans	+90 212 473 72 03	+90 212 473 72 41	vetdekyrd@istanbul.edu.tr
Secretaryship	+90 212 473 72 05	+90 212 473 72 41	vetfaksek@istanbul.edu.tr
WEB	http://veteriner.istanbul.edu.tr/		

Title and name of head of the Faculty: **Prof.Dr. Halil GÜNEŞ (Dean)**

Is the Faculty within a University? If so, please give address of the University.

Address: ISTANBUL UNIVERSITY RECTORATE
İstanbul Üniversitesi, Beyazıt Merkez Kampüsü
34452 Beyazıt, Fatih / İstanbul – TURKEY
Telephone and Fax: +90 212 440 00 00 and +90 212 440 00 10
WEB and E-mail: *www.istanbul.edu.tr and* iubilgi@istanbul.edu.tr

- Details of the competent authority overseeing the Faculty.

Address: Yükseköğretim Kurulu Başkanlığı (YÖK)
(Council of Higher Education in Turkey)
06539 Bilkent/Ankara-TURKEY
E-Mail: webadmin@yok.gov.tr
Telephone and Fax: +90 312 298 70 00 and +90 312 266 47 59

Indicate the rules concerning the appointment of the elected officials of the Faculty (Dean, Vice Dean, Heads of Department, etc.)

Rector of Istanbul University:	Prof.Dr. Mahmut AK
Dean of Faculty of Veterinary Medicine:	Prof.Dr. Halil GÜNEŞ
Vice Dean:	Prof.Dr. Kemal AK
Vice Dean:	Prof.Dr. İsmail KIRŞAN
Faculty Senator:	Prof.Dr. Seyyal AK
Faculty General Secretary:	Emine HALAÇ

Faculty Board:

Dean:	Prof.Dr. Halil GÜNEŞ
Director of the Vocational School of Veterinary Medicine:	Prof.Dr. Güven KAŞIKÇI
Head of Divisions:	
Basic Sciences:	Prof.Dr. Vedat ONAR
Clinical Sciences	Prof.Dr. M. Ragıp KILIÇASLAN
Preclinical Sciences	Prof.Dr. Seyyal AK
Food Hygiene and Technology	Prof.Dr. Özer ERGÜN
Animal Nutrition and Breeding	Prof.Dr. Ahmet ALTINEL
Professor Members:	Prof.Dr. M. Erman OR Prof.Dr. İbrahim FIRAT Prof.Dr. Vedat ONAR
Associate Professor Members:	Assoc.Prof.Dr. E. Barış BİNGÖL Assoc.Prof.Dr. Tolga KAHRAMAN
Assistant Professor Member:	Assist.Prof.Dr.Dr. Altan ARMUTAK
Research Assistant Representative:	Res.Assist.Dr. Murat KARABAĞLI
Faculty General Secretary (Reporter):	Emine HALAÇ
Student representative:	M. Eyüp DEMİR

Faculty Administrative Board:

Dean:	Prof.Dr. Halil GÜNEŞ
Professor Members:	Prof.Dr. Kemal AK Prof.Dr. Harun AKSU Prof.Dr. Çağatay TEK
Associate Professor Members:	Assoc.Prof.Dr. Gülsün PAZVANT Assoc.Prof.Dr. Feraye Esen GÜRSEL
Assistant Professor Member:	Assist.Prof.Dr. Gülbin SENNAZLI
Research Assistant Representative:	Res.Assist.Dr. Murat KARABAĞLI
Faculty General Secretary (Reporter):	Emine HALAÇ

Divisions and Departments Connected to the Faculty:

Divisions:

Departments:	***Heads:***
Basic Sciences:	Prof.Dr. Vedat ONAR
• Anatomy	Prof.Dr. Oya K. KAHVECIOĞLU
• Histology and Embryology	Prof.Dr. Hakan BOZKURT
• Biochemistry	Prof.Dr. Kemal Özdem ÖZTABAK
• Physiology	Prof.Dr. Murat ARSLAN
• Deontology	Assist.Prof.Dr.Dr. Altan ARMUTAK
Clinical Sciences:	Prof.Dr. M. Ragıp KILIÇARSLAN
• Obstetrics and Gynecology	Prof.Dr. M. Ragıp KILIÇARSLAN
• Surgery	Prof.Dr. Serhat ÖZSOY
• Internal Medicine	Prof.Dr. M. Erman OR
• Reproduction and Artificial Insemination	Prof.Dr. Kemal AK
Preclinical Sciences:	Prof.Dr. Seyyal AK
• Microbiology	Prof.Dr. Seyyal AK
• Virology	Prof.Dr. Hüseyin YILMAZ
• Pharmacology	Prof.Dr. Murat YILDIRIM
• Parasitology	Prof.Dr. Cem VURUŞANER
• Pathology	Prof.Dr. S. Seçkin ARUN
Food Hygiene and Technology:	Prof.Dr. Özer ERGÜN
• Food Hygiene and Technology	Prof.Dr. Özer ERGÜN
Animal Nutrition and Breeding:	Prof.Dr. Ahmet ALTINEL
• Animal Nutrition and Nutritional Diseases	Prof.Dr. Tanay BILAL
• Animal Breeding and Husbandry	Prof.Dr. Hıdır DEMIR

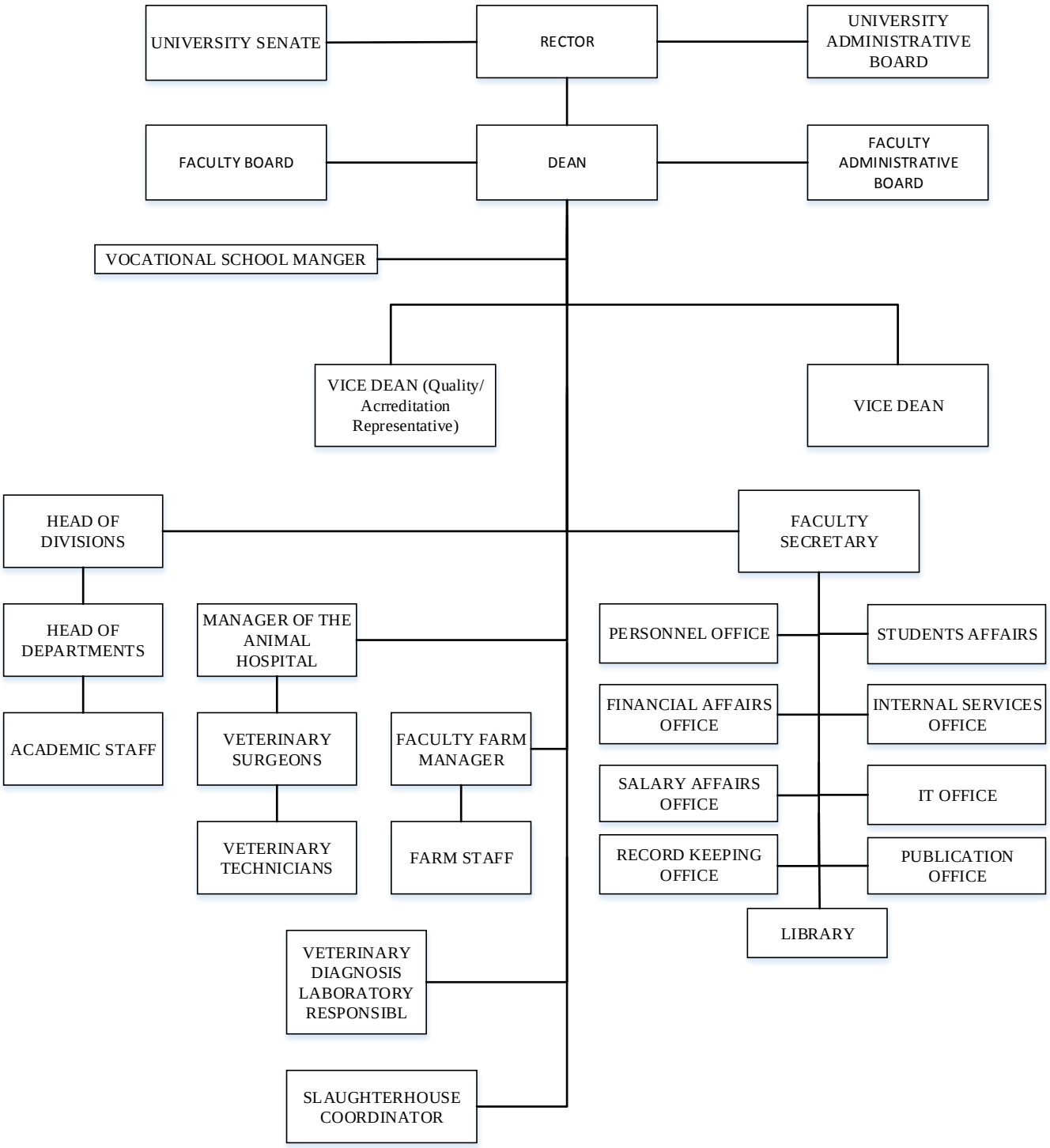
Units Connected to the Faculty:

- Education and Research Hospital
  General Surgeon: Prof. Dr. M. Ragıp KILIÇARSLAN
- Veterinary Diagnosis and Analysis Laboratories
  Responsible: Dr. Beren BAŞARAN KAHRAMAN
- Slaughterhouse
  Coordinator: Prof.Dr. Ömer ÇETIN
- Education and Research Farm
  Manager: Veterinary Surgeon Hüseyin HÜSEYIN

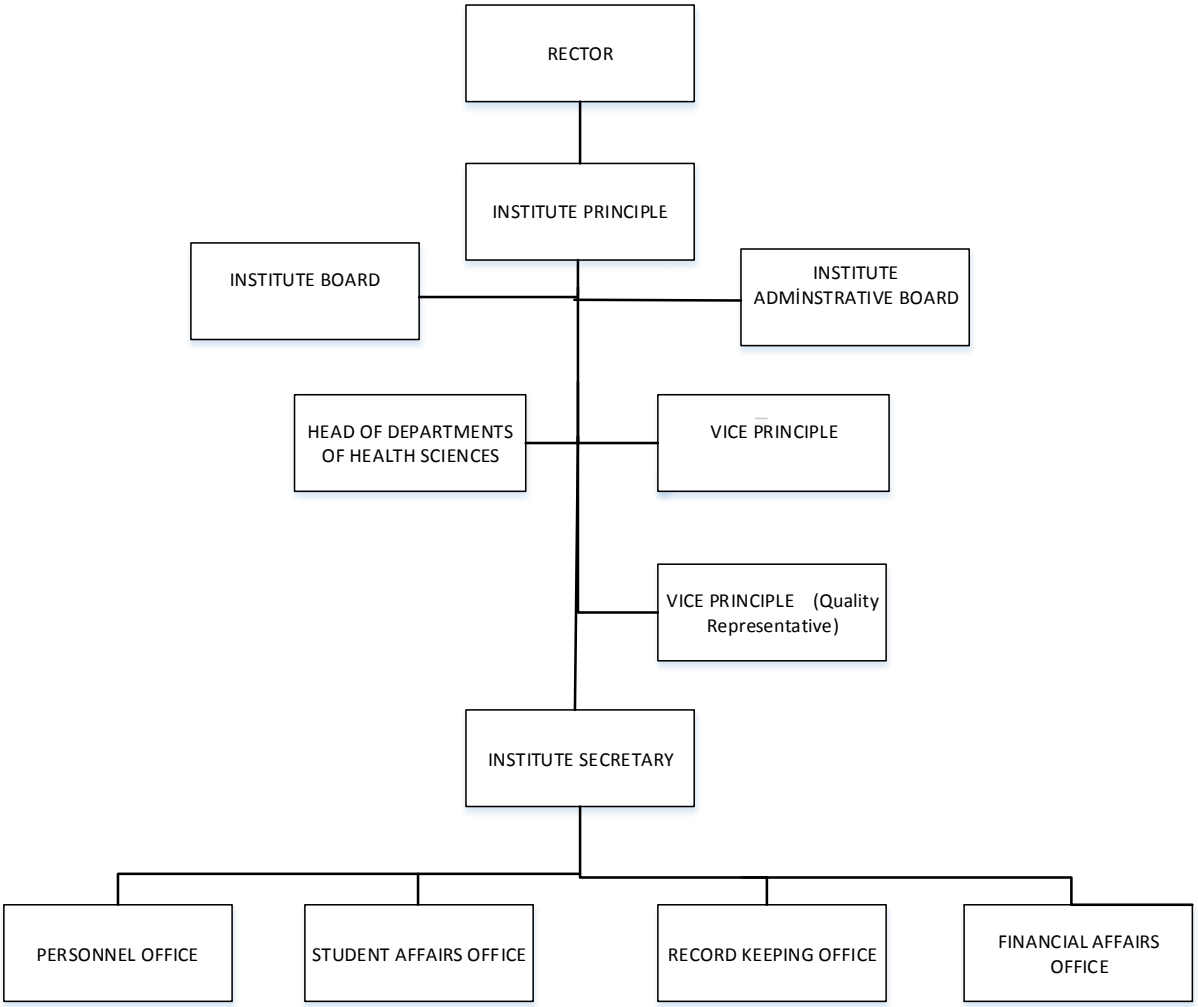
Provide a diagram of the administrative structures showing the Faculty in relation to the University and ministerial structure of which it is part.

Provide a diagram of the internal administrative structure of the Faculty itself (councils, committees, departments, etc.).

ORGANIZATIONAL SCHEME OF ISTANBUL UNIVERSITY FACULTY OF VETERINARY MEDICINE



ORGANIZATIONAL SCHEME OF HEALTH SCIENCE INSTITUTE OF ISTANBUL UNIVERSITY



Describe briefly the responsibilities, constitution and function of the main administrative bodies (councils, committees etc.)

***Rector**:*

All the academic personnel of the University, votes within regard to the invitation of the rector and determine six candidate rectors. The Council of Higher Education offers three of the candidate rectors to the President of Republic of Turkey. The President appoints one of these three candidates as the rector. Term of office of the rectors, who represent the legal entity of the University, is four years.

Duty, authority and responsibilities of the Rector:

- To chair the University boards,
- To implement the decisions of the Council of Higher Education (YÖK),
- To evaluate the suggestions of the University boards and make the final decision,
- To enable regular work between the establishments connected to the University,
- To inform the Turkish Inter-University Board about the educational scientific research and publication activities of the University at the end of each academic year and when required,
- To prepare the investment programmes, budget and vacancy needs of the University and submit them to the Council of Higher Education after receiving the opinions and suggestions of the connected units, University administrative board and senate,
- To change the work places of the academicians and the other staff who work in the establishments and units that comprise the University when necessary or to give them new duties,
- To maintain his/her duty of general observation and inspection on the units of the University and the staff at every level,
- To perform the other duties given by the laws and regulations.

The Rector is authorized and responsible at the first level for the rational use and development of the teaching capacity of the University and the connected units, providing the students with the necessary social services, taking the security precautions when needed, planning and execution of the education, scientific research and publication activities in line with the state's development plan and goals, scientific and administrative observation and inspection and transferring these duties to the subunits.

***Senate**:*

It consists of the vice rectors, Deans and one academician selected from each Faculty and managers of institutes and academies, which are connected to the Rectorate, under the presidency of the rectors. Senate meets at least twice a year; at the beginning and end of each academic year. The Rector invites the senate for further meetings when necessary. Senate is the academic organ of the University and performs the duties below.

Duties of the Senate:

- To make a decision of the principles of the University's education, scientific research and publication activities,
- To prepare the drafts of the laws and regulations which concern the whole University or to submit an opinion,
- To prepare the regulations which are related to the University or it's units to be published in the Official Gazette and come into force after the approval of the rector,
- To evaluate the annual academic programme and calendar of the University and make decisions on them,
- To give honorary academic titles independently from any examination and make decisions on the suggestions of the Faculty boards for this matter,
- To evaluate the objections to the decisions of the Faculty boards, institute and academy boards connected to the Rectorate and make decisions on them,
- To select members of the University administrative board.

***University Administrative Board**:*

It consists of Deans and three professors, who are elected for four years by the senate, under the presidency of the rector. The Rector invites the administrative board for meeting when needed. University administrative board is an organ that helps the rector for administrative activities and performs the duties below:

Duties of the University Administrative Board:

- To assist the rector in line with the plans and programmes determined within the implementation of the decisions of the higher education supreme establishments and the senate,
- To enable the implementation of the activity plans and programmes, examine t he investment programme and the budgetary draft considering the suggestions of the units connected to the University and submit them to the Rectorate together with their own suggestions,
- To make decisions on the matters proposed by the rector in relation to the University administration.

Dean and Vice Deans:

The Dean, who is the representative of the Faculty and its units, is elected by the Council of Higher Education among three professors suggested by the rector inside or outside the University for three years. T h e Dean elects maximum two people among the salaried academicians of the Faculty to assist him/her for his/her own activities. When the duty of the Dean is over the duties of the vice Deans are also cancelled.

Duty, authority and responsibilities of the Dean:

- To chair the Faculty boards,
- To implement the decisions of the Faculty boards,

- To enable regular work between the Faculty units,
- To report the general status of the Faculty and its progress to the rector at the end of each educational year and when requested,
- To inform the Rectorate about the appropriation and vacancy needs of the Faculty together with their justifications,
- To submit the suggestion related to the Faculty budget to the Rectorate after learning the opinion of the Faculty administrative board,
- To maintain the duty of general observation and inspection on the units of the Faculty and the staff at every level.

The Dean is responsible to the rector at the first degree for the rational use and development of the teaching capacity of the Faculty and the connected units, taking the security precautions when needed, providing the students with the necessary social services, regular execution of the education, scientific research and publication activities, observation and inspection of all the activities, their follow-up and control and obtaining their results.

Faculty Board:

Faculty Board under the presidency of the Dean, consists of the heads of the divisions of the Faculty, academy managers connected to the Faculty, three academicians elected by the professors among themselves, two academicians elected by the associate professors and one academician elected by the assistant professors. Faculty board holds its ordinary meetings at the beginning and end of each semester. The Dean invites the Faculty board for further meetings when necessary.

Duties of the Faculty Board: Faculty board is an academic organ and performs the duties below:

- To discuss the education, scientific research and service activities of the Faculty and make decisions,
- To elect members for the Faculty administrative board,
- To perform the other duties given by the laws and regulations.

Faculty Administrative Board:

Faculty administrative board consists of three professors, two associate professors and one assistant professor who are elected by the Faculty board for three years under the presidency of the Dean. Faculty Administrative Board is gathered upon the Dean's invitation. Administrative board can establish temporary working groups and educational coordinators when necessary and regulates their duties.

Duties of the Faculty Administrative Board: University administrative board is an organ that assists the Dean for administrative activities and performs the duties below:

- To assist the Dean for the implementation of the principles specified in regard to the decisions of the Faculty Board,
- To enable the implementation of the education, plans and programmes and academic calendar of the Faculty,

- To prepare the investment, programme and budgetary draft of the Faculty,
- To make decisions on all the tasks revealed by the Dean with respect to the Faculty administration,
- To make decisions on the admission of the students, course orientations and exclusion and procedures related to education and exams,
- To perform the other duties given by the laws and regulations.

Divisions of the Faculty and Head of Division:

Heads of Departments who constitute the division submit the suggestion for the candidate head of division to the Dean. The Dean considers the written opinions and appoints the Head of Division. Divisions are the units which conduct researches and implementations of Departments. Head of Division inspects all the activities of the Departments and informs the Dean. Head of Division is also the member of the Faculty Academic Board. Term of duty is 3 years.

Departments of the Division and Head of Department:

It consists of the Departments, Department board and heads of Departments. Department board elects the Head of Department and submits its opinion about the planning and implementation of the department programmes to the head of department. Head of Department coordinates and inspects the educational, research and service activities within the department. Term of duty is 3 years.

Boards formed by the Dean or Faculty Administrative Board:

Commission:	**Task:**
Clinical Practices Evaluation and Observation in Pets: Prof.Dr. Erman OR (Head) Prof.Dr. Alper BARAN Prof.Dr. Utku BAKIREL Dr. Seval TOYDEMİR Dr. Didar AYDIN Dr. Lora KOENHEMSİ Dr. Banu DOKUZEYLÜL	To observe the clinical practice activities and number of sick animals in pets and inform the Deanery.
Clinical Practices Evaluation and Observation in Farm Animals: Prof.Dr. Serhat ÖZSOY (Head) Assoc.Prof.Dr. Abdullah KAYAR Assoc.Prof.Dr. Kamber DEMİR Dr. Özge TURNA YILMAZ Res.Assist. Ümit UĞURLU	To observe the clinical practice activities and number of sick animals in Farm Animals and inform the Deanery.

Clinical Practices Evaluation and Observation in Equines: Prof.Dr. M. Ragıp KILIÇARSLAN (Head) Assoc.Prof.Dr. Dilek OLGUN Dr. Sinem ÜLGEN Dr. Gamze EVKURAN DAL	To observe the clinical practice activities and number of sick animals in Equines and inform the Deanery.
Satisfaction Assessment from Service Processes: Assist.Prof.Dr.Dr. Altan ARMUTAK (Head) Assoc.Prof.Dr. Sinem Ö. ENGİNLER Dr. H. Can KUTAY Dr. Banu DOKUZEYLÜL Dr. Murat KARABAĞLI Dr. Özge ERDOĞAN Dr. Baran ÇELİK Res.Assist. Ozan GÜNDEMİR	To assess the customer satisfaction for people who receive service from the Faculty Hospital, laboratories etc.
Satisfaction Assessment from Educational Processes: Prof.Dr. Mithat EVECEN (Head) Prof.Dr. İsmail ABAŞ Prof.Dr. Ömer ÇETİN Assoc.Prof.Dr. Gülsün PAZVANT Assoc.Prof.Dr. Meltem ESATGİL Assist.Prof.Dr. Altan ARMUTAK	To evaluate the students' opinions about the infrastructure of the Faculty, courses and academicians.
Faculty Website: Assoc.Prof.Dr. Ömür KOÇAK (Head) Dr. Burak ESENER Dr. H. Can KUTAY Res.Assist. Ozan GÜNDEMİR IT Technician Ali Oğuz CAN	To modify the Website of the Faculty.
Necropsy Practices Evaluation and Observation: Assist.Prof.Dr. Gülbin ŞENNAZLI (Head) Dr. Kıvılcım SÖNMEZ Dr. Damla HAKTANIR	To observe the necropsy activities and numbers in all the species and inform the Deanery.
Education and Practice Farm: Prof.Dr. Kemal AK (Head) Prof.Dr. İsmail ABAŞ Prof.Dr. Yalçın DEVECİOĞLU Assoc.Prof.Dr. Ömür KOÇAK Assoc.Prof.Dr. Abdullah KAYAR Assoc.Prof.Dr. Ahmet SABUNCU	To provide consultation for all the issues related to the Faculty farm.

Clinical Practices Evaluation and Observation in Exotic and Wild Animals: Prof.Dr. Serhat ÖZSOY (Head) Dr. DidarAYDIN Dr. Banu DOKUZEYLÜL Dr. Lora KOENHEMSİ	To observe the clinical practice activities in Exotic and Wild Animals and number of sick animals and inform the Deanery.
General Consumables and Laboratory Materials Drug and Medical Materials Examination and Acceptance Assoc.Prof.Dr. Handan ÇETİNKAYA (Head) Assoc.Prof.Dr. İbrahim AKYAZI Dr. Kozet AVANUS Dr. Baran ÇELİK Dr. Gülay Merve BAYRAKAL Dr. Damla HAKTANIR Dr. Seval TOYDEMİR Res.Assist. Ozan GÜNDEMİR Officer Mahmut BAKAN	To examine all the goods including instruments, devices, drugs, consumables etc., which are bought by the Faculty, and accept them if their conditions are convenient.
Service Purchases Examination and Acceptance Assoc.Prof.Dr. Abit AKTAŞ (Head) Assoc.Prof.Dr. Gülsün PAZVANT Dr. Onur KESER Dr. Funda YILMAZ EKER Chief Doğan Zeki ŞEN Officer Şeref CANDEMİR Officer Ayten ULUK	To inspect the service purchase activities for instruments, staff etc. with the tendering procedure.
Direct Supply and Market Research: Prof.Dr. Murat YILDIRIM (Head) Prof.Dr. Yalçın DEVECİOĞLU Prof.Dr. Hilal ÇOLAK Assoc.Prof.Dr. Ömür KOÇAK Dr. H. Can KUTAY Dr. Kerem ÖTER Chief Necip UYGUN Officer Sait TUNCEL	To examine the proposals made within purchase tenders and take charge in tenders.
Approximate Cost and Price Determination: Prof.Dr. Kemal ÖZDEN ÖZTABAK (Head) Assoc.Prof.Dr. Barış BİNGÖL Assoc.Prof.Dr. Feraye ESEN GÜRSEL Dr. Atila ATEŞ Dr. Beren BAŞARAN KAHRAMAN Dr. Kıvılcım SÖNMEZ Officer İlker CARAN	To specify the prices of all the goods such as instruments, devices, drugs, consumables etc., which will be bought by the Faculty.

Control Organization: Assoc.Prof.Dr. Ömür KOÇAK (Head) Res.Assist. Pembe DİLARA AKIN Officer İlker CARAN Technician Salih ALTUN Driver Rıdvan AK Driver Ergin FİLİZ	To inspect whether activities comply with the laws and the concluded contracts in service purchases.
Academic Evaluation and Quality Improvement: Prof. Dr. Kemal AK (Head) Prof. Dr. İsmail KIRŞAN Prof. Dr. Hakan BOZKURT Prof. Dr. Özge ARUN Assoc.Prof. Dr. Serkan İKİZ	Sub-commission connected to the Rectorate. It evaluates the academic activities and informs the Deanery about the solution suggestions.
Evaluating Academic Promotion Applications: Prof. Dr. Halil GÜNEŞ (Head) Prof. Dr. Murat YILDIRIM Prof. Dr. Bülent EKİZ	It pre-examines the activities of the candidates in academic progress and informs the Deanery.
Commission of Accreditation (EAEVE): Prof.Dr. Kemal AK (Head) Prof.Dr. H. Hakan BOZKURT Prof.Dr. Alper YILMAZ Prof.Dr. Erman OR Prof.Dr. Özge ÖZGEN ARUN Prof.Dr. Yalçın DEVECİOĞLU Assoc.Prof.Dr. Serkan İKİZ	To follow and document all the educational processes and inform the Deanery.
Determining Revolving Resources Contribution Amount: Prof.Dr. Kemal AK (Head) Prof.Dr. Bülent EKİZ Officer Sait TUNCEL	To determine the contribution amount which will paid from the revolving resources to the academic staff.
International Academic Relations: Prof.Dr. İsmail KIRŞAN (Head) Prof.Dr. Erman OR Prof.Dr. Serhat ALKAN Prof.Dr. Mustafa HASÖKSÜZ Prof.Dr. Özen Banu ÖZDAŞ	To coordinate the academic relationships between the Faculty of Veterinary Medicine and international faculties.
Publication: Prof.Dr. Kemal AK (Head) Prof.Dr. Alev AKDOĞAN KAYMAZ Prof.Dr. Ali AYDIN Prof.Dr. Bülent EKİZ Assoc.Prof.Dr. Serkan İKİZ	To execute the scientific activities of the books which belong to the Faculty academicians and will be printed with the University's own means; especially the Faculty Journal.

Student Affairs: Prof.Dr. İsmail KIRŞAN (Head) Prof.Dr. Alper YILMAZ Prof.Dr. Funda BAĞCIGİL Prof.Dr. Hasret YARDİBİ Officer Nilüfer GÜZELBAKAN	To execute all the processes related to students.
Education (Bologna Process): Prof.Dr. İsmail KIRŞAN (Head) Prof.Dr. Seyyal AK Prof.Dr. Serhat PABUCCUOĞLU Prof.Dr. Harun AKSU Assist.Prof.Dr.Dr. Altan ARMUTAK	To follow up the educational activities, specify the problems and submit the solution suggestions to the Deanery.
FARABI Exchange Programme: Prof.Dr. İsmail KIRŞAN (Coordinator) Prof.Dr. Serhat PABUCCUOĞLU (Assistant Coordinator) Division Coordinators: Prof.Dr. Vedat ONAR Prof.Dr. Seyyal AK Prof.Dr. Ragıp KILIÇARSLAN Prof.Dr. Özer ERGÜN Prof.Dr. Ahmet ALTINEL	Commission related to student and academician exchanges between the national faculties for a short term.
Additional Course Examination: Prof.Dr. Erman OR (Head) Prof.Dr. İsmail ABAŞ Prof.Dr. Alper BARAN Prof.Dr. Çağatay TEK Prof.Dr. Yalçın DEVECİOĞLU	Commission that examines the courses given by the academicians.
Occupational Health and Safety: Prof.Dr. Kemal AK (Head) Prof.Dr. Murat YILDIRIM Prof.Dr. Mehmet Ragıp KILÇARSLAN Prof.Dr. Hasan Hakan BOZKURT Prof.Dr. Güven KAŞIKÇI Prof.Dr Ömer ÇETİN Faculty General Secretary Emine HALAÇ Vocational School Secretary Mehmet KUŞ DVM Hüseyin Hüseyin Nurcan ERÖZKAN Officer Sait TUNÇEL Officer Ayten ULUK	Commission that determines and implements the rules for the occupational health, risk management, and health and safety culture.

Biosafety and Waste: Prof.Dr. Murat YILDIRIM (Head) Prof.Dr. Nezir Yaşar TOKER Prof.Dr. Funda BAĞCIGİL Prof.Dr. Hilal ÇOLAK Assoc.Prof.Dr. Gülsün PAZVANT Dr. Funda YILDIZ	Commission that determines and implements the rules for the safety of Faculty personnel and disposal procedures of the wastes.
Student Internship: Prof.Dr. İsmail KIRŞAN (Head) *Clinics 1. Group .* Prof.Dr. Çağatay TEK Prof.Dr. Yalçın DEVECİOĞLU *Clinics 2. Group .* Prof.Dr. Erman OR Assoc.Prof. Dr. Serkan İKİZ *Farm .* Prof.Dr. Alper YILMAZ Prof.Dr. İsmail ABAŞ *Food Hygiene .* Prof.Dr. Harun AKSU Prof.Dr. Özge ARUN	Commission that specifies the internship places and conditions.

Indicate the involvement of the veterinary profession and general public in the running of the Faculty.

The Faculty makes significant contributions to the promotion of our profession for the regional public over its widespread efforts in the treatment of animals, both food and companion. Moreover, high school students regularly visit the Faculty and they are provided with pre-information to assist their University preferences in the future. Our research studies like cloning and transgenic animal generation are known and appreciated across the whole country. Our close cooperation continues with the Ministry of Food, Agriculture and Livestock and reporting activities are continuously performed in our licensed laboratories. We work on the treatment of all kind of animals living in the natural environment within the framework of the protocol signed with the Ministry of Environment. Besides, animal treatments are conducted within the scope of the agreements concluded with the Turkish Army and the Police Service. Consultation service is rendered to the hospitals of the Jockey Club of Turkey and student practices are also performed in the club.

A great number of our graduates work as managers, especially in the private sector. Our postgraduate education rank at a high levels in terms of number and quality. The only osteo-archaeology museum of Turkey is in the Faculty; bones, which were found during Marmaray excavations and aged thousands of years, are exhibited here. Our academicians frequently appear in written and visual press for daily topics or information covering their own scientific fields.

2.2. COMMENTS

Add any comments on the organization and functioning of the Faculty that you feel useful for completing the description.

Although the Organisation Chart reflects the Approving Authority as the Rectorate and its administrative board, the Deanery and its administrative boards have autonomy in decisions to a certain extent.

These decisions are as below:

- Determination of the DVM- teaching program
- Adaptation and development of the organisation and curriculum
- Decision making within the allocated budget
- Decision-making within the Faculty for any issue
- Coordination of the departments amongst themselves in terms of use of resources, coordination and integration

2.3. SUGGESTIONS

If you are not satisfied with the situation, please list your suggestions for change in order of importance and describe any factors which are limiting the further development of the Faculty.

CHAPTER 3

FINANCES

3.1. FACTUAL INFORMATION

3.1.1. GENERAL INFORMATION

Indicate whether the Faculty's current financial model (system) meets the Faculty's mission.

In addition please specify:

- *How the allocation of funding (including public funding) to the Faculty is determined, and by what body.*
- *If the allocation of funds, or any significant proportion of it, is linked to a particular factor (e.g. student numbers, research output), please describe this.*
- *How the basis for funding the Faculty compares with those teaching other courses (e.g. whether veterinary training receives a higher budget weighting compared to other disciplines).*
- *How the allocation of funds within the Faculty is decided.*
- *What are the mechanisms for funding major equipment and its replacement?*
- *The mechanism(s) for funding capital expenditure (e.g. building work, major items of equipment) and how decisions are taken in this matter.*
- *The mechanism(s) to provide the necessary support for building maintenance and how decisions*

Monetary resources of our University are summarized as below:

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

a. General Budget:

Expenditures like salaries, electricity, water, heating, course payments, service purchases, device purchases, their maintenance and repair, purchase of instruments and materials for student practices, stationery and cleaning are all paid for from the general budget, which is the main budget of the Faculty. Mission and objectives of the Faculty are updated every 5 years (strategic plan), discussed in the Faculty administrative board and Faculty budget proposals of the coming year are submitted to the Rectorate on the basis of strategic plans. The budget of Istanbul University is constituted by the government considering the expenditures of the faculties and then submitted to the Grand National Assembly of Turkey for approval. The budget from the existing fiscal year remains unchanged but with inflation added.

Divisions and departments have no specific budget. The Faculty budget is run by the Dean's office. For this, heads of the division and departments are invited twice a year to give input covering their short- and long term fiscal needs. In case of a need for emergency spending, the Dean has full autonomy to allocate money to all levels of the faculty.

b. Revolving Resources Budget (Income from services provided):

It is the budget gained from the service activities of the faculties (animal hospital, laboratories, consultation etc.). Expenditures of the Faculty regarding animal feed, car leasing, animal caretakers in contractual staff (service purchase); purchases of instruments, devices, materials; service fees of the devices and their repair; feed purchase; drug purchase etc. are paid from this budget. An important part of the budget gained by the Faculty is allocated to the Faculty use, because it is a budget which can be exert most easily and has the simplest bureaucratic procedures. Any kind of expenditure can be provided from this budget including education.

Five (5) % of the Revolving Resources budget is allocated to the Scientific Research Projects Unit (called BAP) budget and 1 % tax goes to the University of Istanbul. The net revenue from all these activities goes into a common, separate bank account which is managed by the Dean. Any type of expenses can be covered by this Faculty bank account. The Deanery runs this finance.

c. Scientific Research Projects Budget

Internal Fundings:

Internal funding for the Scientific Research Projects budgets of the Faculty, comes from the internally organized budget from the Research Funding of University of Istanbul (BAP). Our academicians utilise the BAP budget to conduct research which is appreciated within the country and abroad.

External Fundings:

An important number of research projects which are funded by the Scientific and Technical Research Council of Turkey (TUBITAK), State Planning Organization (SPO), Ministry of Food, Agriculture and Livestock and the EU Projects, are performed. Additionally, sectors related to Veterinary research area funds the sectorial research projects.

d. The budget of Health, Culture and Sports (HCS) Unit of the University of Istanbul

This is a service unit which fulfils the students' social, cultural, consultation, guidance and sport needs and "conducts implementations and researches" for the purpose of supporting the education. Various needs are fulfilled by the HCS regarding the education and health of the students. Financial support is routinely received for periodical activities such as student club activities (congresses and student transport etc.) and others (instruments, devices, materials etc.).

e. Directorate of Construction and Technical Work budget

It is a directorate that is a part of the University. Expenditures regarding all the new building, repairing, and installation (water, electricity, waste water etc.) activities are provided by the directorate. In the Faculty, approximately 4 million Euros have been spent within this area over the last 6 years. This expenditure is made for strengthening the clinical buildings, laboratories and other units such as isolation.

3.1.2. INFORMATION ON EXTRA INCOME

What percentage of income from the following sources does the veterinary teaching Faculty have to give to other bodies (University, etc.)?
- *clinical or diagnostic work:*
- *research grants:*
- *other (please explain):*
- *please indicate whether students:*
- *pay tuition/registration fees,*
- *how much these are,*
- *how they are decided,*
- *how the funds are distributed.*

No payment is required from the students of the Faculty at any stage of the education. We have no other resources (scholarship etc.) other than the ones stated above (3.1.1). Tax (1%) and BAP (5%) deductions are paid from the incomes of the Faculty's revolving resources.

3.1.3. OVERVIEW OF INCOME (REVENUE) AND EXPENDITURE

Incomes and expenditures of the Faculty are summarized in followed tables. Because of the variable Euro/TL parities, the tables were prepared in TL [1 Euro = 3 TL (29 June 2015)].

Table 3.1. Income / Revenue (TL)

Year	State (Government)		Income generated by the Faculty		Total
	To University administered outside the Faculty	Direct to Faculty	Income from services provided	Research	
2014	16.803.953	176.052	2.471.916	1.049.135	20.501.056
2013	16.604.923	221.657	1.783.382	1.208.676	19.819.638
2012	15.509.058	31.638	1.582.517	946.805	18.070.018

Table 3.2. Expenditures (TL)

Year	Salary	Non Salary				Total
	Salaries	Teaching support	Research support	Clinical support	Other *	
2014	14.169.983	2.597.011	925.135	2.738.838	36.959	20.467.926
2013	12.535.424	4.042.209	1.119.676	995.326	27.290	18.719.925
2012	11.759.206	3.716.609	867.805	1.295.157	33.243	17.672.020

*Travel and remuneration costs

3.2. *COMMENTS*

- *Teaching establishments never have enough finance. Please comment on any of the „Guidelines and Requirements" that are particularly difficult to fulfil in the present financial situation. Please make any comments that you feel would help the experts concerning the Faculty's finances.*
- *What is your number one priority for the use of any increased funding?*
- *Comment on the degree of autonomy and flexibility available to the Faculty in financial matters.*
- *Comment on the percentage of income from services that the Faculty is allowed to retain for its own use, and in particular on the extent to which loss of this income acts as a disincentive for the services concerned.*
- *Please make any other general comments that you feel would help the experts concerning the Faculty's finances.*

The first priority of the Faculty is education. All the foreseeable expenditures can be paid from the general budget. Second priority of the Faculty is the service (revolving resources capital) activities to support the education. All the budgets, especially the BAP can be used efficiently for the research activities. Execution of plans and projects, which require great expenditure, depends directly on the approval of the Rectorate.

3.3. *SUGGESTIONS*

If you are not satisfied with the situation, please list any shortcomings and provide suggestions in order of importance and describe any factors which are limiting the further development of the Faculty.

IU-FVM continuously strives for a better revenue from its resources such as clinics and external laboratory services. Efforts are especially made for more active participation of the academic staff, closer cooperation with institutions like municipalities and central government and breeders, making the Faculty farm more efficient and increasing the income. It is also planned to increase the support received from the extramural funds such as TUBITAK and EU Projects.

CHAPTER 4

CURRICULUM

4.1. FACTUAL INFORMATION

Indicate whether there is a defined national curriculum and (if applicable) how and with what principles/board decisions are determined.

Programmes of all the higher education institutes in Turkey (duration of education, examination system, diploma work etc.) are prepared by Faculties and University Rectorates and approved by the Higher Education Council of Turkey.

Competency criteria of all the sciences including the Veterinary profession are determined by the Council of Higher Education (CHE) within the framework of the European Union criteria and national regulations established for each profession. Each Faculty is responsible to implement the educational programme to meet these criteria. The IU-FVM curriculum programme and professional competency requirements are formed in the teaching board of IU-FVM. Criteria which are met with the academic activities in the Faculty of Veterinary Medicine, Istanbul University are as follows:

1. Identify the animal species and races, their structural, functional (anatomical, histological, physiological, biochemical, etc.) and behavioural characteristics are recognized.
2. Determine the husbandry and nutrition alternatives for healthy breeding in line with the different animal species, husbandry methods and expected yield attributes and prepare husbandry program for this aim.
3. Delivers the basic information on chemical and biological substances, which will be used for disease prevention and treatment, and their production technologies.
4. Evaluate the yield made between the animal species and the selection, hybridization and artificial insemination procedures are applied at a level that breeding can be implemented when required.
5. Administrate the stock-farming establishments and food animal production establishments.
6. Receive update information within the scope of national and international laws and regulations related to the veterinary profession.
7. Clinically recognize any kind of disease which is likely to occur in animals, utilise diagnostic methods for this purpose, take diagnostic samples for authorized laboratory to test when needed, and treat the diagnosed diseases by using all the methods of the profession (interpretation of the diagnostic methods' results, medical or operative implementations etc.).

8. Take necessary precautions including biosafety to control the contagious diseases.
9. Know the technological information with regard to the hygienic production of the animal originated foodstuff, which is produced for the human consumption, and/or the foodstuff containing animal originated products, to inspect all these stages and perform health checks of the final food products for consumption.
10. Take responsibility in individual and group tasks and fulfil the duties in accordance with the skills.
11. Make a contribution to a solution working as a team member in cooperation with other experts for problems outwith the specialization area.
12. Produce solutions for the regional or national problems through communication with professional partners.
13. Determine new information and information sources by critically evaluating the acquired knowledge and skills.
14. Provide information and organize meetings for identification of problems that concern the public and the animal health field.
15. Plan and perform social projects, leading to public awareness, by means of professional skills and competences.
16. Follow the international agenda closely. Use computer software and professional applications and use other technological devices, which may be necessary at the level of social relationships.
17. Be aware of the matter of human, animal and animal owner rights and respect for animal welfare in all areas.
18. Be aware of the awareness of the Environment, Veterinary Public Health principles and be aware of important zoonotic diseases, show sensitivity to implementations affecting nature protection.
19. Follow legislations in respect of the delivery of veterinary. Perform regular continuing development in their profession.
20. New and necessary information is investigated by critically evaluating the acquired knowledge and skills. Evaluate and judge any gained skills and knowledge critically gain.

The objective of the programme is to render the best practice by offering a high-level of Veterinary Education at international standards and training Veterinarians who are sensitive to animal husbandry policies of the country, aware of the country's needs in terms of animal health, have gained production and clinical knowledge about farm, companion and wild animals, informed about zoonotic diseases, exhibit behaviour in compliance with the professional Veterinary medicine ethics and traditions, work for the progress in the Veterinary Medicine scientific area and can take responsibility with patient owners. To best serve the animal and human health of the country by training Veterinarians who can use the highest standards of Veterinary Medicine for treating animals, while taking note of the environmental conditions, develop an ethos of continuous professional development and retain a knowledge of food safety and respect to animal welfare.

Describe the degree of freedom on the curriculum change of the faculty.

When the autonomy of the institution over the Council of Higher Education is taken into consideration, the opportunity to prepare the curriculum with the obtained experiences and information has been given to the Faculty. Thus, the Faculty has the freedom to prepare the general education programme and determine the theoretical and practical course hours and their ratios.

The duration of the Veterinary Education course was determined as 10 semesters in Turkey. In the Faculty, the 10th semester is an educational period comprising of only practice to increase the practical skills of the students. In this period, there are four guidance areas (*Poultry Breeding and Diseases, Food Hygiene and Technology, Animal Breeding and Clinical Laboratory Diagnostics*). Students may select one of these areas on their will. All students, who have chosen one of these areas, **must also participate in the clinical practices** in the animal hospital three times a week and attend to the ambulatory clinic service.

Outline how decisions on curriculum and course content are taken within the Faculty.

The Dean is responsible for the programme and the execution of the teaching programme and the student affairs are under the responsibility of the Vice Dean who is responsible for Student Affairs. The basic format of the curriculum is prepared by the Education and Accreditation Commissions. The Education Commission consists of two Professors, two Associate Professors and an administrative officer working in the student affairs department. The Accreditation Commission consists of six Professors and one Associate Professor. The Vice Dean who is responsible from Student Affairs attends and chairs all the sessions of the Commission of Education.

The Commission discusses the opening/ending of the courses, formation of the elective courses, distribution of the course hours among the courses, arrangement of the ratios of the theoretical and practical courses, determination of the course credits and the examination method in respect with the suggestion of the related Departments and finally forms the curriculum model according to the national education criteria. During the process, negotiations are held with the heads of Departments. The revisions that will be made in the curriculum model are discussed in the Education Commission with the suggestions of Departments, Academicians, Students and Accreditation Commission and the results are sent to the Faculty Board.

The Faculty Board evaluates and delivers an approval. The programme accepted by the Faculty Board is then sent to the University Senate for the final decision. The curriculum model is continuously published on the Student Panel and Website of the Student Affairs Office every year.

An updated curriculum came into effect for the first grade students in the academic year 2012-2013. This modified curriculum programme was also applied to the students who started education in 2011-2012. The purpose of this modification was to fulfil 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. This system gives the students the possibility of selecting elective courses in line with their interests and helps them prepare themselves for specialization within the Veterinary profession.

Another purpose of the modification is to provide the students and academicians with more mobility opportunities between the other Faculties of Veterinary Medicine in Europe and the World. The prepared educational programme is presented at Table 4.2 and Table 4.3.

Rules to obey about elective courses:

Elective courses are divided into two groups as area courses (topic oriented) and common elective courses. Each elective course has a quota of 50 students. Students have to choose an elective course area at 2nd or 3rd grade. To qualify for graduation, students have to successfully complete all the elective courses they take. Besides, students can be registered for common area elective courses to the extent that both their courses do not overlap and regulations also allow. If students want to change their elective course area, they are required to submit the reason to the student affairs office with a petition. If the Commission of Education and Faculty Administrative Board finds it appropriate, the students can change their area. However, students must successfully complete all the elective courses of the selected new area to qualify for graduation.

Students, who want to select a course from their own area, can be registered for that unless the quota (50 students) for that course is not yet filled. Otherwise, they can choose another elective course in related area.

Each student, who was registered in the Faculty through internal and external transfers from other faculties, must prefer an elective area following the transfer period. Students have to complete all the courses of preferred area, from their beginning period, till their graduation. If the curriculum of the elective or compulsory courses taken in the previous faculty complies with the contents of the area courses, students submit it/them to the student affairs and its/their compliance is checked with the related departments. If the Department confirms the content, students are considered as successful for that elective course with their grade reported from their previous faculty. Students can complete their missing elective course credits, apart from the area courses, by selecting common area courses.

10th Semester: Veterinary Medicine Maturation Practice Training (Internship):

There are four guidance areas in the Veterinary Medicine Maturation Practice Training. Quota for each guidance area is 50 students. When the number of student preferences is more than specified in the guidance areas, elective course area will primarily be taken into account to place the students.

Self-Learning:

Apart from the formal training, students can support themselves for education with various facilities (such as course notes, educational CD's, books, journals, clinic and laboratory documents etc.) in the related Departments, Faculty Library, Student Clubs and on internet in order to enhance the theoretical and practical activities.

Outline how decision is made on the balance of theoretical and practical training hours

The Commission of Education determines the ratios of the theoretical course and practice hours which are suggested by the Department responsible from the course. The Commission prepares the draft and submits it to the Faculty Board. If it is accepted by the Faculty Board the programme is sent to the University Senate for a final decision. Theoretical courses and practices are added or removed and their hours are designated considering the national and international current requirements.

Indicate the presence and disposition of an integrated curriculum. Describe the degree of integration and the amount of time devoted for EU- and non-EU-listed courses

The curriculum is continuously modified in line with occupational, social needs and the educational criteria of the European Union Veterinary Medicine.

4.1.1. POWER OF SUBJECTS AND TYPES OF TRAINING

4.1.1.1. POWER OF SUBJECT

"Core" subjects taken by every student;

Core programme (1, 2, 3 and 4th semesters) includes the courses of Basic Sciences and field-related bases of Veterinary Medicine, Animal Breeding, Animal Nutrition, Animal Welfare and Behaviour.

Courses related to Preclinical and Food Hygiene are given in the fifth and sixth semesters. Courses completely limited to the clinics are given in the seventh and eighth semesters. There are courses covering the clinics, husbandry, businesses and professional ethics and Veterinary Medicine legislation in the ninth semester.

The tenth semester is a period comprising several disciplines. This period is important in terms of beginning an intensive education on disease symptoms, diagnosis, treatment, prevention of diseases, animal health and diseases so that students understand the differences between normal and abnormal structures and functions. The curriculum according to semesters and credits are given in **Annex I**.

Approach for diagnosis and treatment of the significant diseases of the domestic animal species is taught most intensively during the courses in seventh, eighth, ninth and tenth semesters. In the clinics, students also gain experiences in respect of communicating with the patient's owner by taking an anamnesis. They gain the ability of diagnosis with the help of the findings obtained at the stage of diagnosis. They play an active role in the management of the case. Students who are in the tenth semester have to follow up patients in the clinics. At this point, students execute the stages involving an anamnesis, diagnosis, prescription, treatment of the patient and ending the treatment on their own. During all these activities, students get support from the specialized Academicians of the Faculty.

Ambulatory clinic and educational excursions are organized for different days of the week and different disciplines during the training. These obligatory activities include animal breeding and nutrition, livestock herd health, horse, small and/or exotic animal clinical practices, food hygiene, slaughterhouse and laboratory practices. These activities, which are organized for our students, are conducted in the Large Animal Practice Farm, Poultry Farm and in cooperation with private and official contracted institutions outside the Faculty in company with the teaching associates who have sufficient practical knowledge. These practices are designed by the departments.

Students must participate in these excursions and fulfil the criteria in their practice reports. These practices include the ambulatory clinic and educational excursions. These studies are performed so that students gain information about the current situation, and the information they obtained during their training is observed, implemented and evaluated under field conditions.

The students are liable to perform the obligatory internships, which are a complementary part of the Veterinary Education, according to the Istanbul University Undergraduate Educational Regulations and internship guidelines prepared within the framework of the conditions foreseen by the European Association of Establishments for Veterinary Education (EAEVE).

On condition that all the compulsory courses of the 6th semester have been taken, students perform their "extramural practice" separately in the areas of *Animal Breeding and Nutrition* (*Extramural 1*) and *Food Hygiene and Technology* (*Extramural 2*), each of which will take 10 working days in August, begins after they choose the area they desire; on condition that all the compulsory courses of the 8th semester have been taken, they perform their extramural practice in the area of *Animal Health* (*Extramural 3*) for 20 working days again in August in official and private establishments. The details of this work are given under "obligatory extramural work".

"Electives" which each student must select from a list of permissible courses;

In the Faculty, students are free to organize their personal activities and select elective courses according to their areas of interest. 92 out of a hundred elective courses are directly related to the science of Veterinary Medicine in the Faculty. Students also select elective courses like Fine Arts, Physical Training, History of Civilization, Communication Techniques, Disaster Culture, Scientific Research Techniques, Sign Language, Entrepreneurship, which will contribute to their professional, social and cultural knowledge until the 3rd semester. Elective courses were distributed into five occupational track (Track of Exotic Animals, Track of Animal Breeding, Track of Food, Track of Clinical Sciences, Track of Poultry) and Common Elective Courses. Class quota of each elective course is limited to 50 students. Each student has to select an elective course area as of the 2nd and 3rd years. Students have to successfully complete all the elective courses taken and collect 74 (25%) ECTS Credits (European Credit Transfer System) to graduate. Common elective courses and elective courses according to tracks are given in Annex II.

Besides, students can get registered for the other common elective courses to the extent that their courses do not conflict and regulations allow. If students want to change an area which they preferred before due to any reason, they are required to submit the reason to the student affairs office with a petition. If the Commission of Education and Faculty Administrative Board find it appropriate, the students can change their area, however, students must then successfully complete all the elective courses of the new selected area until graduation.

Students who want to select an area course can get registered for that course unless the 50-person quota of the course is not filled. Otherwise, they have to choose another elective course in that area. Even if only one (1) student applies for the elective courses, they are still opened in the related semesters.

Each student, who got registered in the Faculty through internal and external transfers from other faculties, must prefer an elective area following the transfer period. Students have to complete all the courses of preferred area, from their beginning period, till their graduation. If the curriculum of the elective or compulsory courses taken in the previous faculty complies with the contents of the area courses, students submit it/them to the student affairs and its/their compliance is asked to the related departments. If the Department confirms the content, students are considered as successful for that elective course with their grade reported from their previous faculty. Students can complete their missing elective course credits apart from the area courses by selecting common area courses.

Obligatory extramural work;

On condition that all the compulsory courses of the 6th semester have been taken, students perform their "extramural practice" separately in the areas of *Animal Breeding and Nutrition* (*Extramural 1*) and *Food Hygiene and Technology* (*Extramural 2*), each of which will take 10 working days in August, begins after they choose the area they desire; on condition that all the compulsory courses of the 8th semester have been taken, they perform their extramural practice in the area of *Animal Health* (*Extramural 3*) for 20 working days again in August in official and private establishments which are considered appropriate

by the extramural practice commission, approved by the Faculty Administrative Board and includes at least one full time Veterinarian. Students will prefer/decide their compulsory extramural practice on their own or in line with the suggestion of the supervising academician. Pre-evaluation is made by the Faculty extramural practice commission in terms of suitability and productivity of the places preferred/decided by the student.

All extramural practice and performance competences of the students are monitored by the extramural practice commission, which consists of the Faculty Teaching Members. During and in the end of the extramural practice the local responsible Veterinarians monitor and approve the student's practice. These local Veterinarians prepare the extramural practice report, where instructions are written with respect to the purpose and requirements of their practice, from the Faculty and record their opinions about the practice in this record book. Final approval is made by the extramural commission after the interview with the students about what they have performed/achieved during the practice. At the end of the extramural practice, a survey is implemented by the institution administrator where opinions, criticisms and recommendations are asked for the next practice and new modifications are made in accordance with the practice-related criticisms and recommendations.

4.1.1.2. *TYPES OF TRAINING*

There cannot be absolute distinction between the terms used to distinguish between different types of training. Overlap is inevitable. The following descriptions are derived from the definitions presented in the section "Main Indicators" of ***Annex I****.*

Curriculum provides important educational tools for the students; for example, courses, seminars, desk and laboratory practices, clinical and non-clinical practices. A case based practical training is also implemented.

4.1.1.2.1. Theoretical Training:

- ***Lectures*** *convey theoretical knowledge. Lectures are given to an entire or partial annual intake of students. Teaching may be with or without the use of teaching aids or of demonstrations animals or specimens. The essential characteristic is that there is no active involvement of the students in the material discussed. They listen and do not handle.*

Theoretical Courses:

Theoretical information is given in these courses which are performed semester based. During these courses, teaching is achieved by using supporting materials, live animals, laboratory materials, multimedia technologies. Students participate in the discussed material/topic actively under the invitation and supervision of the academician. Attempts are made to give the theoretical courses interactively.

• ***Seminars*** *(sometimes called tutorials or supervised group work) are teaching sessions directed towards a smaller group of students during which they work on their own, or as a team, on part of the theory, prepared from manuscript notes, photocopied documents, articles and bibliographic references. Information is illustrated and knowledge extended by the presentation of audio-visual material, exercises, discussions and, if possible, case work.*

Seminars:

Academicians can have the students perform individual or group activities. Students present the theoretical activities they prepare from books, course notes and the literature to the Academician and the other students, involving in the teaching process. Information is presented as audio-visual materials, discussions, and if possible, case studies.

• ***Self-directed learning*** *is sessions of individual students making use of defined teaching material provided by the Faculty (e.g. e-learning).*

Self-Directed Learning:

Apart from the formal training, students can support their education with their own activities (making use of sources such as course notes, educational CD's, books, journals, clinic and laboratory documents etc.) in the related Departments, Faculty Library, and Student Clubs and on internet in order to enhance the theoretical and practical activities taken in the courses.

4.1.1.2.2. Supervised Practical Training:

• ***Laboratory and desk based work:*** *Includes teaching sessions where students themselves actively perform laboratory experiments, use microscopes for the examination of histological or pathological specimens. It also includes work on documents and idea-formulation without the handling of animals, organs, objects or products (e.g. essay work, clinical case studies, handling of herd-health monitoring programmes, risk-assessment computer-aided exercises).*

Laboratory and desk based work:

This consists of the sessions where students actively conduct their microscopic examinations, laboratory experiments and pathologic practices in the Basic Sciences and Preclinical areas themselves under the supervision of academicians. This also includes the activities by using laboratory manuals, animals, organs, objects or products (for example, analyses, case studies, herd tracking and nutritional programmes, computer-assisted activities).

- ***Non-clinical animal work:*** *These are teaching sessions where students themselves work on normal animals, on objects, products, carcasses etc. (e.g. animal husbandry, ante mortem and post mortem inspection, food hygiene, etc.) and perform dissection or necropsy.*

Non-clinical animal work:

This includes the sessions where students themselves work on normal animals, objects, products, carcasses and various materials (e.g. animal breeding and husbandry, ante-mortem and post-mortem observation, food hygiene etc.) and perform inspection, dissection and necropsy.

- ***Clinical work:*** *These are strictly hands-on procedures by students which include work on normal animals in a clinical environment, on organs and clinical subjects including patients and herds, making use of the relevant diagnostic data. Surgery or propaedeutical hands-on work on organ systems on cadavers to practice clinical techniques are also classified as clinical work.*

Clinical work:

In clinical work, students perform studies on the healthy animals, sick animals and organs, including the ones brought to the Faculty Clinics by the students and those within the herds and shelters, using the appropriate diagnostic methods. Most of the basic theoretical subjects explained in the clinics have been integrated into the obligatory clinical practices and laboratory activities, which students actively attend. Students make use of the suitable equipment in the hospital during these practical procedures.

Clinical Practices:

As of the fourth semester, students have to perform clinical practices, which continue in rotation within the Clinical Departments. Practically, students are separated into different groups (Internal Medicine, Surgery, Obstetrics and Gynecology, Reproduction and Artificial Insemination). Students interact with the patients together with the Staff Clinician for Training during the daily clinical practices in various units of the clinics (e.g. Policlinics, Operation Rooms, Radiology, Intensive Care Unit, In-Patient Unit etc.), participate in the surgical interventions as the first or second assistant during surgical procedures and monitor the patients.

Each student is responsible for a total of compulsory 100-hours "Emergency Clinical Watch" from the registration for the "Clinical Practice" course of the 9th semester until the end of the Maturation Practice Training.. These watches cover 50-hours for each of fall and spring semesters. Students have to interact with the patients under the supervision of the on-duty veterinarian during their duty in the Emergency Clinic. They are responsible for the treatment of the hospitalized patients.

From 2014 there is an obligation for students to successfully participate in the ambulatory clinical activities within the scope of Ambulatory Clinical Practices, which began in 2003 for the first time. As a result of this change, students must go to the ambulatory clinic at least 3 times in a semester at different times and also get the signature of the trainer who is responsible for the practices regarding their success.

Students who do not attend the ambulatory clinic and/or cannot be successful at the practices are considered as unsuccessful and they are requested to complete their deficiencies during the compensation period given at the end of the semester. Each student has the opportunity to perform clinical work for 1210 hours in total (1050 hours in Faculty (75 hours of Clinical Practice per week x 14 weeks) and Ambulatory Clinical Practices and 160 hours in extramural practice) during their education in the Faculty.

At the end of the 8th semester, students have to perform 20-days Animal Health extramural practice in various facilities like farms, clinics, hospitals etc. where clinical practices are carried out. Meanwhile, the members of the Extramural Practice Commission determine the extramural practice places and inspect the execution of them in compliance with their purpose. They hold interviews after the extramural practice to decide the success/unsuccess status of the students. Students attend the interview sessions regularly and information is obtained from the students about their extramural practice performances and practical implementations.

Maturation Practice Training (Internship):

For the purpose of providing the students with the skills of using the knowledge, which they gained during the previous periods of the Veterinary Medicine Education, effectively through implementations in the 10th semester, internship is given in four different areas for 14 weeks (560 hours). These practice areas are *Poultry Breeding and Diseases, Food Hygiene and Technology, Animal Breeding and Husbandry, Clinical Laboratory Diagnostics* given by related departments of Internal Medicine, Surgery, Obstetrics and Gynecology, Reproduction and Artificial Insemination, Food Hygiene and Technology, Microbiology, Pathology, Parasitology, Animal Breeding and Husbandry, Animal Nutrition and Nutritional Diseases, Biochemistry, Pharmacology and Toxicology, Physiology, Histology and Embryology, Virology. During this training period, students have to attend the Clinical Veterinary Medicine Training in rotations for 336 hours in total as 98 hours in the Internal Medicine Clinic, 98 hours in the Surgery Clinic, 98 hours in the Obstetrics and Gynecology Clinic and 42 hours in the Reproduction and Artificial Insemination Department in addition to the guidance areas they have selected. They also participate in the Emergency and Ambulatory Clinical practices during this training period. Students are liable to keep 100-hour Emergency Clinical Duties in total (50 hours in the 9th semester + 50 hours in the 10th semester) including nights, days, weekdays and weekends on different dates. Meanwhile, students conduct studies on the examination of the encountered patients, diagnosis, treatment and preventive medicine. The details of guidance areas are given below:

a. Area of Poultry Breeding and Diseases :

In this programme, students are made to perform intensive implementation of matters they will encounter in the future with regard to poultry (Poultry Breeding, Nutrition, Incubation Knowledge and Technique, Poultry Diseases and Diagnosis Methods etc.) in the Departments like of Microbiology, Pathology, Parasitology, Animal Breeding and Husbandry, Animal Nutrition and Nutritional Diseases, Biochemistry, Pharmacology and Toxicology, Physiology, and Virology during 14 weeks (224 hours).

b. Area of Food Hygiene and Technology:

This practice area also takes 14 weeks (224 hours) and students have to attend and be successful at practices in the Slaughterhouses and in the Departments of Food Hygiene and Technology, Parasitology, Microbiology, Pharmacology and Toxicology, Histology and Embryology, Biochemistry and Virology. Meanwhile, students are made to conduct studies on the production of food products of animal origin, their controls, processing, conserving and control methods of the products produced from them and distribution technologies. Extensive skills, which are necessary for the Veterinary Surgeons, are provided regarding the importance of the risk-based self-controlled programmes; that is, the controls of all the steps of the food chain from farms to all the commercial retail including restaurants, catering firms and houses, which is the extraordinary concern in protecting the human health (Veterinary Public Health).

c. Area of Animal Breeding:

Practices are demonstrated and carried out on modern approaches related to animal production and breeding techniques besides breeding, improvement and nutrition of various farm animal species (cattle, sheep and goats, poultry, fish, bees). This 14-week (224 hours) practice period is completed by the Departments of Animal Breeding and Husbandry and Animal Nutrition and Nutritional Diseases.

d. Area of Clinical Laboratory Diagnostic:

During this 14-week (224 hours) practice period, students learn and perform very important laboratory implementations (Virology, Pathology, Microbiology, Parasitology, Biochemistry, Physiology, Pharmacology and Toxicology, Animal Nutrition and Nutritional Diseases) which are used for diagnosis. They especially learn and carry out different diagnostic methods in animal diseases and laboratory diagnoses of the notifiable diseases.

4.1.2. UNDERGRADUATE CURRICULUM FOLLOWED BY ALL STUDENTS

4.1.2.1. CURRICULUM HOURS

This section makes a distinction between curriculum hours to be taken by every student and those offered as electives or within a given track. Specific information is also requested on subjects other than those specific in Table 4.2.

In this section, distributions of the compulsory and elective course hours, which belong to the curriculum and taken by the students, are shown separately.

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

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

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

"Seminars and self directed learning practices are included within the curriculum. The elective classes are taught in small groups of students and therefore, lectures shown in Table 4.3 are often conducted as seminars. Those seminar type lectures are performed as workshop, group work, case summary, student presentation etc. However, the hours of this type of teaching can vary among theoretical classes and therefore to avoid misinformation they are all defined as a lecture. In this report seminar hours are included in Table 4.1."

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

Subject	**Theoretical Training**			**Supervised Practical Training**			**Other**	**Total**
	Lectures	**Seminars**	**Self-Directed Learning**	**Laboratory and Desk Based Work**	**Non-Clinical Animal Work**	**Clinical Work**		
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	
1. Basic Subjects								
a) Physics	28							28
b) Chemistry	28			14				42
c) Animal biology (Medical Biology)	42			28				70
d) Plant biology[1]								
e) Biomathematics (including Informatics)	28							28
1-Total Number of Hours	**126**			**42**				**168**
2. Basic Sciences								
a) Anatomy (including Topographic Anatomy, Histology and Embryology)	224			42	154			420
b) Physiology	98			56				154
c) Biochemistry, cellular and molecular biology	84			56				140
d) Genetics	28							28
e) Pharmacology and Pharmacy	84			28				112
f) Toxicology (including environmental pollution	28			28				56
g) Microbiology (including Virology, Bacteriology and Mycology)	126			84				210
h) Immunology	28			28				56
i) Epidemiology (including scientific and technical information and documentation methods)	28							28
j) Professional ethics[2]	14							14
2-Total Number of Hours	**742**			**322**	**154**			**1218**

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

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

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

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

[1] : There is no such a separate subject; it is included in the Medical Biology Lectures
[2] : Including Veterinary Legislation
[3] : Including Surgery, Orthopaedics, Internal Medicine and Poultry Diseases Lectures
[4] : Pathology lectures counted as non-clinical
[5] : There is no such a separate subject; it is included in the various lectures
[6] : It is included in various lectures. Also it can be selected as an Elective Lecture
[7] : There is no such a separate subject; it is included in the Pharmacology Lectures
[8] : There is no such a separate subject; it is included in the Rural Economics, Animal Production Lectures
[9] : It is included in various lectures. Also it can be selected as an Elective Lecture
[10] : There is no such a separate subject; it is included in the Food Hygiene and Technology Lectures
[11] : There is no such a separate subject; it is included in the Forensic Lectures
[12] : Career Planning and Opportunities subject does not exist however, various Seminars and Workshops on this subject are organised with sectorial representatives and stakeholders for our students

Please note:
Establishments, which due to the character of their curriculum feel unable to complete Table 4.2 may – of their curriculum. This should allow conclusions to be drawn about the extent to which the requirements layed down in directive 2005/36/EC are met. The values for ratios R6, R7 and R8 (Annex I, 2.10) must be given.

Table 4.3. Curriculum hours in EU-listed subjects taken by each student (continued)

Subject	***Theoretical Training***			***Supervised Practical Training***			***Hours to be taken by each student per subject group***
	Lectures	***Seminars***	***Self-Directed Learning***	***Laboratory and Desk Based Work***	***Non-Clinical Animal Work***	***Clinical Work***	
	(A)	(B)	(C)	(D)	(E)	(F)	
1. Basic Subjects							
Fine Arts	*28*						*28*
Physical Training	*28*						*28*
History of Civilizations	*14*						*14*
Communication Techniques	*14*						*14*
Disaster Culture	*14*						*14*
Scientific Research Techniques	*14*						*14*
City Culture and Istanbul	*14*						*14*
Sign Language	*14*						*14*
2. Basic Sciences							
Terminology of Veterinary Anatomy	*14*						*14*
Animal Rights	*10*	*4*					*14*
Biotechnology	*11*	*3*					*14*
Anatomy of Exotic Animals	*11*	*3*					*14*
Physiology of Exotic Animals	*11*	*3*					*14*
Biochemistry of Exotic Animals	*11*	*3*					*14*
Avian Anatomy	*14*						*14*
Avian Physiology	*14*						*14*
Avian Biochemistry	*12*	*2*					*14*
Exercise Physiology	*14*						*14*
The Use of Instruments in Biochemistry Laboratory	*14*						*14*
Anatomy of Laboratory Animals	*14*						*14*
Biochemical Differences of Animals	*14*	*2*					*14*
Animal Blood Bank	*14*						*14*

Biochemistry of Immunology and Tumours	*14*						*14*
Viral Vaccine Preparation Techniques	*14*						*14*
Viral Zoonoses	*10*	*4*					*14*
Animal Genomes	*14*						*14*
Doping	*14*						*14*
Clinical Pharmacokinetic	*10*	*4*					*14*
Biochemistry of Metabolic and Hereditary Diseases	*14*						*14*
Molecular Diagnosis of Diseases	*14*						*14*
3. Clinical Sciences							
Exotic Animal Parasites	*12*	*2*					*14*
Pathology of Exotic Animals	*14*						*14*
Internal Diseases of Exotic Animals	*11*	*3*					*14*
Bacterial and Mycological Diseases of Exotic Animals	*12*	*2*					*14*
Viral Diseases of Exotic Animals	*14*						*14*
Exotic Animal Surgery	*14*						*14*
Reproduction Diseases of Exotic Animals	*14*						*14*
Vector Control	*12*	*2*					*14*
Fluid Electrolyte Therapy	*11*	*3*					*14*
Diagnostic Imaging Methods in Internal Medicine	*12*	*2*					*14*
Antineoplastic Medicines	*14*						*14*
Drug Usage in Bee, Fish and Exotic Animals	*11*	*3*					*14*
Behaviour Disorders of Animals	*11*	*3*					*14*
Clinical Oncology and Chemotherapy	*14*						*14*
Gynaecological Oncology	*14*						*14*
Oncologic Surgery Procedures	*14*						*14*
Avian Parasites	*14*						*14*
Avian Internal Diseases	*12*	*2*					*14*
Avian Pathology	*14*						*14*
Bee Diseases	*11*	*3*					*14*
Laboratory Animals Parasites	*14*						*14*
Fish Pathology	*14*						*14*
Clinical Bacteriology	*14*						*14*
Pathology of Laboratory Animals	*14*						*14*
Emergency Surgery Applications	*14*						*14*
Zoonotic Parasites	*12*	*2*					*14*
Reproductive Ultrasonography	*14*						*14*
Gynaecological Emergency	*14*						*14*
Clinical Parasitology	*14*						*14*

Reanimation in Newborns and Neonatology	*10*	*4*					*14*
Ophthalmology	*14*						*14*
Hemopathology	*14*						*14*
Tumor Pathology	*14*						*14*
Emergency in Internal Medicine	*11*	*3*					*14*
Physiotherapy	*14*						*14*
Neurosurgery	*14*						*14*
Geriatric Diseases of Pets	*11*	*3*					*14*
Udder Health and Control Programs	*14*						*14*
Advanced Monitoring Systems	*14*						*14*
Clinical Endocrinology	*14*						*14*
Molecular Identification of Parasitic Diseases	*14*						*14*
Small Animal Dentistry	*14*						*14*
4. Animal Production							
Nutrition of Exotic Animals	*14*						*14*
Feed Legislatıon and Quality Control	*14*						*14*
Organic Animal Nutrition	*12*	*2*					*14*
Shelter Feasibility and Hygiene	*12*	*2*					*14*
Organic Animal Breeding	*11*	*3*					*14*
Nutrition in Culture-Based Fisheries	*12*	*2*					*14*
Water Buffalo Nutrition	*14*						*14*
Nutrition of Pets	*14*						*14*
Herd Health and Management	*11*	*3*					*14*
Assisted Reproductive Technologies in Farm Animals	*14*						*14*
Nutrition of Avian	*12*	*2*					*14*
Assisted of Reproductive Techniques in Fowl	*14*						*14*
Nutrition of Laboratory Animals	*14*						*14*
Assisted Reproductive Techniques in Cats and Dogs	*14*						*14*
5. Food Hygiene / Public Health							
Food, Environment and Public Health	*14*						*14*
Special Food Hygiene and Technology	*14*						*14*
Food Chemistry	*14*						*14*
Food and Nutrition Culture	*14*						*14*
Food Processing and Preservation Techniques	*12*	*2*					*14*
Hygienic Controls in Food Production Facilities	*14*						*14*
Food Legislation	*14*						*14*
Special Histologic Examination Methods	*14*						*14*
Management of Food Establishment	*12*	*2*					*14*
Aquatic Food Products Hygiene and Technology	*14*						*14*

Poultry Meat Hygiene and Technology	*14*						*14*
Slaughterhouse and Veterinary Medicine	*14*						*14*
Food Quality Management Systems	*12*	*2*					*14*
Drug Residues and Public Health	*14*						*14*
6. Professional Knowledge							
Material Submission and Reporting	*14*						*14*
Veterinarian Services in Municipalities	*10*	*4*					*14*
Practical Entrepreneurship	*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.

The inherent nature of an elective is, that students make a distinction and select. However the total number of hours to be taken by each students out of the various subject groups should be stated.

Where a faculty runs a "Tracking system" this should be indicated when completing Table 4.3. Separate tables should be provided for each track, e.g. Table 4.3a: Curriculum hours in EU-listed subjects to be taken in the "equine medicine track".

Table 4.4 requests information concerning curriculum hours in subjects not listed in Table 4.2 to be taken by every students.

Table 4.4. Curriculum hours in subjects not listed in Table 4.2 to be taken by each student, including Diploma Work (Final graduation thesis or final graduation work)

Subject	**Theoretical Training**			**Supervised Practical Training**			**Other**	**Total**
	Lectures	**Seminars**	**Self-Directed Learning**	**Laboratory and Desk Based Work**	**Non-Clinical Animal Work**	**Clinical Work**		
	(A)	(B)	(C)	(D)	(E)	(F)		
History of Veterinary Medicine	28							28
Ataturk's Principles and History of the Turkish Revolution	56							56
Turkish Literature	56							56
Foreign Language	56							56
Laboratory Animals	28							42
Fish Diseases	14							14
Internship (Tracking Programme)				140	84			224
Total	**238**			**140**	**98**			**476**

Each student prepares and presents at least one seminar during the Maturation Practice Training (Internship). Considering the weekly course intensity of each Department, Field Coordinatorships distribute the students among Departments from the beginning of the academic spring semester. Students are appointed to the Departments. Duration of the Maturation Practice Training is 14 weeks and 40 course hours a week. Students spend 24 hours of this duration in the Departments of Clinical Veterinary Medicine and the remaining 16 hours in the Departments of the guidance fields.

Topics of the seminars are specified both with the student and the academician together. Students have to present their seminars to the Academicians of the relevant Department and students in their own group. Duration of the seminars should be at least 15 to maximum 30 minutes. A negative situation which emerges between the supervisor and the student is evaluated by the Field Coordinatorship if one of the parties applies with a reasoned petition. Seminars prepared by the students are evaluated as successful/unsuccessful by the Head of the relevant Department. In case a student is unsuccessful for the seminar, the student is evaluated within 7 days; if he/she cannot then succeed, he/she has to get a new seminar topic in the following academic year.

4.1.3. FURTHER INFORMATION ON THE CURRICULUM

Provide the visiting team with highlights and innovative aspects of your educational system (e.g. tracking and orientation programmes)

Besides the presence of compulsory courses in our educational programme, an opportunity is given to the students, who are interested in a certain track of the veterinary profession, to create an additional educational programme for themselves. Students, who are interested in a certain animal species or professional subject, can reinforce their interests by receiving an additional training in a desired track (5 professional elective tracks and 1 common professional elective track) as of the 3rd semester, and they acquire the change to graduate with more competences in a desired professional track by this way. Another significant contribution of this system for the students is the fact that missing course problems are substantially solved in case of diploma equivalence, which is encountered in post-graduate education and studies they want to select in other countries. By this way, the criterion “the ratio of the elective courses must be 25% within the total course ECTS credit” is fulfilled.

Within the framework of the special bilateral agreement signed with 19 foreign Faculties of Veterinary Medicine (Germany: Munich, Italy: Bologna-Messina-Camerino-Perugia, Poland: Wroclaw, Bulgaria: Sofia-Stara Zagora, Russia: Moscow-St. Petersburg-Kazan, Latvia: Jelgava, Macedonia: Skopje, Czech Republic: Brno, Bosnia-Herzegovina: Sarajevo, Kosovo: Priština, Kyrgyzstan: Bishkek, Kazakhstan: Almaty, Azerbaijan: Gence, Slovenia: Ljubljana, and IVSA (Japan and South Korea), the Faculty sends the voluntary students to the countries they select in groups of 11-15 people for 15 days to receive training as of the 3rd year. Meanwhile, accommodation and food expenses of the students are met by the hosting Faculty. Under the same conditions, more than 200 Veterinary students from these countries receive education in the planned Clinical and Preclinical areas in the Faculty every year. Moreover, exchanges are made in the Faculty every year within the scope of ERASMUS and MEVLANA student and academician mobility.

"International Veterinary Medicine Students Scientific Research Congress" was initiated by Istanbul University, Faculty of Veterinary Medicine in 1999 for the first time in Turkey and since then, it is held regularly in May every year and the 17th organization will be held in 2015. Many Veterinary Students attend it both from our country and abroad. Besides over 150 foreign guests from 16 countries and 250 students and academicians from the Veterinary Medicine Faculties in 20 cities, around 300 students and academicians from Istanbul University, Faculty of Veterinary Medicine participated in the 2014 congress ; a total of 700 people. During the congress, oral and poster presentations of research conducted by the students, are given. Forums and discussions are held, Awards for students are determined by the scientific jury from the oral and poster presentations. Participants also receive certificates, various gifts, cultural excursions, celebrations and meals. This congress is a chance for the students to come together with and meet others, and continue their relationships with each other in their future educational and professional activities.

The Faculty has the first modern animal hospital complex approved by the Ministry, a farm free from notifiable diseases, accredited reference laboratories and clinical examination facilities for both domestic and wild animals, brought in from different parts of Turkey for treatment and rehabilitation (within the scope of the bilateral protocol signed with the Ministry of Forestry and Water Affairs). This work affects both the education of the students and the quality and intensity of the rendered services in a very positive way.

Istanbul University, which is the locomotive of the University tradition in Turkey, is an important turning point for the work and social lives of its graduates. The brand of Istanbul University is a significant key that can point the way for the graduates of Istanbul University, Faculty of Veterinary Medicine in all the stages of their subsequent professional career.

We would like to mention that Istanbul University has played a profound role in the educational system of the world for 562 years (since 1453). Graduating from the Faculty of Veterinary Medicine of such a deep-rooted University is a privilege. In our country, graduates of Istanbul University, Faculty of Veterinary Medicine serve the country successfully in different fields from the business world to politics and from art to bureaucracy besides their successful Veterinary Medicine services. Politicians, CEO's of huge companies, University Rectors, Deans, Academy Administrators, significant academicians and even artists, who graduated from the Faculty, are a source of pride for the Faculty and increase career possibnilities.

State the parts of the programme that must be attended as obligatory by the students and how the attendance is verified.

According to the current valid "Course and Examination Rules", students have to attend 70% of the theoretical courses and 80% of the practices. Students' participation in the Ambulatory Clinical activities, educational excursions, emergency clinic watch and seminars is again compulsory and this participation is recorded by the lecturing academician. Practices that are missed due to an acceptable reason (sickness or an official duty within the city/abroad etc.) will definitely be completed within the last 1 week of the semester. Students who do not continue the practices are considered unsuccessful. They have to continue the related

practices the following year. Students' participation and competency in the extramural practice outside the University must be confirmed by a local responsible Veterinarian appointed for it. An extramural practice report, where detailed information is written about the requirement of the practices is prepared by the Veterinarians.

Please provide specific information on the practical clinical training.
If clinical training is be provided through obligatory clinical rotations in different areas, please give an outline description of how this is structured, in terms of:

- *are such rotations a structured part of the training given to all undergraduate students?*
- *the total number of days or weeks of such rotations;*
- *the year(s) in which they occur;*
- *the different areas covered and the time spent in each area;*
- *whether attendance is full-time, for part of the day, and/or other (e.g. based on case needs);*
- *the activities and case responsibilities that students are expected to undertake;*
- *the group sizes in the clinical rotations.*
- *Describe clinical exercises in which students are involved prior to the commencement of clinical rotations.*
- *Prepare the draft of the areas which cover the student practices in emergency and hospitalized patient sections of the clinics.*
- *Specify the student participation in ambulatory clinical practices and clarify the duration that will be spent in these mobile clinics.*

In the Faculty, students have to attend the trainings in rotation, which include 2 hours of theoretical (per each) and 4 hours of clinical practices a week in the Departments of Internal Medicine and Surgery as of the 5th semester of the 3rd year and 4 hours of clinical practices per week as of the 6th semester. They are liable to fulfil the clinical practice criteria denounced by the Clinical Departments and distributed to the students.

In the Internal Medicine Clinic, students learn:

1. Methods of internal clinical examination in Small animals and Farm Animals
2. Which sequence a sick animal should be examined
3. Physiologic and pathologic situation of the systems in animals

In Surgery Clinic, students learn:

1. History and clinical importance of Veterinary surgery
2. Approach to the patient in equidae and ruminants
3. Approach to the patient in carnivores and poultry
4. Anamnesis, inspection, palpation
5. Probing, auscultation, menstruation
6. Diagnostic operations
7. Examination of ears, eyes and oral cavity
8. Examination of thorax and abdomen
9. Rectal palpation and examination of reproductive organs
10. Examination of forelegs
11. Examination of hind legs and nails
12. Examination for lameness.

These weekly 4-hour clinical visits constitute both a professional notion and motivation for the students and the case data forms a significant base for the period of the clinical practice training given in 4 and 5th years.

Students have to attend the Clinic and Pathology practices 5 hours a week in the 7 and 8th semesters and Clinical Practices 5 hours a week in the 9th semester and 24 hours a week in the 10th semester of the 4th year in groups consisting of approximately 15-20 people in rotations. During the clinical rotations, students are placed in different units of their clinic (Policlinics, ambulatory treatment rooms, radiology and other imaging rooms, pre-anaesthesia rooms, operation rooms, in-patient areas etc.); students have to directly participate in the routine clinical practices (taking anamnesis, consultation interviews, diagnostic imaging and analyses, operations, necropsy etc.) in these areas under the supervision of the responsible academician. Charts stating Clinical Practice Criteria, which students are liable to fulfil as a part of their clinical practices, are prepared and distributed at the beginning of the educational period. They carry out some of these practices on animate or inanimate materials by watching the academicians, some together with the academician or some on their own.

Students are liable to attend the educational excursions and ambulatory clinical practices within the clinical activities. Students who study in the 7, 8, 9 and 10th semesters participate in the ambulatory clinical practices. Meanwhile, practices are performed in various farms, hospitals and shelters including the Faculty Farm (200 head cattle, 800 head sheep, 30 horses), cattle and sheep farms outside the Faculty (>1000 head cattle, >1000 head sheep), Horse Hospital of the Jockey Club of Turkey and small animal shelters that belong to Municipalities. During the visits to the animal shelters, procedures such as spaying and castrating, anaesthesia, preparation of operational area, operation, analgesia and other

therapeutic procedures etc. are conducted by the students under the observation of the trainers.

Students of 7th and 8th years attend the Ambulatory Clinical Practices on Thursday and Friday, students of 9th semester every Monday and Tuesday, students of 10th semester on Monday, Tuesday and Wednesday. Students go to the farms in groups consisting of 10 students together with a trainer team. During the practices, subjects such as herd health, regular reproductive examinations (pregnancy examination, infertility examinations and treatments), collective oestrous synchronization studies, calf diseases, taking blood samples within the scope of eradication programmes, vaccination, tuberculosis test, taking other samples, some season-dependent operative implementations (caesarean section, umbilical operations, dehorning, nail examinations and operations, abscess drainage etc.), udder and milk examination, milking hygiene over the farm milking machines are discussed. In the ambulatory clinic, transfer of the students to the farms and the requirements of the practices for equipment and consumables are covered by the Faculty.

Students receive practical training on farm animals, horses, pets and exotic animals during their obligatory clinical training.

Clinically, students are capable of taking anamnesis, basic examination, and clinical recognition of any kind of diseases likely to emerge in animals, using advanced examination methods, taking and sending the diagnostic materials to the authorized laboratory and/or testing them if required at the end of the 5th year. They can interpret the results of the diagnostic methods and treat the diagnosed diseases. They can perform some operations (e.g. spaying-castrating operations, operative closure of the tissue injuries, abscess drainage, bandage etc.), preventive medicine implementations and artificial insemination procedures. They can give suggestions in nutritional and care matters. Each student gives information and organizes activities with regard to taking the necessary precautions including biosafety to control the contagious diseases. Identification of the problem in relevant boards on issues regarding the Public and animal health and solution suggestions. Students know about the rights of humans, animals and animal owners, and observe the animal welfare in all the practices. They are sensitive about the zoonoses, know the implementations to protect the nature and conduct these when needed.

4.1.4. OBLIGATORY EXTRAMURAL WORK

These are training periods that are an integral part of the curriculum, but which are taken outside the Faculty. Please make a distinction in respect to the nature of the work, for instance work on farms, training in a veterinary practice or in Food Hygiene/Public Health with a commercial or government organization.

Please indicate the guidelines pertaining to this activity, and the manner by which it is assessed.

On condition that all the compulsory courses of the 6th semester have been taken, students perform their "extramural practice" separately in the areas of *Animal Husbandry and Nutrition* (*Extramural 1*) and *Food Hygiene and Technology* (*Extramural 2*), each of which will take 10 working days in August, begins after they choose the area they desire; on condition that all the compulsory courses of the 8th semester have been taken, they perform their extramural practice in the area of *Animal Health* (*Extramural 3*) for 20 working days again in August in official and private establishments which are considered appropriate by the Extramural Practice Commission, approved by the Faculty Administrative Board and includes at least one full time Veterinarian. Students will prefer/decide their compulsory extramural practice on their own or in line with the suggestion of the supervising academician. Pre-evaluation is made by the Faculty extramural practice commission in terms of suitability and productivity of the places preferred/decided by the student.

All extramural practice and performance competences of the students are monitored by the Extramural Practice Commission, which consists of the Faculty Teaching Members. In this period, the students are accompanied with the Veterinary surgeon for supervision. During and in the end of the extramural practice the local responsible Veterinarians monitor and approve their practice. These local Veterinarians prepare the extramural practice report, where instructions are written with respect to the purpose and requirements of their practice, from the Faculty and record their opinions about the practice in this record book. Final approval is made by the Extramural Practice Commission after the interview with the students about what they have performed/achieved during the practice. The commission determines the successful / unsuccessful status of the students after the extramural practice. At the end of the extramural practice, a survey is implemented by the institution administrator where opinions, criticisms and recommendations are asked for the next practice and new modifications are made in accordance with the practice-related criticisms and recommendations.

Table 4.5. Obligatory extramural practice that students must undertake as part of their course.

Nature of Work	Minimum Period		Maximum Period		Year in which work is carried out
	Hours	% of total study time	Hours	% of total study time	
Animal Husbandry and Nutrition (Practice 1)	80		80		Third Year
Food Hygiene and Technology (Practice 2)	80		80		Third Year
Animal Health (Practice 3)	160		160		Fourth Year

Extramural Practice for Animal Husbandry and Nutrition at the end of the third year:

Purpose of the Animal Husbandry and Nutrition extramural practice is the comprehension of the rules related to the daily routine implementations, habits, strategies, new

movements and the role of the Veterinary Surgeon. In this period, the students are accompanied with the Veterinary surgeon for supervision. Therefore, a farm is required to be large enough and host a high number of animals. Small family premises and zoos aren't accepted.

Extramural practice for Food Hygiene and Technology at the end of the third year:

Purpose of the Food Hygiene and Technology extramural practice is to reinforce their knowledge and skills for the hygiene of the food products of animal origin, their preservation and production technologies, hygiene, cleaning and disinfection implementations in food premises, microbiological control methods of the foodstuff, infections resulting from food products, food poisoning and other matters related to food products and premises.

Extramural practice for Animal Health (Clinic) at the end of the fourth year:

Purpose of the Animal Health (Clinic) extramural practice is to see, implement and evaluate the knowledge, which is gained by the students during the training in official and private establishments dealing with animal health, under the area conditions.

4.1.5. SPECIFIC INFORMATION ON THE PRACTICAL TRAINING IN FOOD HYGIENE/ PUBLIC HEALTH

Describe the arrangements for training in a slaughterhouse and/or specify the priorities for production such as processing, distribution/sale or consumption of food of animal origin- Indicate the distance to slaughterhouses where students undergo training and the species covered. Outline the structure and the frequency of the visits (number of groups, number of interns, duration etc.)

The main objective is to teach students extensive theoretical information and skills on Food Hygiene and Technology/Public Health here. Students receive 140-hour compulsory theoretical education and practice for 70 hours in total during the whole training on slaughterhouse environment, legal slaughterhouse conditions, Antemortem and Postmortem evaluations, Food Microbiology, Food Chemistry, Food Safety, Food Toxicology, Food Technologies, Hygiene rules and technologies etc. Moreover, students who select the guidance area of Food Hygiene and Technology in the 10th semester practice for 112 hours in total during 14 weeks as 8 hours per week. All these implementations are performed in intramural licensed training slaughterhouse, accredited laboratories and external institutions.

Visits to establishments/enterprises for Public Health and Food Hygiene:

Each visit to the practice facility related to the practical programme is prepared by the Department of Food Hygiene and Technology and it is held on the agreed dates. The training is executed as visual and practical courses under the control of the responsible Veterinary Surgeon in the training institution and Academicians of the Department of Food Hygiene and Technology. Students are evaluated by the responsible Supervising Veterinary Surgeon in the facility together with the Academician from the Department of Food Hygiene and Technology and their success status is recorded in the practice report. Students who do not attend or complete the visits are considered unsuccessful.

Food Hygiene and Technology Courses

Courses	Weekly Hours			Semester Theoretical Total*	Semester Practical Total*	Total Hours
	Theoretical	Practical	Total			
Food Hygiene	2		2	2x14=28		28
Food Safety	2		2	2x14=28		28
Meat Inspection	2		2	2x14=28		28
Meat Hygiene and Technology	2		2	2x14=28		28
Milk Hygiene and Technology	2		2	2x14=28		28
Practical Training		5	5		5x14=70	70
Total	**10**	**5**	**15**	**140**	**70**	**210**

*: Each semester consists of 14 teaching weeks

4.1.6. RATIOS

These must be delineated from Tables 4.1, 4.2 and 4.3.
For explanation about ratios, see the section „Main Indicators" of Annex I. The indicator derived from the ratios established is the denominator when the numerator is set to 1.

4.1.6.1. GENERAL INDICATORS OF TYPES OF TRAINING

As indicated in Table 4.1, Table 4.2 and Table 4.3, the figures for the numerators and denominators are defined as follows:

Figure	Total number of teaching hours
A	Lectures
B	Seminars
C	Self-directed learning
D	Laboratory and desk based work
E	Non clinical animal work
F	Clinical work
G	Other

RATIO	FORMULA		IU FVM	EAEVE
R 6	$\frac{\text{Supervised practical training } (D+E+F)}{\text{Theoretical training } (A+B+C)}$	*1836/2814*	**0.652**	**0.602** (Min.)
R 7	$\frac{\text{Laboratory \& non clinical animal work } (D+E)}{\text{Clinical work } (F)}$	*1106/730*	**1.515**	**1.809** (Max.)
R 8	$\frac{\text{Teaching load } (A+B+C+D+E+F+G)}{\text{Self directed learning } (C)}$	*4650/126*	**36.904**	**2.59-46.60** (Recommended range)

4.1.6.2. SPECIAL INDICATORS OF TRAINING IN FOOD HYGIENE / PUBLIC HEALTH

RATIO	FORMULA		IU FVM	EAEVE
R 9	$\frac{\textit{Total number of hours in the vet curriculum}^{1}}{\textit{Number of hours in FH /VPH}^{2}}$	*4650/210*	**22.142**	**8.86-31.77** (Recommended range)
R 10	$\frac{\textit{Number of hours obligatory extramural work in veterinary inspection}^{3}}{\textit{Number of hours in FH /VPH}^{2}}$	*80/210*	**0.380**	**0.074-0.556** (Recommended range)

Origin numerators, denominators:

[1]: Total as derived in Table 4.1

[2]: Total as derived in Table 4.1, Subject 5

[3]: Figures to be taken from Table 4.5

4.2. COMMENTS

It is considered that the curriculum of the Faculty meets with the minimum requirements of European directives.

Particularly, elective tracks can help the students prepare for their professional careers.

Significant improvements in arrangements of the curriculum hours have been made in the training program. A lot of developments such as animal welfare and herd health are provided and ambulatory service practice is carried out intensively. At the start of the each semester, the Deanery and hospital management discuss the current problems and aim to solve the problems and organize ambulatory clinic activities.

4.3. SUGGESTIONS

R6 and R7 ratios are close to limit values. Several parts of some courses which are indicated as theoretical lectures in the tables are performed as practical training. Additionally, sometimes the students perform clinical work in courses which are indicated laboratory and desk based work, non-clinical animal work and theoretical training. These hours cannot be clearly determined. Nevertheless the ratios are within the acceptable limitations.

CHAPTER 5

TEACHING AND LEARNING: QUALITY AND EVALUATION

5.1. FACTUAL INFORMATION

5.1.1. TEACHING PROGRAMME

Describe the measures taken to ensure coordination between different departments, institutes and services.

The Teaching programme is coordinated by the Commissions of Education, Accreditation, and Student Affairs. Commissions of Education, Accreditation and Student Affairs consist of twelve academic staff and an administrative official. Commission of Education is generally gathered every week and discusses the methods and problems of education and teaching on different matters. In the meantime, according to the legislation and procedures the commission examines, assesses the matters and suggestions related to education and teaching, coming from students, academic units and Rectorate, and submits the decisions taken to the Faculty Board and Administrative Board as suggestions.

Depending on the case, meetings are sometimes held together with the Commission of Accreditation and student representatives are also invited to the meeting if their presence is required. During the discussion of the agenda items, the Commission of Education negotiates with the Heads of Departments, academicians, student representatives of classes and other staff, and accepts their opinions and suggestions if required. In necessary, the Commission of Education forms sub-commissions among academicians and students within its body and conducts activities.

Working principles of the Commission of Education are as follows:

- Registration procedures of students, introduction to courses and Departments, organizing course and exam programmes, implementing the graduation procedures etc.
- Conducting studies on the requests of the Divisions/Departments for opening new courses, determination of student numbers, sufficiency of the physical opportunities in the educational activities etc. and submits its opinion to the Faculty Board or the Faculty Administrative Board.
- Negotiation of the status of the suggested new courses (compulsory/elective etc.), status of curriculum and credits.
- It applies surveys with the undergraduate and graduate students by contacting the other partners to develop and restructure the Veterinary Education quantitatively

and qualitatively. In line with the information obtained, academic programme and adequacy of the academicians are evaluated. Accordingly, strong and poor aspects of the education, employment and continuation of work. The Commission shares the data and its suggestions with the Faculty Administration and Board Members.

- Commission of Education works in close communication and coordination with all the Departments, Animal Hospital and other supportive units in the clinical and other practical activities of the students. It holds common meetings.
- It deals with the printing and distribution of course notes, laboratory booklets and Clinical and Practice Reports.

Describe the pedagogical approach of the Faculty. In particular, describe the new approaches such as problem-based learning, interactive computer-assisted learning etc.

First of all, basic sciences (Physics, Chemistry, Medical Biology etc.) and basic information about the normal structure and functions of the animals are taught to students to provide necessary skills so that they can comprehend Preclinical and Clinical subjects in a better way and more easily. The main objective of teaching basic sciences is to form a strong basis for Veterinary Education. In basic sciences, subjects are taught by Veterinary Academicians in line with the directives of the European Union. In the educational programmes of the basic sciences, numerous experimental applications are performed to support teaching theoretical concepts. For example, experimental demonstration of the theories and laws during the laboratory teaching and the occurrence of the occasions at the molecular level provide basic information for clinical and preclinical subjects.

The Faculty has sources with up-to-date information such as new course books, course notes, practice notes, Educational CD's on various topics etc. Besides, usage of the WEB-based virtual teaching sources, including audio-visual materials like written texts, sounds, images, animation and videos, within the educational process and provision of such opportunities make great contributions to the students' skills for learning and gaining experience and balancing of the information in the Veterinary Education. These contain problem based and topic oriented teaching approaches.

Therefore, a link is presented on the website of the Faculty for a Veterinary Medicine Educational Programme under the title of WikiVet e-Learning to support the conventional education of our students as Istanbul University, Faculty of Veterinary Medicine. Our students and Academicians can make use of those online Educational sources after signing up on WikiVet WEB for free and obtaining their individual passwords. Again, a part of our Veterinary Medicine Educational Curriculum and educational external links are shared on the website of the Faculty under the title of e-Learning. Moreover, we continue work on developing new sources related to e-learning.

In all disciplines, courses are given through the computer, internet, data and video projection, smart board, overhead projector, photos, videos, PowerPoint presentations and on animate materials. Drawings from other commercial sources (e.g. CD's, video cassettes etc.) are also used. By this way, students are helped to reinforce what they have learnt on the course subjects and opportunities which can be used as sources for the exam preparation are also presented. Students can have easy access to these sources both intramurally and extramurally. Meanwhile, these sources can be reached in the Library of the Departments and Faculty.

There are also routine laboratory equipment and materials available to student's usage alone or together with other students during the practices. To meet the expectations of the animal rights in the practical courses, two different approaches are followed in the laboratory: an effort is made to use various models, devices and computer as often as possible during the discussion of the practical subjects, and students only conduct animal experiments when animal materials have to be used.

Clinical importance of the body structures are taught in course and presentations of Topographic Anatomy which is given in the fourth semester/second grade. Thus, clinical practices are supported. Our students find an opportunity to gain wide knowledge about many pathological changes in different animal species, since the Department of Pathology examines various species (farm animals, zoo animals, pets, birds, fish and reptiles etc.) macroscopically and microscopically during the year. Cases are the materials sent or brought by the private veterinary clinics and hospitals, animal owners and institutes, ministries, official and non-governmental organizations etc.

Students are helped by expert and student clubs with databases, websites, search tools and search techniques. The Central Library of the University is the leading unit setting an interface with the world over the innovative information technologies. It aims to provide students practical computer skills and library sources, and to help them examine and obtain the literatures with electronic catalogues and databases. In the Library of the Faculty, many opportunities on various topics especially about veterinary subjects are offered to our students, communication technologies and periodical publications.

In Clinical and Preclinical classes, up-to-date significant diseases are taught with the guidance of Basic Sciences, which were taught before. A problem-based approach is adopted while explaining the diagnosis of the diseases and differential diagnostic aspect. Ethical and deontological aspects of Veterinary Medicine, professional laws and legislation issues are also given within the educational curriculum.

Clinical training is performed on patients; live and model educational materials are used during the clinical practices. Especially, clinical approaches which focus on the differential diagnosis of the diseases and problem-solving are taught. Hence, students know how to use these methods in clinical studies in the future.

Students approach the patients on the basis of individual problem-solving in the animal hospital. There is a strong dialogue between student and academician during these activities in the hospital. Here, students have to examine and treat their own patients under the supervision of an academician. Students are liable to fulfil the Clinical and pathological implementation criteria, which they will learn on their own, with an academician or by assisting the academician.

PowerPoint presentations are mainly used in the Food Hygiene course together with video presentations. Slaughterhouse practices are performed. Within the scope of practical studies, basic methods are taught to provide practical experiences in many significant fields (e.g. food microbiology, chemical food safety, food spoilage and preservation milk and meat products processing technology and inspection, meat inspection, official controls of institutions and foodstuff).

Indicate the extent to which course notes are used to supplement or substitute for the use of veterinary textbooks.

Course notes and practice manuals are regularly written and distributed. Students prefer short course notes and PowerPoint presentations when making preparation for the mid-term and end-term exams. Students can have access to these sources through Departments, Academicians, Deanery, Internet Café used by students, computers in the library of the Faculty and the internet at their homes. The purpose behind supporting the students with course notes, PowerPoint presentations and educational CD's is to enable the easy learnability and well-comprehension of subjects. For the courses, there are also new, up-to-date books and literatures in native and foreign languages in the library of the Faculty.

Describe (if applicable) any established or contractual arrangements that support undergraduate teaching between the Faculty and outside bodies (e.g. farms, breeding centres, practitioners, state veterinary services, factories/processing plants, outside laboratories etc.)

Renewing the educational, research, service programmes and their quality continuously in line with the European standards, the Faculty gives great importance to the cooperation with private and official establishments within the country and abroad. In this sense, we have national and international relationships through the cooperation protocols signed with many external partners. Relationships with external partners provide many advantages especially for the education of students and activities of academicians.

As a result of cooperation, students of the Faculty have the opportunity to perform their theoretical courses, internships and practices in the various establishments. On certain days of the week, the below-mentioned establishments are visited for ambulatory clinical service. Students practice during the ambulatory clinic service under the supervision of academicians and the Veterinary Surgeon in the visited place.

Nationally;

a. Contractual establishments receiving Ambulatory Clinical Service:

- Jockey Club of Turkey,
- Association of Livestock Milk Breeders,
- Association of Sheep Breeders,
- Private Farm (Doğamar),
- Küçükçekmece Municipality Animal Shelter,
- Avcılar Municipality Animal Shelter.

b. Contractual establishments receiving Clinical Service at Hospital

Clinical services are rendered in hospital environment for the official and non-governmental organizations such as below:

- Ministry of Forestry and Water Affairs,
- Presidency of Disaster and Emergency Management,
- Bayrampaşa Municipality,
- Silivri Municipality,
- Avcılar Municipality,
- Istanbul Provincial Gendarmerie Command
- Istanbul Provincial Security Action Force Branch Office.

Internationally;

a. Bilateral educational agreements (with Veterinary Medicine Faculties)

- Ludwig Maximilians Universität (Munich-Germany)
- State Veterinary Academy (Saint Petersburg-Russian Federation)
- Skryabina State Veterinary Academy (Moscow- Russian Federation)
- Bauman Kazan State Veterinary Academy (Kazan-Russian Federation)
- Manas University (Bishkek-Kyrgyzstan)
- Azerbaijan State Agricultural University (Ganja-Azerbaijan)
- Kazakhstan State Agrar University (Almaty-Kazakhstan)
- University of Environmental and Life Sciences (Wroclaw-Poland)
- Experimental Zooprophylactic Institute (Perugia-Italy)
- University of Sassari (Sassari-Italy)
- University of Camerino (Camerino-Italy)
- University of Messina (Messina-Italy)
- University of Veterinary and Pharmaceutical Sciences (Brno-Czech Republic)
- University of Sarajevo (Sarajevo-Bosnia-Herzegovina)
- Trakia University (Stara Zagora-Bulgaria)
- University of Forestry (Sofia-Bulgaria)
- Ss. Cyril and Methodius University (Skopje-Macedonia)
- Latvia University of Agriculture (Jelgava-Latvia)
- University of Ljubljana (Ljubljana-Slovenia)
- University of Science and Technology (Irbid-Jordan)
- IVSA-Japan (Tokyo-Japan)
- IVSA-South Korea (Seoul- South Korea)

b. Erasmus Agreements

- University of Environmental and Life Sciences (Poland)
- Alma Mater Studiorum Universita di Bologna (Italy)
- University of Sassari (Italy)
- University of Camerino (Italy)
- University of Messina (Italy)
- Universidad de Leon (Spain)
- University of Ljubljana (Slovenia)
- Trakia University (Bulgaria)
- Aristotle University of Thessaloniki (Greece)

- Banat University of Agricultural Sciences and Veterinary Medicine (Romania)
- "Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine Iasi (Romania)

Besides, there are national and international institutions which students find out themselves for education.

In addition to the foreign students, Veterinary Surgeons who come from the country and abroad are also provided with in-service trainings in the Faculty.

The number of students and academicians from the foreign country universities, to the Faculty for activities like education, internship, training, visit, giving lectures and research, and number of students and academicians sent from the Faculty for the same purposes are presented in the tables below.

Student Exchange With Foreign Country Universities
(Between 2010-2014)

Programme	Duration	Number of Incoming		Number of outgoing	
		University	Student	University	Student
Erasmus	1 semester	4	22	3	9
Bilateral agreement	15-30 days	18	218	10	109
Training	1 month	3	4	8	9
Excursion	1 week	36	177	5	37
Total		**61**	**421**	**26**	**164**

As seen, 421 foreign students have come to the Faculty in total within the last four years and received education in different periods. And 164 students have been sent from the Faculty abroad for education through the Deanery.

Accommodation and catering of the guest students besides their education in the Faculty are covered by our University for free. Our own students are sent abroad under the same conditions.

Academician Exchange With Foreign Country Universities
(Between 2010-2014)

Programme	Duration	Number of Incoming		Number of Outgoing	
		University	Academic	University	Academic
Erasmus	1 week	2	14	2	2
Training	1-3 months	4	4	3	4
Excursion	1-5 days	13	143	-	-
Total		**19**	**161**	**5**	**6**

During the same time period, 161 foreign academicians have come to the Faculty for in-service training, giving lectures, visiting and research.

Last year, Students of Veterinary Medicine from 44 countries attended the 63rd IVSA (International Veterinary Student's Association) congress between 28 July and 9 August 2014 in Indonesia. In this congress, 2 students represented Istanbul University, Faculty of Veterinary Medicine. In the congress, short/long-term inter-Faculty international student exchange programmes executed in the academic year 2013-2014 were taken into evaluation. Istanbul University, Faculty of Veterinary Medicine IVSA Club participated in this competition, where 211 student exchange programmes were evaluated from 91 Veterinary Faculties of 38 countries in total, with 3 exchange programmes (England-Liverpool, Czech Republic-Brno and Bosnia-Herzegovina-Sarajevo). The evaluation committee which consisted of 21 people from 13 countries selected the Student exchange programme between Istanbul University, Faculty of Veterinary Medicine and University of Sarajevo, Faculty of Veterinary as the *Second Best Exchange Programme* among all the exchange programmes.

Describe the general learning objectives in the curriculum of Veterinary Medicine and how these are ensured

As expressed in the educational guidelines and regulations of the Faculty, the objective of the curriculum is to render the best service for the animal and human health of the country by training veterinary surgeons to use the highest standards of the Veterinary Medicine according to the environmental circumstances, and to develop themselves following graduation. Graduates are sensitive to animal husbandry policies of the country and the world, aware of the country's needs in terms of animal health, have production and clinical knowledge about farm, house and wild animals, know about diseases transmitted from animals to humans, exhibit behaviours in compliance with the professional ethics and traditions of Veterinary Medicine, work for the progress in the science of Veterinary Medicine and can take responsibility with patients and patient owners, and have knowledge about food safety.

To achieve this goal, improvements are continuously made in physical areas, the number and types of courses, laboratories and hospital equipment are increased, information and service technologies are constantly renewed, and academicians and students were helped to make use of the hospital automation system after its instalment for the purpose of education and service. Ambulatory clinical service is rendered to public and private premises and animal shelters to develop the professional practical opportunities of the students. The good point for the emergency clinical practice is that intern students can have a chance to take responsibility and practice individually. Educational excursions are held within the sector. Introductory and informative organizations are arranged for professional employment. Domestic and international meetings are held to reveal and teach the developments and innovations in the field of Veterinary Medicine.

Describe how the Faculty collects the data related to the improvement of these Day-one skills of the students.

Firstly the Rectorate, then the student representatives of classes in the Faculty, students, academicians, graduates, other relevant faculties, Ministry of Food, Agriculture and Livestock, Ministry of Health, Ministry of Forestry and Water Affairs, Council of Higher Education, Municipalities, Chambers of Veterinary Surgeons and other external partners can always give the Faculty advises on education and teaching. These advices are received through face-to-face interviews, correspondences, workshops and surveys repeated every year. The received advises are negotiated by the Commissions of Education and Accreditation and submitted to the Faculty Board and University Senate. Results become useful for the determination of the real requirements expected from the Veterinary Surgeon outside and accordingly the arrangement of the teaching plan and processes.

5.1.2. THE TEACHING ENVIRONMENT

Describe the available staff development facilities, particularly in relation to teaching skills

In the Faculty, some subject-based, organized and group-based activities (e.g. assessment and evaluation seminars for the academic staff, training for using the hospital automation systems, international quality studies training on Veterinary Education and services, job security and health training etc.) are performed for the education of the academic and administrative staff.

As another way of training academic staff, scientific organizations are arranged, the staff is encouraged and supported to participate in the scientific congresses and conferences in the country and abroad. Some students and academicians in the Faculty take duties as the members and leaders of national and international organizations.

Describe the available rewarding systems of teaching excellence
(e.g. accelerated promotion, prizes etc.)

Teaching in the Faculty is regularly evaluated by the student and the Deanery every year. Students evaluate it with surveys and the Deanery by considering the responses given in the surveys, comments and course success obtained from exams, the annual number of graduates, and etc. Although student comments do not constitute a negative result for the career of the academicians, they help with the discussion of the results and modification in the teaching system of the Faculty.

"*Pleasant expressions*" of the students and the people receiving service about the staff and Faculty increase the motivation. However, people who achieve excellence in teaching and

serving are not provided with any financial support or official appreciation. The Deanery shares the results of the evaluations with students and the staff and help with the present developments and the precautions that must be taken.

Describe other measures taken to improve the quality of teaching and learning opportunities.

Satisfactions of students and academicians have been remarkably increased by the investment in the academic activities of the Faculty:

- The physical areas of the Faculty have been improved.
- Information technology and computers have begun to be used in academic activities more frequently.
- A large and modern Research and Training Hospital was built, where students are trained. Modern conditions are provided in the large and small animal policlinics of the hospital for clinical teaching and service.
- New settlement areas are built for the farm animals in addition to the available training and research farm.
- Scientific Research Club, which is one of the twelve student clubs available in the Faculty now, encourage the undergraduate students to conduct scientific research through the 17th International Veterinary Medicine Student Congress that will be held in 2015 and regularly every year. In this congress held in the Faculty every year, Veterinary students from the universities in Turkey and abroad find an opportunity to come together and present their researches here.
- Tasks are given to students for their self-improvement in other National and International Congresses.
- Increases have been observed in individual utilization and studies with the use of the developed services of the library.
- Problem-based learning and self-learning have been put in practice.
- Different elective course tracks have been formed according to the students' tracks of interest. There are a lot of elective courses in each track.
- Students can connect and use the wireless internet network of our campus with their own computers, tablet computers and smart phones or have access to the internet through the computers of the Faculty.
- Important contributions have been made to the academic activities of the students through the internet.
- Equipment in the student laboratories of the Departments have been provided and modernized through projects and purchases.
- Students are helped with self-improvement and negotiation of many subjects in an extracurricular free atmosphere with the excursions held to professional and social establishments within the country under the supervision of the academicians.

5.1.3. THE EXAMINATION SYSTEM

Describe the examination system of the Faculty, in particular:
- Is there a central examination policy for the Faculty as a whole? If „yes", by whom is it decided?

Exams

Exams consist of mid-term exam, quiz, end-term exam, excuse exam, single-course exam and exemption exam. Guidelines related to exams are as follows:

a. Mid-term exam: Exam held within the semester of a course foreseen in the academic programme of the Faculty.
b. End-term exam: Completion and make-up exams held at the end of the course semester.
   1. Completion exam: End-term exam.
   2. Make-up exam: Exam held after the completion exam for the students who could not take the completion exam despite the fulfilment of the conditions, or if taken, got unsuccessful (FF) or conditionally successful (DD) and (DC) letter grades.
c. Excuse exam: Exam held in substitution for the mid-term exam upon the acceptance of the excuse of a student, who could not take the mid-term exam due to a valid reason despite the fulfilment of the conditions and submitted the excuse with a petition within the due course, by the Faculty Administrative Board.
d. Single-course exam: Exam held within fifteen work days following the end of the make-up exams for the students who cannot graduate because of only one unsuccessful course without considering whether the course is given per semester or year. Single-course exam cannot be taken for a course which has not been taken before or failed due to absence.
e. Exemption exam: Exam held at the beginning of each academic year for the courses which are found appropriate for exemption with the suggestion of the Faculty Board and the decision of the Senate.

Exams are held at times and places determined according to the programme, which prepared and denounced by the Faculty Deanery. However, some intra semester activities that are determined at the beginning of the semester, except for the mid-term exam, and practice exams can be performed independently from a certain examination programme and announcement. When seen necessary, exams can also be held without the work hours or on Saturday and Sunday except for national and religious holidays pursuant to the decision of the Faculty Administrative Board. It is obligatory for the students to submit their identity cards to take the exam.

Exams are held in Faculty buildings. But they can be held outside the Faculty buildings and facilities pursuant to the decision of the Faculty Administrative Board according to the status and requirement of the course.

Exams must be held in a written format. However, they can also be held in written and verbally/practically or verbally/practically pursuant to the decision of the Faculty Administrative Board.

Students who cheat, try to cheat or help with cheating during the exams and students who are found to have cheated or helped with cheating during the evaluation get zero (0) for that exam. In this case, the attended discipline committee is informed to discuss the situation of this student.

Exam papers and/or records are kept for two years in line with the rules specified by the relevant Faculty Administrative Board and disposed with the preparation of an official report at the end of this duration.

Mid-term exams

Mid-term exams of a maximum of three courses for the same semester can be held within one day. The score of the mid-term exam which is skipped without an excuse is considered zero (0) including the repeated courses, and the average mid-term exam score is calculated accordingly. Skipping mid-term exams does not constitute an obstacle for taking the end-term exams.

End-term exams

End-term exams of each course are held at the end of the semester, when that course is given. In order to take the end-term exams of a course, it is obligatory to:

a. Attend minimum 70% of the theoretical courses,

b. Attend and be successful at minimum 80% of the practices in practical courses.

Students who could not take the completion exam despite the fulfilment of the conditions, or if taken, got unsuccessful (FF) or conditionally successful (DD) and (DC) letter grades can take the make-up exam for that course. Grades of these students for the exams and activities of that semester are considered equally valid. In this case, the last success grade taken from the course is reflected on the transcript in the CGPA calculation without taking the previous grade of the completion exam into account.

Objection to exam grades

Students can apply to the student affairs office with a petition within three working days following the announcement of the mid-term results and the end-term exam grade, which is determined through evaluation over 100, and ask for re-assessment of their exam papers. The Dean establishes a three-academic commission from the relevant academicians or academic staff, one of whom is responsible for that particular exam, for the assessment of the exam paper. If there is only one academician in the department/branch related to the exam, other members of this commission are selected by the Dean among the academicians of the courses which are close to the course of the exam taken.

a. Commission concludes the objections within three working days at the latest.

b. Changes, which are made due to any reason after the announcement of the success grades in letters, are not reflected on the previous statistical distribution of that course.

Is there a central examination policy for the Faculty as a whole?
If "Yes", by whom is it implemented?

The examination system is a part of the curriculum and the student affairs officials prepare the exam programmes. Stages of printing the questions and optical evaluation of some exam results are under the duty of the Deanery. The examination system includes one mid-term exam, quizzes, end-term exam and end-term make-up exam. Examination programme and instructions are prepared together with the Deanery and student representatives of the classes at the beginning of the semester and announced on the website of the Faculty and on the Student announcement board. This examination programme is shared with all the Departments and Academicians.

Are there special periods without teaching for examinations during the year?

Academicians and students have to obey the Study and Examination Rules. There is a two-week mid-term exam period without teaching in the middle of each semester and two-week end-term and make-up exam periods without teaching at the end of the semester.

What forms of examinations are there?
(written exams, multiple-choice tests, oral, practical, clinical examinations, continuous examinations etc.)

In order to assess the knowledge levels of the students, exams are held by the academician who gives the course.

Mid-term exam cover the subjects until the last lecture given. End-term and make-up exams include all the subjects of the semester. Students have to take the end-term exams on the dates previously determined by the Deanery and the student representatives of the classes together. In practical exams, students are taken to examination by different academicians. Students who fail the end-term and practical exams are taken to examination in another exam period within the same scope.

Only written exams are applied for the examination of the theoretical courses. Written exams have the types of written, multiple-choice, blank-filling, true/false, recognition of an image and short-answer exams.

In some Departments, verbal practical exams are held. Practical exams are particularly applied on animals, devices, tools, medication etc. under the supervision of an examining academician in clinics. Practical exams are held on microscope, laboratory implementations, cadavers etc. in Basic Sciences and Preclinic departments.

It is obligatory for the students of last grade to prepare seminars on various topics and present them before the students and academicians for improving the verbal expression of their own opinions.

Is use made of external examiners?

Use of external examiners in intramural examinations is not made. However, some exams are held by external examiners including the State exams after the graduation of the students.

How many retakes of an examination are allowed?

Exams consist of mid-term exam, end-term exam, excuse exam, single-course exam and exemption exam. Skipping mid-term exams does not constitute an obstacle for taking the end-term exams. End-term exams of each course are held at the end of the semester. In order to take the end-term exams of a course, it is obligatory to:

a. attend minimum 70% of the theoretical courses,

b. attend and be successful at minimum 80% of the practices in practical courses.

Students who could not take the completion exam despite the fulfilment of the conditions, or if taken, got unsuccessful (FF) or conditionally successful (DD) and (DC) letter grades can take the make-up exam for that course. Grades of these students for the exams and activities of that semester/year are considered exactly valid. In this case, the last success grade taken from the course is reflected on the transcript in the cumulative grade point average calculation without taking the previous grade of the completion exam into account. If students fail the exams of the course, they take the mid-term exam in the coming examination period again.

There are two sessions of examination, namely Completion and Make-up Examinations, taken within the examination period at the end of the semester. Students are considered unsuccessful if they do not take the end-term exam of the course they have studied. They have to get registered firstly for the unsuccessful course in the following academic semester and take the relevant exam in the examination period. Students retake the exam during the examination periods until they become successful.

Do students have to pass the examination within a certain time?

There is no temporal restriction for passing the exams. Students must be successful at all the obligated courses to graduate from the Faculty.

Do students have to pass the examinations before they can start other courses?

In the Faculty, students whose Cumulative Grade Point Averages (CGPA) are below 2 in two successive semesters are considered unsuccessful. Unsuccessful students cannot take any new compulsory courses, but can take elective courses from an upper semester. They have to compulsorily repeat the previously unsuccessful or conditionally successful courses.

Students whose CGPA's are above 2, are liable to take the compulsory unsuccessful courses of the lower semesters, for which they received (FF) and (FD), while taking courses from the upper semesters; moreover, they can retake the conditionally successful courses, for which they received (DD) and (DC) from the lower semesters. In this case, the last success grade received from the repeated course is reflected on the transcript in CGPA calculation without considering the previous grade.

Students who increase their CGPA's above 2 with course repetition, continue their education normally.

In the implementation of semester guidelines, students with CGPAs above 3.50 for at least two years can take the related and unconditional course/courses of an upper grade besides the courses of their current year. For this, students must take all the courses and have no unsuccessful courses until the current grade. In this context, it is determined by the decision of the Faculty Administrative Board which courses can be taken from the upper semesters.

5.1.4. EVALUATION OF TEACHING AND LEARNING

Describe the methods used to assess the quality of teaching and learning in the Faculty.
Indicate whether the evaluation is a Faculty procedure, or one set up by departments, by students or by individuals.

- *- Indicate the use of external evaluators.*
- *- Describe the role of students in the evaluation of teaching and teachers.*
- *- Describe the post-period of the evaluation.*

In our country, quality of the higher education is evaluated by the Presidency of Board of Higher Education, which is a state organ, at the national scale.

Coordinated quality management has begun in all the divisions of the Faculty including the education following the initiation of ISO 9001:2008 and TS EN ISO-9001 quality system in all the units of the University, and improvements has been achieved. At this point, the membership of Istanbul University in the European University Association has also been effective.

Academic staff and academic activities are evaluated in the Faculty as follows: students' evaluation of the academicians and educational system started with a questionnaire including the participation of all students in 2002. In this survey, students were asked to evaluate the lecturers in terms of teaching capability, equipment used for teaching and the knowledge given to the students etc. Eventually, the Deanery decided on the initiation and regular application of students' evaluation survey in more detail and it is still applied.

In every academic year, a questionnaire is applied to students by a Commission established by the Deanery; opinions are separately asked about all the academicians, courses and the Faculty in this survey. Within the survey procedure, students evaluate the academicians and also their opinions about the course content and presentation, positive and negative judgments about the Faculty. Results are shared with the Faculty Management, academicians and students and used in the development of the programme after their assessment by the Evaluation Commission (Satisfaction assessment from educational processes).

Besides, Departments can ask the students for an evaluation at the end of the course in relation to their own courses and implementations. These evaluations are managed by the academic staff of the relevant Department. Considering the results, arrangements are made in coordination with the Deanery and other Departments.

The Commission of Education is gathered every semester under the presidency of the Vice Dean, who is responsible for education, evaluates the courses and curriculum subjects in line with the proposals of the Departments and the Commission of Accreditation and proposes the suggestions for modification in the content to the Faculty Board.

The Faculty cooperates with external partners to help achieve success in its activities, achieve its goals, increase the success level at the national and international scales, meet and go beyond the expectations of the customers

Every year, SWOT analyses are conducted and assessed in the Faculty; officers of official, non-governmental and private-sector establishments participate in these analyses including the Ministry of Food, Agriculture and Livestock in particular, Ministry of Forestry and Water Affairs, Turkish Veterinary Medical Association, Chamber of Veterinary Surgeons, Municipalities, Professional Organizations, Jockey Club of Turkey, Association of Breeding Milk Producers, Association of Sheep Breeders, Association of Poultry Breeders, Private Veterinary Clinic, Policlinic and Hospital Officers, officials of Veterinary Medication and Material sector etc.

New and old graduates are asked for the evaluation of the education in the Faculty and their feedback is used to assess the graqduates progress in terms of employment and career. Such feedback are is on the website of the Faculty. Data on both old and new graduates have been collected since 2010. Unfortunately, rates of feedbacks are low, but we have found out that graduates who give feedback make valuable comments and give valuable advice to improve the educational curriculum. Graduates are encouraged for more frequent participation and this survey is continuously published on our website.

According to our mission, the main duties of the Faculty are education and teaching at the standards of the European Union, research and public service. Improvements have been made due to the advice given by both internal and external partners to achieve these objectives. Meanwhile, the continuous evaluations are analysed and new sources are added. This attribute has increased the awareness on abroad. In our Faculty, there are now students who from various countries of the world including Germany, Albania, Azerbaijan, Austria, Bulgaria, Bosnia-Herzegovina, Greece, Hungary, Iran, Kenya, Kosovo, Macedonia, Moldova, Nigeria, Palestine, Turkmenistan, Uzbekistan, Russia and Sweden.

Moreover, a student from the Faculty became the World Head of the IVSA during the headship selections of the IVSA (International Veterinary Student's Association) in December 2014. This will make a significant contribution to the promotion of our Country and Istanbul University, Faculty of Veterinary Medicine as well as the overseas education of our students.

5.1.5. *STUDENT WELFARE*

Describe any measures taken to protect students from zoonoses (e.g. rabies) and physical hazards.

Our students, who want to receive healthcare service, make use of the free healthcare services by applying directly to Medico-Social, University and State Hospitals with their identity cards. Information about the obligatory rules and safety arrangements in the Faculty, clinics and laboratory is given to students by the academicians during the first classes of each subject. Academicians must explain the hazards on health as well as the equipment used in the practical courses. Preventive precautions and matters regarding how to behave in case of a health and life-threatening hazard are taught to students. 3rd and 4th grade students who are sent for internship are insured for liability by the Faculty.

No mass prophylactic vaccination is applied to the Students and the Faculty Staff against zoonoses, because "immunity of physical integrity is an important part of the human rights pursuant to the provisions of the Constitution, Laws and Regulations. Medical intervention is implemented only by receiving an informed consent/approval from the person except for

medical obligations and situations written in the law." With regard to vaccination, there are no mandatory provisions which bring a legal attribute different from the general rule or any different implementations in our legislation. However, the related student or staff member is taken to the staff healthcare centres on request and can get vaccinated for free. This implementation is conducted in coordination with the Provincial Directorate of Health within the scope of general health rules.

Approach to animals and restraining them is taught to students who work in the Clinical Environments or within a facility related to Veterinary Medicine; students are made to wear caps, masks, clothes, shoe covers, latex gloves, gowns or special protective clothes, which are for single-use, and protective glasses if needed. All the safety principles are taught in veterinary clinics, laboratories, farms and other premises. When a farm is visited, students are made to wear boots, rectal palpation clothes and gloves during the rectal examination and latex gloves for holding the large animals, simple examinations and interventions.

Academicians and authorized people have to show the students which rules will be obeyed when entered to the necropsy room each time. Students can enter the necropsy room only after the observation of the defined rules: students must have the permission of an academician or authorized person to enter the room; students are initially taken to the changing room to wear appropriate single-use caps, masks, clothes, arm covers, boots, shoe covers and latex gloves here.

Students must not leave their bags or other material anywhere except within the cabinet. Long hair must be tied up. Necklaces, bracelets or any other decorative items must not be outside the clothes and gloves. Hands must be washed after every operation and before leaving the necropsy room; tools must be washed, equipment must be cleaned, rinsed, disinfected and placed back after the operations. Staff must be informed in case of any accidents. It is forbidden to smoke, drink or eat anything in the necropsy room.

Areas of all the units including the waiting rooms are routinely cleaned and disinfected every day. Disinfection is obligatory in places where sources of infection are possible including the clinics, operation rooms, laboratories, all the classrooms etc. There are appropriate areas in the laboratories, where chemical substances are used, for washing the eyes. There are signs and writing at the entrance of the radiology unit for students who receive education here. Moreover, students are made to wear protective gowns by the vet and other authorized people; protected areas are shown to them and they stay in those areas during the scanning.

Describe the facilities provided for students (not related to the teaching programme).

In the Faculty, there is a cafeteria, a computer room for students with 18 computers, internet connection and other communication and visual equipment, resting areas, Rooms of Student Clubs, Conference rooms, library where the opportunities of computers and internet that can have access to multimedia sources are presented besides studying from 08:00 until 24:00 during the day, night and weekends, educational documents, journals

etc., and special cabinets where students can put their personal stuff and educational instruments.

Within the campus overall, there are large cafeterias where breakfast, lunch and dinner (including vegetarian, diet food) are given, wireless internet, resting areas, dormitories for 1253 people, a comfortable library environment and Health-Culture student centre rendering healthcare services. In addition, there is a guest house for 60 people, who come from other places to the campus and whose accommodation and eating needs are met.

Students who receive education with Erasmus or other exchange programmes in the campus can stay in this guest house or the dormitories.

University Sports Services provide the students with playing sports in various outdoor and indoor sports facilities from morning to evening. Here, there is a sports hall for basketball and volleyball and including a fitness centre, two astro turf pitches – one and two small–outdoor and indoor tennis courts, outdoor basketball court, table tennis, running tracks and natural sports areas, and students can make use of these opportunities for free.

Moreover, full-fledged sports facilities will be put into service by Istanbul Metropolitan Municipality soon. There are students from the Faculty of Veterinary Medicine who play in National ad University sports teams in various branches and they are supported by our University and Faculty. These students participate in both national and international sports competitions. Students can reach the campus easily by Metrobus, IETT Buses, Private Public Buses, Minibuses, See Buses and Student buses. Besides, there ring services in the campus which can be used for free to travel within the campus.

Scientific, social and cultural development of our students is enhanced with the spring festivals which are organized in Avcılar Campus every year, International Veterinary Medicine Student's Research Congress and other professional and cultural activities (concerts, dances, sports competitions, exhibitions, dinners, shows, etc.).

Describe the guidance offered by the Faculty for students with problems including the social and study issues and about career development and presented job opportunities during their training.

In the Faculty, face-to-face interviews are held and surveys etc. are applied every year to identify the most common problems students may encounter, and with their identification, solutions are found for the problems and requirements. There is a close cooperation between the Faculty Administration and Veterinary Student Clubs. The Faculty Administration supports the establishment of new student clubs and the intra- and extramural club activities.

In total, 12 student clubs perform activities in the Faculty and they were established by the students: Beekeeping Club, Club of Atatürk Ideology, Horse Riding Club, Computer Club, Scientific Research Club, Farm Animal Medicine Club, Food Hygienists' Club, Sports Club, Wild Life Research and Protection Club, Dog Psychology and Training Club,

International Veterinary Student's Association (IVSA), Sea Veterinary Medicine Club. Last year (2014), 67 activities were performed in total by these clubs at national and international scales.

STUDENT CLUB ACTIVITIES OF 2014			
No	**Clubs**	**Activities**	**Date**
1	Scientific Research	Publication of the Journal Zoom	01.01.2014
2	IVSA-Istanbul	Embryo Production in Ruminants with Biotechnological Methods	08.01.2014
3	IVSA-Istanbul	62nd Winter Symposium and Scientific Training (Workshop) Courses (with 123 students who came from 35 Countries)	08-10.01.2014
4	IVSA-Istanbul	Cultural excursion and visiting historical places	09.01.2014
5	Wild Life Research and Protection	Release of a roe deer to Polonezköy	05.02.2014
6	Wild Life Research and Protection	Release of a jackal in Çatalca after its treatment	20.02.2014
7	Scientific Research	Erasmus Orientation Meeting	25.02.2014
8	Farm Medicine	Veterinary Surgeon in Farm Medicine (DVM Haluk Gülmez, CP Yem)	03.03.2014
9	Computer Club	Infrastructure support in educational seminars	04.03.2014
10	IVSA-Istanbul	Promotion and Orientation Meeting for the Czech Republic	05.03.2014
11	Farm Medicine	Do you know Tarsim? TARSIM Animal Insurance (DVM Orhan Sarıtepe)	11.03.2014
12	Farm Medicine	Technical Excursion to Istanbul Food Control Laboratory	14.03.2014
13	Scientific Research	Meeting for the duty distribution of students who will attend the 16th International Veterinary Medicine Students Scientific Research Congress	17.03.2014
14	Computer Club	Tournaments with various computer games within the Faculty	18.03.2014
15	Farm Medicine	Presentation with members of VISAD Administrative Board	19.03.2014
16	Horse Riding	Excursion to Horse Farms in the Vicinity	22-23.03.2014
17	Scientific Research	Meeting for the duty distribution of students who will attend the 16th International Veterinary Medicine Students Scientific Research Congress	03.04.2014
18	Dance and Music Shows (being established)	Acquaintance Meeting	04.04.2014
19	Scientific Research	Number of 16th International Veterinary Medicine Students Scientific Research Congresses and Publication of the Journal Zoom	10.04.2014
20	Horse Riding	Excursion to Bursa Karacabey Pension Stud Farm and TIGEM Karacabey Stud Farm (DVM Ibrahim Kurban)	26.04.2014
21	Wild Life Research and Protection	Helping and Participating in the Organization of Istanbul Exotic Animal Medicine Congress	2-3.05.2014

22	Computer Club	Class representatives were helped for the distribution of the course notes to the students	07.05.2014
23	Scientific Research	16th International Veterinary Medicine Students Scientific Research Congress	08.05.2014
24	IVSA-Istanbul	IVSA Istanbul Event Week and Training (Hosting 29 from 6 separate countries)	02-10.05.2014
25	IVSA-Istanbul	Technical Excursion to Antalya	04-08.05.2014
26	Horse Riding	Seminar of Homeotherapy in Horses (Dr. Marie-Noelle Issautier)	12.05.2014
27	Dog Psychology and Training	Professional Educational Excursion to the dog farm named "Pet Services Business and Sports Dogs Training Farm"	13.05.2014
28	Computer Club	Seminar held on presentation and poster preparation on computer	14.05.2014
29	Wild Life Research and Protection	Excursion to Izmir Sasalı Natural Life Park and Gediz Delta for Bird Observation (Dr. Özge Erdoğan)	17-18.05 2014
30	Farm Medicine	Presentation: Today's Site Veterinary Medicine and It's Future	20.05.2014
31	Sports and Excursion Club	Annual General Board Meeting of Istanbul University	12.06.2014
32	Wild Life Research and Protection	Release of a treated stork in Ipsala and Bird Observation (with HAYTAP)	14.06.2014
33	Farm Medicine	Election of the Club Headship in 2014-2015	24.09.2014
34	Scientific Research	Club Acquaintance Meeting	26.09.2014
35	Horse Riding	Acquaintance Meeting	29.09.2014
36	Scientific Research	Club Acquaintance Meeting	30.09.2014
37	Wild Life Research and Protection	Meeting for Member Participation in Wild Life Research and Protection Club	09.10.2014
38	Farm Medicine	Club Acquaintance Meeting	13.10.2014
39	Beekeeping	General Board Meeting	16.10.2014
40	Farm Medicine	Presentation: Veterinary Medicine for Farm Animals (Dr. Erdal Ilgü)	20.10.2014
41	IVSA-Istanbul	Acquaintance Meeting	21.10.2014
42	IVSA-Istanbul	Acquaintance Meeting	24.10.2014
43	IVSA-Istanbul	Orientation Meeting	24.10.2014
44	Entrepreneurship (being established)	Club Promotion Meeting	24.10.2013
45	Farm Medicine	Interview with Veterinary Surgeon Ali Özdec	24.10.2014
46	Food Hygienists'	Administrative Board, which would execute the activities of the Academic Year 2013-2014, was determined	24.10.2014
47	Photography and Film	Meeting of Photography and Film Club Annual Ordinary Administrative Board (FOFIK)	27.10.2014
48	Sports and Excursion	Educational and Cultural excursion to Iğneada	25-26.10.2014
49	Farm Medicine	Animal Welfare Inspector Free Training with Eyes on Animals and Animal Welfare Foundation	25-26.10.2014
50	Dog Psychology and Training	Club Acquaintance Meeting	31.10.2014
51	Sea Veterinary Medicine	Acquaintance Meeting	11.11.2014

52	Beekeeping	Presentation Named Role and Significance of Beekeeping in Veterinary Medicine	24.11.2014
53	Scientific Research	Seminar: How to Conduct a Scientific Research. (Assist.Prof.Dr.Dr. Altan Armutak)	26.11.2014
54	Scientific Research	Seminar: How to conduct a Scientific Research. (Assoc.Prof.Dr. Elif Armutak)	27.11.2014
55	Farm Medicine	Excursion to Bursa Ulubat Köyü (Village) SÜTAS Karacabey Dairy Farming Training Centre	28.11.2014
56	Wild Life Research and Protection	Excursion to Bursa Bear Shelter and Rehabilitation Centre	29.11.2014
57	Atatürk Ideology	Acquaintance Meeting	02.12.2014
58	Horse Riding	Seminar: Passport Arrangement in Horses	05.12.2014
59	Wild Life Research and Protection	Presentation: Huge Predators of Turkey	08.12.2014
60	Scientific Research	Seminar of: How to Prepare a Verbal Poster Presentation (Assist.Prof.Dr.Dr. Altan Armutak)	08.12.2014
61	Scientific Research	Seminar: How to prepare a Verbal Poster Presentation (Assoc.Prof.Dr. Elif Armutak)	11.12.2014
62	Dog Psychology and Training	Promotion Meeting and Presentation of "Everything About Dogs" and "Mysterious Life of Cats" Documentaries	15.12.2014
63	Sea Veterinary Medicine	Interview with the participation of Cem Karabay, World's underwater record holder.	16.12.2014
64	Dog Psychology and Training	Seminar: Shelter Veterinary Medicine. (DVM Özlem Yağan)	19.12.2014
65	Scientific Research	Erasmus Plus Programme I Orientation Meeting. (Assoc.Prof.Dr. A Funda Bağcigil)	23.12.2014
66	Atatürk Ideology	Meeting on Commemoration of Kubilay, the Martyr of Revolution, and Solutions Against Reactionary to Commemorate Kubilay and inform the Youth About Struggling with Reactionism	25.12.2014
67	Sports and Excursion Club	Organization of Astroturf Tournaments in the Spring Semester	2014

Staff of the Deanery and Student Affairs Office help with the guidance of students for any problems. For example, they deal with informing students who are thinking about getting registered to the Faculty by Faculty Promotion Days, Publication of Advertisement Booklets, face-to-face interviews, promotion of the Departments and courses, student exchange and internship procedures, etc. Also, informing students in terms of their legal rights, promoting domestic or foreign educational opportunities with Erasmus, Farabi, Mevlana and bilateral agreements and the recognition of courses and exams completed in another Faculty.

Financial support is always provided for students who need it in the Faculty. Students (especially with financial problems) can work at any Department (under insurance) as part-time working students away from the course hours and will get paid monthly. There are improvements for disabled students in the Faculty in terms of educational, examination and social opportunities.

Students can talk to the Academicians of the Faculty face-to-face on defined days either in their rooms or through e-mail. Besides, all the Academicians provide consultancy for the

students about all the matters related to their education and career.

Each class has a student representative, who is selected through election by the students. There is also a Faculty student representative selected by the class representatives. Faculty and class representatives can inform the related units or Faculty Administration about the problems and demands of the students. Students have the right for attending the Faculty Administration Board and mentioning about their demands in relation to the matters which concern them in particular. Moreover, Faculty student representative can submit the opinions, suggestions, demands, wishes etc. of the students in the Faculty and vote within the University student representation. Present student representatives work for 2 years and Faculty student representative works for 1 year.

Generally, students are informed about career opportunities for Veterinary Medicine after they begin studying in the Faculty. Information is provided through organization of various meetings, courses, congresses, panels and career days, where internal and external partners attend during the learning process to enable and develop the cooperation between the Faculty and the business world.

5.2. COMMENTS

Please give general comments about the quality of the teaching programme under the above headings.

The root of the Faculty's educational system is "Theory & Practice" within the traditional German system. Quite different changes have occurred in our educational system due to the Anglo- Saxon effect over the last 20 years. In the current system, systematic information accumulation and continuous observation of the progress with exams and surveys can be followed very clearly. In this system, use is made of the constructiveness of both the students and external partners and thus contributions are made to the education of the students.

Every year, the Deanery gathers data from departments, students and EAEVE for the adaptation of course subjects, and practices and new modifications are made. These activities are updated in line with the recommendations received. Often positive feedbacks are received very quickly from the students with regard to the new education programme.

More precautions have been taken in teaching on the basis of problem-solving and for the improvement of the self-learning methods. Learning based on problem-solving has started to be adopted firstly in clinical practices. The experiences are shared with the Departments to popularize this method. Operations are exercised for education with smaller student groups to the extent that financial sources and physical conditions allow.

5.3. SUGGESTIONS

It is required to harmonize the interdepartmental educational subjects to increase the teaching quality, decrease the number of similar course subjects, involve the students in more practices and increase the number of research activities, seminar preparation and

presentations. Academicians must be organized on supporting the problem-based learning approaches more often. Administration and Departments must make more efforts to achieve this goal within the Faculty. It is highly important to give recognition to people who increase the teaching quality. A new evaluation system must be established to appreciate the teaching efforts of the academicians in a more worthwhile way. Academicians must consider the success status and recommendations of the students more frequently and be aware of what kind of precautions should be taken to improve the teaching.

CHAPTER 6

FACILITIES AND EQUIPMENT

6.1. FACTUAL INFORMATION

6.1.1. PREMISES IN GENERAL

Please give a general description of the site(s) and buildings occupied by the Faculty and include a map.

Istanbul University Faculty of Veterinary Medicine is located on an area of 305.000 m^2 consisting of three different buildings covering 44.146 m^2 within Avcılar Campus, Istanbul University. Faculties of Engineering, Business Administration, Sport Science, and Transport and Logistic, Vocational School of Technics Science, Vocational School of Veterinary Medicine are also located in the same campus (Picture 1).

Picture 1. Plan of Avcılar Campus, Istanbul University

Picture 2. Plan of Faculty of Veterinary Medicine, in Istanbul University Avcılar Campus
A: Block A,
B: Block B,
C: Block C,
D: Reproduction and Artificial Insemination Departments Building,
E: Research and Training Hospital:
1. Department of Internal Medicine,
2. Department of Surgery,
3. Department of Obstetrics and Gynecology

First Building (Main Building):
It covers an area of 29.269 m^2, and consists of the Blocks A, B and C.

Block A:

Ground Floor:	Student Affairs, Internal Services Office, Technical Desk Office Desktop Publication Unit, Internet Cafe, Meeting Hall
1st Floor:	Deanery, Vice Deans, Faculty Secretariat, Administrative Offices, Library, Copy Office
2nd Floor:	Department of Parasitology
3rd Floor:	Department of Microbiology
4th Floor	Department of Virology

Block B:

Ground Floor:	Necropsy Hall
1st Floor:	Department of Pathology
2nd Floor:	Department of Physiology
3rd Floor:	Department of Biochemistry
4th Floor:	Department of Pharmacology and Toxicology

Block C:

Ground Floor:	Slaughterhouse
1st Floor:	Department of Histology and Embryology, Department of Anatomy
2nd Floor:	Department of Food Hygiene and Technology
3rd Floor:	Department of Animal Nutrition and Nutritional Diseases Department of History of Veterinary Medicine and Deontology
4th Floor	Department of Animal Breeding and Husbandry

This building contains 4 lecture halls (Amphitheatre), voice and projection devices and a capacity for 180 students. Moreover, there are also 13 student laboratories (each with a capacity for approximately 60 students), 13 seminar rooms, 25 research laboratories, one slaughterhouse and meat processing unit, IT-hall (internet), Faculty library and a canteen . Next to the building, there is the Osteoarchaeology Museum. Amphitheatres and Student Canteen are located in the centre of the blocks.

Second Building:
Department of Reproduction and Artificial Insemination's Building:
The Department of Reproduction and Artificial Insemination is found in this building which covers an area of 1.337 m^2. This building has an arena including bull and farm animal boxes, student laboratory, 3 research laboratories and a seminar room.

Third Building:
Research and Training Hospital and Clinics:
It covers an area of 13.540 m^2. This building has;

Animal Hospital,
Departments of Internal Medicine,
Departments of Surgery,
Departments of Obstetrics and Gynaecology.
Emergency Clinic (in Entrance).

While there are boxes available for farm animals (cattle, sheep, goat, swine units), equine, pets (cat and dog) and exotic animals, there are 7 operation suites for small animals and 2 operation suites for large animals, one radiology unit, 3 policlinics, patient admission unit, Faculty pharmacy and central diagnostic laboratory all within the animal hospital. In addition, there are 3 classrooms, 3 seminar rooms and a lecture hall (amphitheatres) for 240 people. Moreover, quarantine rooms are also found in this building in a separate area. A small building next to the hospital is used as an incinerator (Picture 2).

6.1.2. PREMISES USED FOR CLINICS AND HOSPITALISATION

The information to be entered in Table 6.1 is the number of animals that can be accommodated, not the number of animals used. Certain premises may be used to accommodate different species of animals. If so, the same premises should be entered only once.

Clinical activities are performed within four separate departments: Internal Medicine Clinic, Surgery Clinic, Obstetrics and Gynaecology Clinic, and Reproduction and Artificial Insemination Clinic. Reproduction and Artificial Insemination Unit has a building, which is independent from the other units with practice halls and animal care units.

The Department of Internal Medicine has 2 Small Animal Examination Halls, Serum-Infusion Application Room, Endoscopy Room, Ultrasonography and ECO-Cardiograph Room, Dermatology Room and Electroencephalography Room and an Intensive care unit. Besides, in-patient service is provided in 2 units divided as Infectious and Non-Infectious. In the Infectious In-Patient Unit, there are 18 box units for dogs, 20 box units for cats and several open-air boxes, 1 Animal Washing Room and Infectious In-Patient Examination Room. In the Non-Infectious In- Patient Unit, there are 9 box units for dogs, 16 box units for cats and several open-air boxes and a Non-Infectious In-Patient Examination Room.

The Department of Surgery has 2 Small Animal Examination Halls, 5 Small Animal Operation Suites, Neurology examination room, Ophthalmic examination room, a Room for Anaesthesia recovery, X-Ray and Imaging Room, Ultrasonography Room, Tomography Room and Physiotherapy Unit. There are boxes for 36 cats, 12 dogs and several open-air boxes at the surgery In-Patient Service.

In the Faculty, the Department of Obstetrics and Gynaecology has 1 Small Animal Examination Room, 2 Small Animal Operation Rooms, Ultrasonography/Doppler Room, Endocrinology Laboratory and In vitro Fertilization Laboratory. In-patient service of Obstetrics and Gynaecology has a capacity for 18 cats and 12 dogs and 1 In-Patient Examination Hall.

The units of Cattle Examination Hall, Cattle Operation Hall, Equine Examination Hall, Equine Operation Hall and Sheep-Goat-Swine Examination Hall are used for the examination and treatment.

Meanwhile, there is a Cattle In-patient Service with 12 boxes, Equine In-patient Service with 24 boxes and Sheep-Goat-Swine In-patient Services with 9 boxes, which are located independently from each other.

There are 6 boxes for infectious farm animals and horses including 2 for cattle, 2 for horses and 2 for small ruminants and pigs.

Hospitalization service is given at the in-patient service consisting of 9 boxes for Exotic Animals in the Faculty. Service is rendered with 1 small animal examination and operation room, 1 semen collecting and operation room for large animals (arena), 3 rabbit keeping rooms, Andrology Laboratory, In-vitro Fertilization and Embryo Transfer Laboratory and Advanced Analysis and Biotechnology Laboratory at the department of Reproduction and Artificial Insemination, which is located independently from the Animal hospital of the Faculty. Hospitalization is provided in 6 cattle, 2 equine, 4 sheep-goat, 2 poultry, 2 dog and 1 cat boxes within the body of the department.

Also, there is a quarantine facility and incinerator besides the other facilities.

Animal Hospital of the Faculty also has an Emergency Policlinic which provides service for 24hours/7days. Emergency Policlinic has 2 Examination Halls (one for special for contagious infected patients), 1 Operation Hall and 1 Blood Analysis Laboratory.

Table 6.1. Places available for hospitalization and animals to be accommodated.

	Species	Number of Places
Regular Hospitalization	Dog	35
	Cat	71
	Cattle	14
	Small Ruminant	11
	Equine	24
	Swine	2
	Exotic	9
	Other	2
Isolation Facilities	Large animal	6
	Small Animal	38

6.1.3. PREMISES FOR ANIMALS

Give a description of the facilities for rearing and maintaining normal animals for teaching purposes.

The Faculty has 2 farms:

1. Training-Teaching-Research and Application Farm:

It is 12 km distant from the Faculty and has an open area of 2700 decares and closed area of 10 000 m^2. It includes units for dairy cattle breeding, feeder cattle breeding, sheep breeding and feed store. Average animal population is 160 cattle and 800 sheep.

2. Zootechnics Training and Research Farm:

The building of a poultry unit has been completed on an area of 400 m^2, layer and broiler breeding is planned for student work. Again, the new sheep breeding unit has been completed on a closed area of 400 m^2. The operation building has been opened for service in the same area. Initial construction of the student seminar halls and the building of the guest house have been completed. Completion of the sections of this unit is also planned for some other species (cattle, sheep, swine, equine, and hen).

6.1.4. PREMISES USED FOR THEORETICAL AND SUPERVISED TEACHING

The same room should not be entered under two or more headings, even if it is used, for example, for both practical and supervised work.

Table 6.2. Premises for clinical work and student training

Small animals	Number of consulting rooms	16 (+2 units for emergency services)
	Number of surgical halls	7 (+1 unit for emergency services)
Equine and food animals	Number of examination areas	4
	Number of operation halls	2
Exotic animals	Number of consulting rooms	1
	Number of surgical halls	1

Table 6.3. Premises for lecturing

Number of places per lecture hall								
Hall	No: 1	No: 2	No: 3	No: 4	No: 5	No: 6	No: 7	No: 8
Places	180	180	180	180	240	70	70	70
Total number of places in lecture halls: **1170**								

Table 6.4. Premises for group work

Room	No: 1	No: 2	No: 3	No: 4	No: 5	No: 6	No: 7	No: 8
Places	20	20	20	20	20	20	20	20
Room	No: 9	No: 10	No: 11	No: 12	No: 13	No: 14	No: 15	No: 16
Places	20	20	20	20	20	20	20	20
Total number of places in rooms for group work: **320**								

Table 6.5. Premises for practical work

Laboratory	No: 1	No: 2	No: 3	No: 4	No: 5	No: 6	No: 7
Places	60	60	60	60	60	60	60
Laboratory	No: 8	No: 9	No: 10	No: 11	No: 12	No: 13	
Places	60	60	60	60	60	60	
*Total number of places in laboratories: **780**							

Please give a brief description of health and safety measures in place in the premises for practical work and in the laboratories to which undergraduate students have access.

Precautions are taken for the health and safety of the students in all the places where they take both theoretical and practical courses and necessary warning signs displayed. Risks are determined in cooperation with the occupational safety specialist of the Faculty and the necessary precautions are taken. Protective equipment (laboratory gown, mask, gloves, head guard, etc.) is used in work performed by the students and academicians of the Faculty. Biosafety measures are taken into account and they are also explained as a part of the course content. These are not only Faculty rules but also legal requirements. Operations are regularly conducted with respect to the cleanness and hygiene of the Faculty utilising outside contractors Campus security is also provided over 24 hours with external contractors

6.1.5. DIAGNOSTIC LABORATORIES AND CLINICAL SUPPORT SERVICES

Diagnostic Laboratories
Briefly describe the facilities available for clinical diagnostic work.

Central Laboratory is the laboratory where blood and urine analyses of patients are carried out involving: haematology, biochemistry, leucocyte analysis, sedimentation, blood gases, designation of viral diseases with quick test kits (FIV, FeLV, FIP in cats, distemper, parvoviral enteritis, quad test, (Anaplasma, Ehrlichia, Borrelia, Dirofilaria), Leishmaniasis in dogs), full urine analysis, urine protein/creatinine ratio tests.

The following devices are available in this laboratory: Hemogram device (Mindray BC-2800 Vet), Biochemistry device (Prestige 24i), Blood gas device (IDEXX VetStat, Electrolyte and Blood Gas Analyzer), 1 microscope (Olympus) and 1 centrifuge device (NF 200).

Emergency Policlinic is available in the clinics of the Faculty with a 24/7 service. It has the Hemogram device (IDEXX Vet Autoread)**,** Biochemistry device (IDEXX Vet Test)**,** Centrifuge device (Elektromag M 415E), Centrifuge device (QBC VetCentrifuge IDEXX)**,** Autoclave (Elektrolab E42) and Microscope (Optika) devices.

Department of Obstetrics and Gynaecology deliver diagnoses and treatment supported with devices such as the Centrifuge device (Nüve NF800R), ELISA device (Biotek), Aspirator (Labotect high vacuum aspirator), Automatic osmometer (Boebing), Washing bath (Nüve BM402), Security cabin (MetiSafe), Carbondioxide incubator (Innovate CO-48) (Thermo Scientific) (2), Stereomicroscope (Olympus), Binocular Microscope (Olympus).

Department of Reproduction and Artificial Insemination; The following items are available in the In-vitro Fertilisation (IVF) – Embryo Transfer (ET) Laboratory, with reproductive techniques such as IVF, ET, Cloning and Transgenesis, and the Andrology Laboratory, where Spermatologic analyses are conducted and semen are frozen and kept: CO_2 / O_2 Incubator (3) (NB-203XL, N-BIOTEK) (Hera Cell 150, Heraeus) (Hera Cell 150i, Thermo Scientific), O_2/CO_2 Incubator (MCO-5M, SANYO), Microforge Device (EG – 44 PC-10, NARISHIGE), Micromanupulator, IX71, (Olympus) (2), Piezo, PMM4G (PRIME TECH), Electroprotor Device, ECM830**, (**BTX), Micropipette Puller, P-97, (SUTTER), Aspirator, 4014, (Labotech), Incubator, EN 500, NÜVE (3), CO_2 Incubator, MCO-17AI, SANYO, Microscope (3) (S7X7, Olympus) (BX40, Olympus) (ECLIPSE Ni, NIKON), Laminar Flow, MN 120, Nüve, Centrifuge (2) (EBA 8S, Hettich, Universal 32 R, Hettich), Deep freezer (2) (BEKO, BOSCH), Ultra Low Temperature Freezer, MDF -193°C, SANYO, pH-Meter, pH-Meter CG 710, SCHOTT MAINZ, Osmometer, Vapro 5520, WESCOR, Hormone Analysis Device, Genesys, LTI, Shaking incubator, BAE07, FINEPCR, Laminar Flow, FAGUS, Transilluminator, peQPOWER, peQlab, Ultrasound, Falco, ESAOTE Pie Medical, Electro ejaculator (2) (for small animals and for bull), Computed Semen Analysis Device CASA, IVOS, Hamilton Thorne Biosciences, Heating stage (2) (THP-37, Teknosem) (HT 200, miniTüb), Hot water bath, BN 402, Nüve, Sperm Fertility Analyzer**,** SFA-500, Biola, Bio Cool 3**,** SFA-500, Bio Cool.

Department of Surgery has an imaging centre (tomography, X-Ray, etc.).

Department of Internal Medicine is supported with devices such as Microscope (Jnoec) Microscope (YJ-2005B), Great Light (Eastern), Infusion Pump (N411), Centrifuge Device NF048, T/pump (Gaymar), X-Ray.

Central clinical support services
Indicate the nature of these services and how they are organized (e.g. diagnostic imaging, anesthesia, etc.)

Department of Surgery: The diagnoses are supported with Conventional Radiography (CR) (Carestream), Digital Radiography (DR) (Toshiba), Tomography (Shimatsu), Ultrasonography (Telemed), Portable CR (Poskom), 4 Anaesthesia Devices, Arthroscopy Device (Richard Wolf), Infusion Pump (MVM Medikal), Dental Scaler (Hozelock), Koter (LCS) (MVM Medikal), Laser Device (MVM Medikal), Phaco Device (MTP), Pulse oximeter + ECG Monitor (MVM Medikal), Video Otoscope (UB Cam) etc., which are found in the imaging and anaesthesia units.

Department of Obstetrics and Gynecology: Diagnosis is made with 2 Doppler's and 2-dimensional and coloured imaging technique. Besides, the department also has a bed-side monitor (2) (MVM, GT9000F and Biomed BM3-Vet), intensive care cabin (VetArio Intensive care unit), 2 anaesthesia devices (2) (SMS, 2000, classic anaesthesia and Komesaroff Anaesthetic Machine), and an ultrasonography device, and there is an ultrasonography device at the department of reproduction and artificial insemination.

Department of Internal Medicine: Clinics and intensive care unit are supported with Aspirator (Üzümcü PA-2), 4 Electrocardiographs (Edan, Smart ECG), Ultrasound (Siui, Shimadzu), 2 Endoscopes, Imaging Recording System, Video Printer (Sony), Light Source Vet-Vu Monitor (Vıtec), Light Source (Aohua LG-200) (Shenda), Endoscopy Video-bronchoscope (Huger), Gastroscope (VFV 100160 Vet-VU2B VMEC-85), LG Monitor, Laptop (Packardbell), Intensive care unit (Vetario), Incubator (Goldterm F-40), O_2 Device (Özmed), Patient Monitor GT9000F, Monitor (Bexen) Infusion Pomp (IP-12) etc.

Veterinary Diagnosis and Analysis Laboratory: conducts toxicological, pharmacologic, parasitological and pathologic examinations and examinations for infectious and non-infectious bacterial and viral diseases.

Students and the authorized staff (research assistant or animal health officer etc.) determine which clinic (Surgery, internal medicine, obstetrics and gynaecology, reproduction and artificial insemination, emergency) the patients should be directed to. Communication, coordination and documentation are provided within the automation system between the units.

6.1.6. SLAUGHTERHOUSE FACILITIES

Describe briefly the slaughterhouse facility to which the Faculty has access, including distances from the Faculty and level of activity.

In the Faculty, we have a slaughterhouse unit which has separate ovine and bovine animal lines, had been licensed within the 3rd class slaughterhouse category by the Ministry of

Food, Agriculture and Livestock since 2013, and was licensed for slaughtering after that year and is now used for education and research. In this unit, electrical stunning is frequently used for sheep. But, cattle are commonly slaughtered without stunning; as is the practice within Turkey.

Daily slaughter capacity of the slaughtering unit:

Ovine animal: 200 animals/day

Bovine animal: 20 animals/day

A two-week practical training of the students is given in the slaughterhouse in parallel with the meat examination course during the 9th semester. At the end of this practice, students receive training related to the decisions that must be made by the veterinary surgeon during the ante-mortem and post-mortem examination on animals which are brought to the slaughterhouse for slaughter. Meanwhile, intramural and extramural practical slaughterhouse tasks, which are fulfilled by the intern students during the 10th semester, are checked by the academicians of the Division of Food Hygiene and Technology.

6.1.7. FOODSTUFF PROCESSING UNIT

Describe briefly any access that the Faculty has to foodstuff processing units.

There is a small meat processing section within the production unit of meat and meat products. Here, slaughtered ovine and bovine animals are butchered for processing. Ovine and bovine carcasses are classified and preparation of experimental meat products such as fresh meat products (mincemeat, steak etc.), and fermented and heat-treated sausage production is handled within this unit. After packing with the environmental atmosphere or vacuum, products are stored in the cold preservation room or kept in the deep freezer.

6.1.8. WASTE MANAGEMENT

Briefly describe the systems and equipment used for disposing of waste material; cadavers, carcasses, biological waste of different types, excreta, etc.

The Faculty have a n agreement with the municipality for the collection of trash and biological waste. They are separately picked up.

Chemical and toxic waste are stored in a separate unit within the campus and removed from the campus by a specialist waste treatment firm.

Blood waste of the slaughterhouse is collected in a special tank and periodically collected by a private company.

6.1.9. FUTURE CHANGES

Outline any proposed changes in the premises that will have a substantial effect on the Faculty, and indicate the stage which these have reached.

- An exotic animal treatment and accommodation unit is under construction next to the hospital.
- A Laboratory animal facility is under construction.
- A new farm next to the Faculty for poultry and sheep is under construction.
- The Training-Teaching-Research Farm will be moved and reconstructed near to Faculty in the north part of campus.
- In the master plan of the Rectorate, the Faculty buildings will be rebuilt within 10 years.

6.2. COMMENTS

Comment on the adequacy of the buildings in general for undergraduate teaching.
Comment on the adequacy of the equipment in general for undergraduate teaching.
Comment on the maintenance of buildings and equipment.

- The qualitative and quantitative attributes of our buildings are quite sufficient for general and bachelor education.
- The equipment in these buildings is adequate.
- Maintenance and calibration of the devices are regularly carried out by the relevant units within the scope of the agreements.
- Maintenance of the buildings is performed by the Directorate of Construction and Technical Work. Daily maintenance and cleaning affairs are fulfilled by 22 cleaning staff members in the Faculty. Besides, 12 animal keepers perform the necessary activities at the clinical departments.

6.3. SUGGESTIONS

If you are unhappy with any situation, please list any improvements you would make in order of preference.

- We are considering establishing online appointment system to the Animal Hospital of the Faculty of Veterinary Medicine in next year.

CHAPTER 7

ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

7.1. FACTUAL INFORMATION

7.1.1. ANATOMY

Indicate the materials that are used in practical anatomical training, and how these are obtained and stored.

Anatomy courses are given as Anatomy I and Anatomy II in 2 semesters during the first year of the veterinary education. Osteology, arthrology and myology courses are given in the practical training of Anatomy I. Use is made of skeletons of various animal species, bone materials, cadavers of various animals and models during the course education. When not used, bone materials are kept in the bone storage and cadavers in the cadaver pool. Practical training is provided for poultry with the explanation of all the systems on the animal cadavers during the practical courses of Anatomy II. Animal materials used for Anatomy I and II are supplied from the farms and animal hospital of the Faculty of Veterinary Medicine.

Practice halls where Anatomy courses are given are equipped with stainless steel tables and ventilation system.

Table 7.1. Materials used in practical Anatomy courses

	Dog		Ruminant		Equine		Other	
	2014	2013	2014	2013	2014	2013	2014	2013
Live animal								
Cadavers	5	5	6	6	1	1	1 Swine 10 Chicken	1 Swine 10 Chicken
Model	1	1	2	2	-	-	1 Swine 1 Chicken 1 Cat	1 Swine 1 Chicken 1 Cat
Other*	1	1	5	5	4	4	1 Swine	1 Swine
e.g. ultrasound								
Computer assisted teaching								

*: There are also a model of eye anatomy, a pair of ruminant foot model, tooth model for an equine and ruminant and a stomach model. There are 2 horses, 2 ruminants, 1 dog and 1 pig skeletons to be used in the student education and training.

7.1.2. PATHOLOGY

In total, weekly, 3-hour General Pathology courses are given to the 3rd grade students at the Department: theoretical course 2 hours and practical course 1 hour a week during one semester. 4th grade students receive Special Pathology courses for 6 hours in total: theoretical courses 4 hours and practical courses 2 hours a week during two semesters. During two semesters of the 4th year, Clinical Pathology courses are given for 12 hours.

Students have to perform necropsy at least once to be successful at this course. Students are informed about each necropsy material that comes to the Department through written announcements and internet. Appropriate students are expected to participate in the necropsy. Moreover, students learn cytological applications and tissue processing methods in this course.

Students become interns in the 5th year of the education and they are responsible for performing necropsy on various animal species and reporting them during this period.

Indicate the nature and extent of any additional sources of material for the teaching of necropsies and pathological anatomy, including slaughterhouse material.

Table 7.2. Number of necropsies over the past 3 years.

Species		Number of Necropsies			Average
		2014	2013	2012	
Food producing animals	Cattle	52	43	44	155
	Small ruminants	143	91	52	
	Pigs	20	12	10	
Equine		35	18	37	30
Poultry		213	160	133	228
Rabbits		35	20	122	
Companion Animals/Exotic	Dogs	120	92	83	265
	Cats	110	68	56	
	Exotic pets	91	87	89	
Wild animals (roe deer, deer, fox, porcupine, hawk, etc.)*		40	23	14	26
Laboratory animals		136	227	19	127
Fish		35	18	20	24

*1 lion, 3 monkeys, 2 dolphins, 1 sea dog, 1 king penguin and 2 crocodiles were brought for necropsy with the help of students in 2014 and they were examined macroscopically and microscopically.

Necropsy materials come from different sources. Necropsy is performed on the samples that come from Faculty clinics, patient owners, dog shelters, Faculty farms, private farms,

aquariums, animal breeders, Jockey Club and ministries. In cooperation with the other departments, samples taken from the necropsies are sent to the divisions of microbiology, virology, parasitology and toxicology for further examination. In some cases, organs are sent from outside for examination after necropsy. In addition, slaughterhouse materials are brought for examination when pathological changes are noticed.

Besides necropsy and organ samples, tumor tissue samples, skin biopsies and cytological samples (blood, urine, fine-needle aspirations etc.) are sent for examination and evaluation. Diagnostic analyses are subject to a fee. Annually, about 500 samples are submitted for histopathological and cytological evaluation.

7.1.3. ANIMAL PRODUCTION

Indicate the availability of food-producing animals for the practical teaching of students
a) on the site of the institution;

Istanbul University Faculty of Veterinary Medicine
Training-Teaching-Research and Application Farm:

It is 12 km distant from Istanbul University, Faculty of Veterinary Medicine main building and has an open area of 2700 decares and closed area of 10 000 $m^{2.}$ It includes the units of dairy cattle breeding, feeder cattle breeding, sheep breeding and feed. Besides its own administrative structure, the farm has a Faculty Farm Commission which consists of 4 members from the clinical departments and 2 members from the Division of Animal Nutrition and Husbandry. 13 people including 2 veterinary surgeons and 1 veterinary technician and moreover 9 security guards work in the farm. Average animal population is 160 heads of cattle and 800 heads of sheep.

The Kıvırcık sheep breed is raised purely in the farm. Kıvırcık is the main local sheep breed of the Thracian Region. It is adapted to the region perfectly and maintains its fertility even under the most difficult climatic and geographic conditions of the region. It has been demonstrated with research conducted by the Faculty that Kıvırcık sheep have remarkable carcass and meat quality among the exotic and local sheep breeds of the Marmara Region. As a result of these studies, the Leadership of the Kırklareli city *Improvement of Kıvırcık Sheep Breed in the Hands of Public Project* has been carried on by the Faculty since 2011 and it is supported by the General Directorate of Agricultural Research and Policies (TAGEM), Ministry of Food, Agriculture and Livestock. Currently, the project is being implemented on 6300 heads of sheep with 38 breeders in 12 villages connected to centre of Kırklareli. The only herd raised in the Thracian Region as the pure Kıvırcık breed, which is possessed by the state, is found in Istanbul University, Faculty of Veterinary Medicine. In this sense, the Kıvırcık herd of the Faculty is a herd protecting the gene source for this breed.

A farm owned by the Faculty brings a lot of advantages. Animals which are raised here can be used as material for the research activities for different disciplines with the approval of the Faculty administration and the farm commission. Students participate actively in the execution of such research. Experimental research setups, which are difficult in private

farm environments, can be formed easily within the Faculty farm. Animal material which is needed by departments such as Anatomy, Pathology, Food Hygiene and Technology, and Animal Breeding and Husbandry for course practices can be provided from the animals which are raised in the Faculty Farm.

All animals in the Faculty Farm are available for student use for practice and professional experience. Especially during the internship period, students spend a significant part of their time in the Faculty Farm participating in the treatment, rectal palpation pregnancy examinations, vaccination and other breeding work on the farm animals.

Zootechnics Training and Research Farm:

Istanbul University, Faculty of Veterinary Medicine, Zootechnics Training and Research Farm consists of the present sheep-breeding (400 m^2), poultry husbandry buildings (400 m^2), office building (100 m^2), caretaker house (80 m^2), cultivatable and pastured lands (approximately 1000 decares), incomplete classroom building (400 m^2) and prefabricated structures, which are used by the Faculty in the University Campus. New structures will be added to these units according to further needs and possibilities.

The purpose of these new husbandry units is to enable the execution of the student work during the practical courses due to the close distance to the main Faculty building.

b) on other sites to which the institution has access.

Visits are organized to a large dairy cattle facility (700 milking cows), by an agreement with the Faculty, with students working under the supervision of the academicians of the Faculty and the Farm Veterinary Surgeons. Moreover, facilities in 3 different villages of Istanbul/Çatalca are visited every week and clinical work performed. Clinical work is regularly conducted on domestic pets in the animal hospital of Istanbul. Regarding equine breeding and health, further clinical work by students is carried out on visits to the Jockey Club of Turkey, which has an agreement with the Faculty.

7.1.4. FOOD HYGIENE / PUBLIC HEALTH

Indicate the availability of farm animals and products of animal origin for the practical teaching of students in veterinary public health, food hygiene, inspection and technology.

Practical training of the students on the veterinary public health, food hygiene, inspection and technology is provided by the academicians of the Division of Food Hygiene and Technology on weekly basis.

Two different educational systems are available in the Faculty and students who were

registered before 2012 perform food hygiene and milk hygiene practices by separating into two-week educational periods within the course of "Clinical Food Implementations" in the 7th and 8th semesters.

Materials used in these practices are provided from the food samples sent to the laboratories of the Division of Food Hygiene and Technology for analysis or the samples brought by student/trainers.

Two-week practical training, which is given in compliance with the meat examination course, is provided in the slaughterhouse during the 9th semester. At the end of this practice, students receive a training related to the decisions that must be made by the veterinarians during the ante-mortem and post-mortem examination on animals which are brought to the slaughterhouse for slaughtering.

Similarly, students who registered in the Faculty after 2012 conduct the practices of food hygiene, meat and milk hygiene and meat examination during the 14 weeks educational process within the course "Clinical Food Practices" in the 6th and 7th semesters.

Meanwhile, students of both systems make use of the intra and extramural slaughterhouse practices, which are applied to the intern students in the 10th semester, and food hygiene and technology implementations.

Animal materials, which are required for the practical training given in the slaughterhouse of the Faculty, are provided from ovine and bovine animals raised in the Faculty. In addition, excursions are organized in specific periods and students are made to examine meat in slaughterhouses at EU standards and observe the production and controls of the meat and dairy products in the integrated facilities.

During the practical work, students examine products such as raw milk, dairy products, fresh or frozen meat products, eggs and conserved food. Physical, microbial and chemical criteria, relevant to the inspection of the production technologies of the animal-origin foodstuff, are shown to the students in the laboratories of the Division of Food Hygiene and Technology.

Thus, each student, who has completed the practical work, should comprehend the principles of food science and modern food technology, the scientific basis of the relationship between food and human health and the factors lying behind the hygiene quality.

7.1.5. CONSULTATIONS AND PATIENT FLOW SERVICES

7.1.5.1. CONSULTATION

- State the number of weeks, in the course of the year, during which the clinics are open.
- State the number of consultation days each week.
- State the consultation hours.

Our Animal Hospital is open between 08:00 and 16:30 during weekdays. Service is provided

through on-call staff and students after 16:30 at weekends and on other holidays. Accordingly, service of the Animal Hospital is provided for 24hours/7days throughout the year.

Initially, examination of the patient is carried out under the observation of students. Students then accompany the patient and the owner in subsequent specialised clinical examinations.

Patient follow-ups by the students follow the criteria below:

- Prescriptions prepared by the veterinary surgeon must be included in the patient follow-up form.
- There is also a different prescription written by a student in order to allow student to learn how to prescribe.
- Patients that are healthy and just come for a general check up and vaccination cannot be considered appropriate for a patient follow-up.
- Patient follow-up forms are signed by the clinician responsible for that day within the same day.

7.1.5.2. PATIENT FLOW

The number of animals to be stated are for all disciplines combined (medicine, surgery, reproduction, etc.). In Table 7.3 only animals coming into the Faculty should be included. Animals studied in practical teaching outside the Faculty should be entered in the section entitled „Ambulatory Clinic" (Table 7.4).

In the Faculty, patient flow is generally provided over the patients who come for daily examination in the available system. The number of patients that come to the Faculty has increased compared to previous years, especially with the number of patients that come to Internal Medicine and Surgery.

The term „consultation" refers to those patients which come in and go out during daily consultation hours. „Hospitalization" refers to those patients which are retained in the clinic as „inpatients" following presentation.

Table 7.3. Number of cases; a) Received for consultation and
b) Hospitalized in the Faculty clinics in the past three years.

Species		**Number of cases**						**Average**
		2014		**2013**		**2012**		
		a	**b**	**a**	**b**	**a**	**b**	
Food producing	Bovine		68		40		29	158
	Ovine-caprine		138		71		81	
	Porcine		23		13		12	

Poultry		116		114		109		113
Equine		122	25	49	16	200	8	140
Companion Animals and Exotics	Canine	9995	420	8007	380	7255	206	15826
	Feline	9076	101	6269	92	5432	84	
	Exotics		70		53		39	

Emergency Department:

In the Faculty Hospital, there is an Emergency Department which provides for the out of hours service for 24hours/7days. In the Emergency Department, a specialist, support staff and a variable number of students provide the clinical support.

7.1.6. VEHICLES FOR ANIMAL TRANSPORT

State the number and nature of the Faculty vehicles that can be used to bring sick animals to the clinics.

Truck with a transportation capacity of 3.5 tones is used for carrying the large animals. For the other transports (pets, exotic etc.), a van with the capacity for 13 people is used.

7.1.7. ON-CALL EMERGENCY SERVICES

Outline what emergency service is available
(full-time, 24-h service, ON-CALL or 08:00–22:00 h duty) and discriminate for species.

Emergency Department of the Faculty serves 52 weeks of the year and for 24hours/7days.

Emergency duty lists are regularly prepared and announced by the Chief veterinarian of the Faculty Hospital.

Besides the staff and students who stay for emergency duty, an attending academician who can be reached through phone when necessary.

In case of applications to the emergency department by phone, an ambulance is available for intervention on-site or a transport vehicle to bring the patient to the Faculty hospital.

Istanbul Metropolitan Municipality has an Animal Ambulance System to bring emergency cases to the Animal Hospital.

7.1.8. ON FARM TEACHING AND OUTPATIENT CARE

7.1.8.1. AMBULATORY (MOBILE) CLINIC

The Ambulatory (Mobile) Clinic is defined as a unit which provides on-call outside services to farms and other institutions and is generally operated on a commercial basis.

- *State the number of hours of operation per week. Is emergency service provided 24 h/day, 365 days per year? What is the degree of student participation (include duties)?*
- *State the number, the type and the seating capacity of the vehicles used to transport students working in the ambulatory (mobile) clinic.*
- *State the approximate number of sick animals (specify cattle, swine, equine, poultry or small ruminants, others) seen by the ambulatory clinic per year during the past three years (Table 7.4).*
- *State the average number of visits in a year made by the ambulatory clinic to farms and other institutions.*

Ambulatory clinic is planned and put into operation for 4th (7th and 8th semesters) and 5th (9th and 10th semesters) grade students. For this purpose, an agreement has been made with a private establishment, which is in an approximately 1-hour distance from the Faculty in Istanbul/Çatalca which has 700 head of Holstein dairy cattle. In addition, another agreement has been signed with the Breeding Association, which is located in Çatalca and has around 10 villages in connection, and clinical work is implemented extensively in 3 villages in this region.

Visits to the contractual cattle farm for 5th grade students is organized once a week every semester, and the villages of the breeding association on another day with the Faculty vehicles (approximately 15 students at each time). These visits are held between 8.30 and 16.00. During both visits, one specialized veterinary surgeon from the Departments of Surgery, Internal Medicine, Obstetrics and Gynaecology, Reproduction and Artificial Insemination accompany the students.

None of the visits have any financial and commercial purposes. They are planned only for training the students. Veterinary surgeons who work in the private cattle farm contribute to the training of the students together with these specialists. During the visits to this farm, animals with the diseases listed by the veterinary surgeons of that facility (especially digestive and respiratory system, foot and extremity diseases, genital organ and breast diseases) are taken into special care and examined by the students, and medical treatment of diagnosed animals are made by the students. In this farm, each student does rectal pregnancy examination and shares the findings with the responsible veterinary surgeon. Cattle which cannot be treated there are transported to the Faculty clinics with the cattle transfer vehicle of the Faculty.

During the visit to the villages connected to Çatalca, barns of sick animals are visited and patients are examined and treated in the barns. There are cattle, water buffalos, sheep and goats in these villages (average number of cattle is 2500, number of water buffalos is 2000, number of sheep-goats is 5000). Animals which cannot be treated there are transferred to the Faculty hospital with the vehicles of the patient owners or the animal transfer vehicle of the Faculty.

5th grade students also attend to clinical practices in the Faculty farm. There, each student conducts rectal examination (pregnancy examination) on at least one animal. In the presence of sick animals, they are treated by the veterinary surgeons and specialized doctors who work there. When necessary, the animals are transferred to the Faculty clinics and the same students follow up the treatment of these patients there.

4th grade students (7th and 8th semesters) visit the Faculty (University) farm with a vehicle of the Faculty and a specialized academician once a week. On average, 15 students attend the visit. First of all, clinical examination methods are taught to all the students here and sick animals are examined together with the veterinary surgeons and specialized doctors in the farm.

Table 7.4. Number of patients seen during the ambulatory clinic service in the past three years.

Species		Number of Patients			Average
		2014	2013	2012	
Food Producing Animals	Cattle	2217	1101	886	3140
	Sheep-Goat	2310	1547	1360	
	Equine	230	132	168	176.66

There are 2 mini buses (for 24 people), 1 bus (for 44 people) and 2 vans (for 13 and 11 people) used for ambulatory clinical service 4 days a week within the scope of the agreements made with the private farms, farms in Istanbul/Çatalca and the Jockey Club of Turkey. In addition, the students perform clinical practices on pets in the animal hospital of Istanbul Metropolitan Municipality. In each ambulatory clinic, students conduct their work on-site with equipment (ultrasound, operation set, caesarean set, stethoscope, thermometer etc.) necessary for treatment and diagnosis. Such work is performed under the supervision of the academicians.

7.1.8.2. OTHER ON FARM SERVICES AND OUTSIDE TEACHING

If there is no on-duty Ambulatory (Mobile) Clinic, a Faculty may have defined contracts with farms or other institutions to allow for outside teaching and patient care. Similarly, a Faculty may provide herd health services.

Please indicate if and to what extent this applies to the Faculty. If applicable, please provide no. Of patients seen on outside teaching.

Besides the Faculty farm, students gain experience on animal breeding, nutrition and herd health in private farms. Examples of such experience would include:

- PennState Sieve Implementation to assess the particle sizes of the Total Mixture Rations (TMR) which are prepared in the farm.
- Stool Scoring is executed to assess the responses given by the animals against the prepared rations.
- Feed Assessment: approaches of the animals to the feed put in front of them, their behaviours while eating feed, duration of stay at the feeder, rumination rates and amount of food actually consumed
- Evaluation of ration formulation and quality of roughage.
- Evaluation of the maintenance-management and nutritional implementations of the facility in line with increasing the milk yield potential and minimizing the reproductive diseases through the application of Body Condition Score.
- Assessment of the milk yield and reproduction status by examining the Herd Management programme or fertility records.
- Determination and status assessment of the cows in the herd through lameness scoring.
- Clinical examination of the animals which are in the facility, hospital or infirmary.
- Evaluation of fat, protein and the number of somatic cells on the milk and individual milk samples. Application of the California mastitis test (CMT) to the animals with high somatic cell scores.
- Evaluation of uterus and ovary and pregnancy diagnosis by rectal examination.
- Evaluation of farm equipment and shelter conditions and assessment of their effects on animal welfare.

7.1.9. OTHER INFORMATION

Indicate any notable additional outside sources of material for clinical training purposes, such as animal charities, animals awaiting slaughter, etc. Indicate how the level of clinical service that is offered by the Faculty (in small companion animals, equines and production animals) compares with outside practices in terms of facilities, hours of service, equipment, expertise, responsiveness, etc.

Indicate any notable additional outside sources of material for clinical training purposes, such as animal charities, animals awaiting slaughter, etc. Indicate how the level of clinical service that is offered by the Faculty (in small companion animals, equines and production animals) compares with outside practices in terms of facilities, hours of service, equipment, expertise, responsiveness, etc.

Provide an indication in percentage terms of the proportion of cases that are primary (i.e. first opinion) and referrals (provide a breakdown by species, if helpful). If the Faculty has a particular aim or policy as regards this mix, describe it.

Indicate what areas of clinical specialization are covered, and the extent of the coverage (for example, a veterinarian with a particular specialization may see patients in the clinic for one day a week, 3 afternoons, etc.).

Indicate the relationship the Faculty has with outside practitioners (in small companion animals, equines and production animals) in terms of matters such as referral work, providing diagnostic or advisory services for private practitioners, practitioners participating in teaching, holiday or „seeing practice" work for students, feedback on the level of clinical training. Describe (if applicable) any other relationships with outside organizations that are routinely used to provide students with training (in particular practical training) in other clinical subjects (e.g. pathology work, interaction with state veterinary work).

Provide an outline of the administrative system(s) used for the patients, e.g. in terms of how case records are kept, how data are retrieved, whether systems are centralized, etc.

The Faculty hospital has 2 entrances; one for small animals and one for large animals. There are specific areas available where patient owners can park their vehicles. The hospital section is divided into 3 departments: internal medicine (Block A), surgery (Block B) and obstetrics (Block C). Each of these units has a sufficient number of small animal examination rooms. Besides, there are also places like ultrasonography room, endoscopy room, eye examination room where specific examinations can be conducted. There is a section within the Block C where any kind of examination and treatment can be applied to large ruminants. There is a section within the Block B where equines can be examined and operated on. Moreover, there is a recovery room for equine patients.

Again, there are 5 operation suites for small animals at the department of surgery. There is also a radiology unit which serves all departments within the hospital section. This radiology unit is equipped with digital radiography and tomography devices. Patient records are entered and kept in the digital media on the basis of patient names, protocol numbers and names of the owners. These records constitute a record system that can be reached by students every time and consultation can be provided with academicians and their assistants.

There is a section in Block A where any kind of examination and treatments can be performed on small ruminants. In each block, there are sections where small and large animals can be hospitalized. It has also another separate area for for potential infectious diseases. In the hospital, there is a quarantine region where animals with zoonotic diseases are kept under supervision.

In addition to this, there is a section in Block C where exotic animals can be treated and rehabilitated. Here, the animals are provided with care and treatment by the students who are the members of the Wild Life Research and Protection club under the responsibility of an academician who works at the Department of Surgery.

Firstly, the protocol numbers of the patients that are brought to the Faculty hospital are determined and recorded in the automation system. After the recording procedure, they are directed to the relevant department according to their clinical problems. At the department, they are examined by firstly students and then academicians or their assistants. If further examinations (radiologic, blood tests etc.) are required, they are followed up by the students.

Officially, each department has academicians and their assistants specialized in certain fields although it is divided into scientific branches within its body. These personnel carry out examinations and treatments according to their specialization fields (equine diseases, ruminant diseases, dermatology, urinary system, orthopaedics, anaesthesia, neurosurgery etc.).

Daily routine operations are executed at the departments of obstetrics and surgery. Operations are conducted as per the appointment system and each patient must go through blood and radiologic evaluations before the operation. Following the anaesthesia of the patients that will have an operation pre-operation preparation is undertaken within a dedicated preparation room with anaesthesia equipment. The patient is then transferred to the operation room. After surgery patients are taken to a recovery room and either given to the owner or taken to the post-operative sections.

Students start taking clinical courses during 3rd year. They attend clinical practice courses in small groups in 4th year. In practical courses, patients who come to the clinic are firstly examined by students, they are then evaluated together with the academicians in charge. In both semesters, 4th year students have to perform the practices written in the reports which are given at the beginning of the semester. 5th year students participate in the anaesthesia, operation and radiological work They also implement blood sampling, catheter placement etc.. 4th and 5th year students are subjected to a rotation covering all the clinics in small groups.

Outside the Faculty hospital, students are also provided with training in the small and large ruminant farm of the Faculty, private large ruminant farms and the Jockey Club of Turkey.

In the Faculty farm, students directly intervene in the diseases related to internal medicine surgery and obstetrics and perform practices. Clinical work undertaken by the academicians and their assistants are followed up by the students in the private farms and the Jockey Club of Turkey. Practical training is also provided in small animal shelters within the body of the district municipalities. In these shelters, students undertake clinical examinations and surgical interventions.

There are hundreds of pet clinics available within the borders of Istanbul. Specific diseases which are diagnosed in these clinics are directed to the Faculty and they are treated by the specialized academicians in the Faculty.

By

7.1.10. RATIOS

*See the section „Main Indicators" in **Annex Ia** for the figures needed for calculating ratios. Give the figures for numerators and denominators. The ratios should then be expressed by taking the numerator as 1.*

	Per Year
Number of food-producing animals seen at the Faculty	158
Number of individual food-animal consultations outside the Faculty	3140
Number of herd health visits	48
Number of equine cases (140 in Faculty + 177 extramural)	317
Number of companion animals seen at the Faculty	15826
Poultry (flocks)/rabbit (production units) seen	6
Number of necropsies of food-producing animals + equines	185
Number of necropsies of poultry/rabbits	228
Number of necropsies of companion animals	265

Table 7.5. Animals available for clinical training (in the clinics of the Faculty or seen through the Ambulatory Clinic) as ratio to the number of students in last full year of clinical training.

RATIO	FORMULA		IU FVM	EAEVE
R 11	*Number of food-producing animals seen at the Establishment* / *Number of students graduating annually*	158/116	**1.362**	**0.758 (Min.)**
R 12	*Number of individual food-animals consultations outside the Faculty* / *Number of students graduating annually*	3140/116	**27.069**	**8.325 (Min.)**
R 13	*Number of herd health visits* / *Number of students graduating annually*	48/116	**0.414**	**0.326 (Min.)**
R 14	*Number of equine cases* / *Number of students graduating annually*	317/116	**2.733**	**2.700 (Min.)**
R 15	*Number of poultry / rabbit cases* / *Number of students graduating annually*	113/116	**0.974**	**0.407 (Min.)**
R 16	*Number of companion animals seen at the Establishment* / *Number of students graduating annually*	15286/116	**136.400**	**48.061 (Min.)**
R 17	*Number of poultry flocks / rabbits production units visits* / *Number of students graduating annually*	6/116	**0.051**	**0.035 (Min.)**

Table 7.6. Animals available for necropsy.

RATIO	FORMULA		IU FVM	EAEVE
R 18	*Number of necropsies of food producing animals + equines* / *Number of students graduating annually*	185/116	**1.594**	**1.036 (Min.)**
R 19	*Number of necropsies of poultry / rabbits* / *Number of students graduating annually*	228/116	**1.966**	**0.601 (Min.)**
R 20	*Number of necropsies of companion animals* / *Number of students graduating annually*	265/116	**2.284**	**1.589 (Min.)**

7.1.11. OTHER SPECIES

Indicate how the Faculty deals with fish and other food producing species.

The course on Laboratory Animals is given as a compulsory course in the 4th semester. Clinical work involving laboratory animals undertaken by the Veterinary Surgeon are presented in detail in both the theoretical and practical parts of this course. In addition, there are many elective courses given by different departments involving Laboratory Animals.

In the Faculty, the course of Fish Diseases is given as a multidisciplinary compulsory course in the 6th semester. In this course, some basic information is given in relation to fish breeding besides fish diseases. The subject of Fish Pathology is available as an elective course in addition to the pathological implementations.

There is a separate elective course group for exotic animals and these courses are given by different departments. Thus, students who want to specialize in the field of exotic animals find an opportunity to develop themselves with these elective courses. A significant number of exotic animals are brought to the animal hospital during the year and students get an opportunity to practice their clinical skills. Different wild animal species which are brought to the Wild Life Research and Protection Club can be treated here and students acquire a very important practical opportunity for the care, nutrition and treatment of wild animals.

The course on Bee Diseases is multidisciplinary under the coordination of Parasitology Department. Within the scope of this course, basic information about beekeeping is presented to the students besides the bee diseases.

Information about swine breeding and products are presented to the students in the courses of Animal Breeding and Husbandry 2 and by the Division of Food. Moreover, 5 female and 1 male swine are used during the courses of Preclinical and Clinical Sciences to make a contribution to the training of students. Information especially related to swine species and diseases is included in the clinical course curriculum.

7.2. COMMENTS

Feel free to comment on all data provided in this Chapter.
Comment on major developments in the clinical services, now and in the near future.
Comment on local conditions or circumstances that might influence the ratios in Tables 7.5 and 7.6.

Particularly after the restructuring of the Faculty Animal Hospital, Large Animal Clinical Boxes were grouped for separate. Similarly, necessary procedures were applied for the organization of the in-patient boxes at the clinical departments.

Within a section of the Large Animal Boxes, there is also a division where wild animals brought from different regions of Turkey are treated. Wild animals that are brought to this division are treated and taken care of by the Faculty students under the supervision of the advisor academicians. This activity is carried out by the Wild Life Research and Protection Club, which is a Faculty student club. This implementation, which is unique in Turkey, provides a very significant service for wild animals across Turkey.

Istanbul University, Faculty of Veterinary Medicine is in position of a consultation centre in almost all the areas of Veterinary Medicine in Turkey with educated and qualified academicians. Meanwhile, there is a very well-established communication between the academicians and students as a significant part of the Faculty tradition. Students can contact the academicians, ask those questions and get information about the matters they want to learn any time during the day, within or out of courses. This unhindered communication capacity is an excellent opportunity for students to make use of the knowledge, experiences and background of the Faculty academicians.

7.3. SUGGESTIONS

If the denominators in Tables 7.5 and 7.6 for the Faculty are not meeting the range as indicated in Annex I, Supplement A, what can be done to improve these ratios?

CHAPTER 8

LIBRARY AND LEARNING RESOURCES

8.1. FACTUAL INFORMATION

8.1.1. LIBRARY AND OTHER INFORMATION TECHNOLOGY SERVICES

Give a general description of the library/libraries of the Faculty/University that are available to students. Indicate how the library/libraries are managed (e.g. library committee).

For each major library of the Faculty, please provide the following information, either in narrative or tabular form.

Main library:

- *Is this specific to the veterinary training establishment?*
- *Is this common to two or more establishments?*
- *Full-time equivalents of part time employees*
- *Number of full-time employees*
- *Number of journals received each year as hard copies*
- *Numbers of full access electronic journals*
- *Availabilities for online literature search*
- *Availability of textbooks*
- *Number of student reading places*
- *Library opening hours: weekdays weekends*
- *During term-time ....*
- *During vacations ....*
- *Indicate how the facilities are used by students*

The Library consists of 3 sections: main library, archive and a reading hall where students can study. There are 18 tables and 62 chairs in the reading hall. It is equipped in full compliance with modern veterinary medical teaching.

The Library services are accessed by individual electronic application. Electronic access can be gained from Faculty computers, student internet club (equipped with 25 computers and 2 printers) and personal computers outside the Faculty. Distant access can be gained by using the personal IU-mail address and passwords after entering the IP numbers provided from the Faculty. In case of such accesses, the desired publication can be reached through searching with the catalogue scanning programme on the internet. Books can be borrowed for one week at individual applications.

The library is open in educational periods, examination periods and on holidays between 08:30 and 17:00 to fulfil any kind of student needs.

There are 2477 printed books, 477 postgraduate theses, 55 foreign and 30 Turkish periodical publications. In addition, continuous access is provided to the electronic databases.

Subsidiary Libraries of the Faculty:

- *Please describe the subsidiary (e.g. departmental) libraries of the Faculty, and arrangements for student access.*
- *Indicate whether the main library holds a list of individual books of the subsidiary libraries.*
- *Describe any other information services and how are they are supported and how student Access is regulated.*

In addition, our students can make use of the extensive electronic and printed archive in the Central Library of Istanbul University. Scope and access rules of this library are given at *http://www.istanbul.edu.tr* in detail. In this context, many SCI, SCI-Expanded and SCOPUS-registered journals can be reached. Electronic books can be accessed from ten different connection points. Apart from these, libraries of all the departments are kept open for the student use. Inventory lists that belong to the works in these libraries are followed by the departments.

8.2. COMMENTS

Please comment on the adequacy of the books and accessible journals, of the opening hours and of the provision of reading spaces and support personnel.

Even the library is open the hours between 08.30 and 17.00, the reading room is open 24hours/7days and for the lunch time the librarians have a shift so that the students can use the library during lunch time.

Please comment on the Faculty's provision of IT facilities and the approach to self-learning, and on the further developments in this area.

Apart from the formal training, students can support their education with their own activities (Making use of sources such as course notes, educational CDs, books, journals, clinic and laboratory documents etc.) in the related Departments, Faculty Library, Student Clubs and on internet in order to enhance the theoretical and practical activities taken in the courses.

The Faculty believe in self-learning particularly e-learning is important for the future of higher education. Therefore self-learning facilities should be improved gradually.

In the Faculty nearly all rooms have cable internet connection and Wi-Fi connection has also started and it is expanding for hall the Faculty.

8.3. SUGGESTIONS

The furniture of the reading room and the library will be renovated in the development plans of the Faculty.

The webpage of the Faculty particularly in English and in German will be developed.

CHAPTER 9

STUDENT ADMISSION AND ENROLMENT

9.1. UNDERGRADUATE COURSES

9.1.1. UNDERGRADUATE STUDENTS NUMBERS

Table 9.1 asks for numbers of undergraduate students in the veterinary training institution. This means students enrolled for undergraduate training and paying the corresponding tuition fees (if applicable), except for those students who do not participate in the teaching offered.

Some veterinary curricula require students to successfully complete all courses presented in an academic year before they can start the subjects in the following year. In other establishments students have to complete all the subjects in the curriculum before graduating, but can do so in a more flexible way. In the latter instance, it may be difficult – perhaps impossible – to place some of the students in a specific year of the programme.

If this is so, Table 9.1 may: Be omitted, or be an approximate figure, or be calculated by reference to the course of year that corresponds to the largest number of subjects taken.
In any case, please indicate the minimum number of years (MNY) allowed to successfully complete the curriculum.

Duration of Faculty education: 5 years

Average duration of graduation from the Faculty: 6.5 years

Table 9.1. Undergraduate student composition in the year prior to visitation.

Distribution of students	Number of students
Total number of Undergraduate Students	1031
Total number of Male Students	627
Total number of Female Students	404
Foreign Students	34
- From the European Union Countries	10
- From the Countries outside the European Union	24

9.1.2. STUDENTS ADMISSION

- State the minimum admission requirements.
- Indicate whether there is a limit to the number of students admitted each year.
- Describe how the number of government-funded student places is determined.

For admission to the Faculty, it is required to graduate from High School or an equivalent school, receive 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) , which are held by the Student Selection and Placement Centre (ÖSYM) connected to the Council of Higher Education (CHE) and prefer the Higher Education program related to "Istanbul University Faculty of Veterinary Medicine" Undergraduate program in the Guidance Book of Student Selection and Placement Centre (ÖSYS), Higher Education Programs and Quotas.

Candidates who fulfill requirements to get registered to the Faculty apply personally to the registration office in the Faculty together with the documents requested for registration. No registration can be performed with missing documents. Candidates who do not exactly register between the determined dates cannot claim any right.

The number of the students who will be accepted by the Faculty is designated by the Higher Education Board every year after advice from the Faculty. Over the last 3 years the quota average for the Faculty was 139.

The Faculty wishes the number of students registering each year to be decreased to help achieve a higher quality of education. However, the number of the students who register to the Faculty every year is as a result of a state policy. Besides this standard registration, students who were the most successful students in High School, students who bear the Status of Foreign Student and students who come from Vocational High Schools through the Vertical Transfer Exam and other Faculties' students through Horizontal Transfer are added.

Table 9.2 asks the number of the undergraduate students admitted to the Faculty within the last five years.

State any additional admission like students who are transferred from other faculties and financed privately besides the "standard" admission.

Table 9.2. Registration of veterinary students in the past five years.

Year	Number applying for admission	Number admitted		
		"Standard" registration	Other mode of entry	
			Vertical transfer	Foreign student
2014	1669	139	13	5
2013	2023	139	13	5
2012	1961	139	13	5
2011	2004	134	3	5
2010	3487	135	3	5
Average	2229	137	9	5

9.1.3. STUDENT FLOW

Table 9.3 Success flows from the students, who are admitted to the Faculty at the beginning, during the education

Table 9.3. Student flow and total number of undergraduate veterinary students (2014).

Base year: 2009		Number of students present after admitted year 1	Number of additionally admitted students
1st year	2009	133	-
2nd year	2010	103	4
3rd year	2011	101	4
4th year	2012	95	-
5th year	2013	88	-
>5th year	2014	43	-

Table 9.4. Number of students graduating annually over the past five years.

Year	Number graduating
2014	124
2013	120
2012	112
2011	119
2010	105
Average	116

Table 9.5. Average duration of studies (distribution of the students in years, 2014).

Duration of attendance	Number
Students graduating in normal duration	45
Students graduating with 1-year delay	37
Students graduating with 2-years delay	20
Students graduating with 3-years delay	10
Students graduating with 4-years delay	8
Students graduating with 5-years delay	4
Total	124

Describe the requirements (in terms of completing subjects and examinations) for progression to a subsequent year of the course.

It is not compulsory for the student to be successful for all the courses given in a year to continue into the next year. However, for the assessment of the success in a course, the success which is obtained in semester activities and semester-end exams in relation to that course are taken into account.

- Describe the academic circumstances under which the Faculty would oblige students to leave the course.

Students whose Cumulative Grade Point Average (CGPA) is below 2.00 in two successive semesters are classified as unsuccessful. Unsuccessful students cannot take any new compulsory courses, but can take elective courses from an upper period. They have to repeat the previously unsuccessful or conditionally successful courses, which are given in the present period and repeat the courses, for which (DD) and (DC) were received, if they want.

Students whose CGPA's are above 2.00, can take the compulsory unsuccessful courses of the previous semesters, for which they received (FF) and (FD), while taking courses from the upper semesters; moreover, they can retake the conditionally successful courses, for which they received (DD) and (DC) from the previous semesters.

9.2. COMMENTS

Comment on standard of the students starting the course.

Because the exam for transition to higher education is carried out within the framework of the high school educational curriculum, it is not possible to evaluate the matriculated Faculty students in respect of compliance with the profession of a veterinarian. This is similar to admission for other courses as well. Therefore, knowledge of the students who are admitted to the Faculty as a result of the selection processes is generally adequate for them to continue their education in the Faculty. However, to help students in their selection of a university course that will directly influence their future careers, the Faculty organise a series of open days that give potential veterinary students the chance to learn what the Faculty has to offer in terms of education as well as accommodation, sport, health and social opportunities. Potential students, can also find an opportunity to talk to the academicians of the Faculty face to face, and receive answers to their questions.

Comment on the ability of the Faculty to satisfactorily decide the number of students it can accept. Comment on the factors that determine the number of students admitted

Quotas of the students who will be admitted to the Faculty are determined by the Council of Higher Education with the recommendation of the University after taking consideration of the opinion of the Faculty Administrative Board.

During the determination of student quotas for the Faculty, opinions of shareholders are also considered. The substantially high number of students who wish to receive higher education has led to a slight increase in the student quotas. Nevertheless, veterinarians constitute a vocational group which according to the national data has a very high employment rate around 86% within the first year after graduation.

Comment on the adequacy of the facilities and teaching programme to train the existing number of students.

Although there is enough space and personnel for the education of the present quota of students, decrease in student admission numbers would improve the quality of the education.

Comment on the progress made by students in their studies, and the Faculty"s ability to ensure that satisfactory progress is maintained.

The student's studies and their progress are monitored by the commission of "Satisfaction Assessment from Educational Processes" and the "Student Affairs Office". For this,, student satisfaction is discussed with the students.. When students have any problems concerning teaching (progress, improvement, unsatisfactory events, failure etc.) and social activities, they can discuss with the Students Affairs Office, Vice Dean responsible for the education as well as the Student Guidence Supervising and Support Office established within the Avcilar Campus. In case of failure in the exams, students are guided to improve their studies and helping to solve their problems emerging for the exam failure. Also, students have their supervisors who are appointed by the Deanery by random selecting amongst academicians. Students can also discuss their studies and activities with their supervisors. As mentioned above, students get support for their studies, personal problems, social problems and academic improvement. They are followed carefully and satisfactory progress maintained.

Comment on the percentage of students that will eventually graduate.

The number of graduate's changes over the years, but a graduation rate about 77% is calculated when considering the last five years.

9.3. SUGGESTIONS

If you are not satisfied with the situation, please state in order of importance any suggestions that you may have concerning this Chapter if you feel unhappy about:

- *The number of students admitted;*
- *The drop-out percentage and reasons, if known*
- *The average duration of studies;*
- *Other aspects.*

It should be possible to find a way to decrease the number of students admitted to the Faculty, as this will help develop the quality of educational standards in the Faculty .

Education in the Faculty provides continuity for the students. However, students who decide to take a break from their education can begin their education whenever they wish to. Such students who want to leave the Faculty are provided with academic counselling by the Faculty. When the last five years are considered, the number of students who left the Faculty is 56. There are various reasons for this, but some of the main reasons are a wish to transfer to another department, family issues, illness or moving to another veterinary Faculty closer to their familiy

Distribution of the students who left the Faculty within the last five years.	
Year	Number of students
2014	13
2013	9
2012	15
2011	7
2010	12
Total	56

CHAPTER 10

ACADEMIC AND SUPPORT STAFF

10.1. FACTUAL INFORMATION

Definitions:
For definitions, also see the section "Main indicators" in ***Annex I****.*

Budgeted and non-budgeted posts: *A distinction is drawn between:*

- *Posts that are allocated to the Faculty and financed by the University or ministry responsible for the Faculty. These posts can be regarded as more or less permanent. They are termed „budgeted posts";*
- *Posts that depend upon finance in addition to the allocation of budgeted posts from public money. These posts can fluctuate in number. They are termed „non-budgeted posts".*

Full-time equivalents (FTE): *Posts can be occupied full-time or part-time. The number given should correspond to a total of full-time equivalents (FTE). For instance, 10 full-time posts plus two part-time posts at 50% plus 1 part-time post at 80% should be given as a total of 11.8 FTE.*

VS versus NVS academic personnel: *A distinction has to be made between teaching staff holding the degree of veterinary surgeon (VS) and non veterinary surgeon (NVS) teaching staff.*

Teaching staff: *It is understood fact that „teaching" staff will also do research.*

Research staff: *This category includes academic personnel whose main task is to do research work, even though they may from time to time participate in undergraduate teaching.*

Support staff: *This includes all posts, regardless of the work undertaken; secretaries, administrators, technicians, animal caretakers, cleaners, etc.*

Interns, residents, doctoral (Ph.D.) students *are not included in the staff numbers unless they perform regular, paid teaching activities for at least 20% of their workload.*

If you find that the distinctions made between different groups of staff do not fit your situation, make the best distribution you can of your personnel between the headings we use. Add an explanatory note if you wish.

-

Recruitment and promotion of the academic staff

All the members of the Faculty academic staff conduct both educational and research activities. There are 160 academicians in the Faculty including 157 veterinary surgeons and 3 academicians from other professions.

Categorization of the academic staff

Teaching staff
Full Professor
Associate Professor
Assistant Professor
Research Assistant

There are 26 Veterinary Faculties in our country. Vacancies are announced for Turkey through the CHE by newspapers, internet and social media and the application of the candidates who provide the conditions are assessed.

Table 10.1. Personnel in the establishment provided for veterinary training

		Budgeted Post (FTE)		**Non-budgeted Post (FTE)**		**Total (FTE)**	
1. Academic staff		VS	NVS	VS	NVS	VS	NVS
	Teaching staff (FTE)	157	3			157	3
	Research staff (FTE)						
	Others (Please Specify)(FTE)						
	Total FTE	157	3			157	3
	Total FTE (VS+NVS)	160				160	
	FTE providing last year teaching	160				160	
2. Support staff							
	a) Responsible for the care and treatment of animals	26				26	
	b) Responsible for the preparation of practical and clinical teaching	22				22	
	c) Responsible for administration, general services, maintenance, etc.	101				101	
	d) Engaged in research work						
	e) Others (Please Specify)						
	Total Support Staff	149				149	
3. Total Staff		**309**				**309**	

In Table 10.2 supply information on the allocation of personnel to the various departments. The technical term "Departments" refers to the component academic units of the Veterinary Faculty and may have another name (e.g. "Institute"). The titles of the academic staff grades in the table may differ from country to country, and should be modified to suit your particular situation.

Table 10.2. Allocation of academic (veterinary surgeon (VS) and non-veterinary surgeon (NVS)) teaching staff and support staff to the various departments

Department name	Academic teaching staff								Support staff		
	Professor		Associate Professor		Assistant Professor		Research Assistant		Technical	Animal carers	Administrative
	VS	NVS	VS	NVS	VS	NVS	VS	NVS			
Anatomy	4		2				1		1		1
Biochemistry	5		1				2				1
Histology and Embryology	2		2	1			2		1	1	1
Physiology	4		2				2				1
Veterinary Medicine History and Deontology					1						1
Microbiology	3		1				5		1		1
Pharmacology and Toxicology	3		1				4				1
Parasitology	4		2				3		1		
Pathology	4		1		1		4		1		2
Virology	3						2		1		1
Food Hygiene and Technology	5	1	4				3		1		
Internal Medicine	5		2				5		2		1
Obstetrics and Gynaecology	5		5				4		1	1	
Reproduction and Artificial Insemination	7		1				2		1		1
Surgery	5		4				6		7		
Animal Breeding and Husbandry	6		3	1			4		1		1
Animal Nutrition and Nutritional Diseases	6		1				3				1
Deanery units											44
Hospital									2	8	7
Farm									1	4	2
Service purchase (animal sitter)										12	
Service purchase (cleaning)											22
Service purchase (security)											12
Total	**71**	**1**	**32**	**2**	**2**	**-**	**52**	**-**	**22**	**26**	**101**
	160								**149**		

Ratios: From the above data please delineate the following ratios

Table 10.3. Ratios students/staff.

RATIO	FORMULA		IU FVM	EAEVE
R 1	*Number of undergraduate veterinary students* / *Number of total FTE academic staff in veterinary training*	995/160	**6.219**	**8.381** (Max.)
R 2	*Number of undergraduate students* / *Number of total FTE academic staff*	995/309	**3.220**	**9.377** (Max.)
R 3	*Number of undergraduate veterinary students* / *Number of FTE veterinarians in veterinary training*	995/157	**6.338**	**11.057** (Max.)
R 4	*Number of students graduating annually* / *Number of FTE veterinarians in veterinary training*	116/157	**0.739**	**2.070** (Max.)
R 5	*Number of total FTE support staff in veterinary training* / *Number of total FTE academic staff in veterinary training*	*149/160*	**0.931**	**0.505-1.907** (Recommended range)

- *Outline how the allocation of staff to the Faculty is determined.*
- *Outline how the allocation of staff to the departments (or other units) within the Faculty is determined.*
- *Indicate whether there are difficulties in recruiting or retaining staff.*
- *Describe (if appropriate) any relevant trends or changes in staff levels or the ability to fill vacancies over the past decade.*
- *Indicate whether it is easy to employ additional staff from service income (e.g. from revenues of clinical or diagnostic work).*
- *Describe the regulations governing outside work, including consultation and private practice, by staff working at the establishment.*
- *Describe the possibilities and financial provisions for the academic staff to:*
  - *a. Attend scientific meetings;*
  - *b. Go on a sabbatical leave.*

In our University, students can work as assisting students at a department they are particularily interested in during their education. To work as an assisting student, they contact the relevant academic staff and show their interest by contributing to various researche programmes. Students who are successful during their education can also apply to become an academician in the Faculty

Master and doctoral further education is carried out under the auspices of Istanbul University Institute of Health Sciences. Departments inform the institute about the student quotas for master and doctoral education. Students who pass language, general ability and science exams can begin the doctoral/master education. Vacancies for research assistants are opened only for doctoral and master students. Students who continue their education have the right to apply for the available vacancies in the Faculty as long as they fulfil the conditions.

In staff employment, determination of the quotas directly depends on the Rectorate of the University and the central government. People who obtain the right for being state officials with the KPSS (Public Personnel Selection Examination), a central exam, are appointed and start working in our University. Apart from that, services like security and cleaning are bought in from various private firms.

Despite the recent improvements in the salaries of the academicians, salaries are relatively low when compared to some chief positions of the state. However, there remains a strong interest of students in achieving academic positions within the Faculty.

Academicians can be assigned by the institution to attend scientific meetings and can obtain funds from scientific institutions (TUBITAK, BAP).

10.2. COMMENTS

- *Comment on the numbers of personnel in the various categories.*
- *Comment on the salary levels, especially those of academic staff in relation to the level of income in the private sector.*
- *Comment on the ease or difficulty of recruiting and retaining personnel.*
- *Comment on the percentage of veterinarians in the academic staff.*

When the academic positions are reviewed in the Faculty, no striking deficiency stands out. But an increase is required in the number of technical staff members, especially in clinical sciences.

10.3. SUGGESTIONS

CHAPTER 11

CONTINUING EDUCATION

11.1. FACTUAL INFORMATION

Please describe the role of the Faculty in providing continuing education.

Programmes are regularly delivered by members of the Faculty with the aim to continue the development and education of colleagues in the private or state sector. For this, seminars, trainings, courses or congresses are organized by the Faculty with the contribution of the academicians of the Faculty.

Details of the meetings, trainings, congresses and conferences, which have been held over the last two years, are given in Table 11.1.

Table 11.1. Meetings, trainings, congresses and conferences, which have been held over the last two years.

Course Name	Partner Establishment	Course Duration	Place, Date of Organization
Clinical haematology transfusion medical haematosis in small animals	Izmir Chamber of Veterinary Surgeons (ICVS)	1 day	Izmir 20 January2013
Dairy processing workshop	Republic of Turkey Ministry of Food, Agriculture and Livestock	2 days	Ankara 7-8 February 2013
Increasing the yield of culture breed cattle by using the embryo production and freezing techniques	Panagro Tarım Hayvancılık Sanayii ve Ticaret A.Ş.	1 day	Ankara 7 February 2013
Seminar of introduction to cardiology	Izmir Chamber of Veterinary Surgeons (ICVS)	1 day	Istanbul 17 March 2013
Food controller course	Republic of Turkey Ministry of Food, Agriculture and Livestock	½ day	Istanbul 29 March 2013
Biocidal product implementation training	Turkish Veterinary Medical Association	2 days	Istanbul 8-9 April 2013
Inspector behaviours training	Nova Training and Management Consultancy	2 days	Antalya 15-16 April 2013
Course for experimental animals usage certificate	Bağcılar Training and Research Hospital	2 days	Istanbul 19-20 April 2013
Food safety training	Food Safety and Hygiene Academy	2 days	Sakarya 29-30 April 2013
Scientific work methodology workshop	Izmir Tepecik Training Hospital	2 days	Izmir 4-5 May 2013

Quality and food safety training	IU-VFM and IU CEC (Continuous Education Centre)	2 days	Istanbul 18-19 May 2013
Laparoscopy courses on swine model	Dr. Sadi Konuk Research and Training Hospital	2 days	Istanbul 21-22 June 2013
Training for experimental animals usage certificate	Yeditepe University	1 day	Istanbul 19 September 2013
Training for dairy and feeder cattle, sheep-goat and poultry ration preparation and feeding methods	Cargill	2 days	Istanbul 9-10 September 2013
Latest technologies in red meat and meat products from storage to distribution and their effects on the shelf life and struggle with Listeria and E. coli O157	Food Safety and Hygiene Academy	1 day	Istanbul 10 September 2013
Quality management system training	TÜV Rheinland Ulusal Standartları Sertifikasyon ve Denetim A.Ş.	4 days	Istanbul 17-20 September 2013
Cataract operation from every aspect and ophthalmic examination and diagnostic methods	Veterinary Academy	3 days	Istanbul 27-29 September 2013
Workshop on Tissue Flex experiments	Eczacıbaşı	1 day	Istanbul 15 October 2013
Clinical approaches to infertility in cats and dogs (workshop)	Congress of Veterinary Obstetrics and Gynaecology	1 day	Antalya 01-04 November 2013
Training for experimental animals usage certificate	Institute of Experimental Medicine	4 days	Istanbul 01-03 November 2013
Diagnostic methods in diseases progressing with vaginal secretion in cats and dogs (workshop)	Congress of Veterinary Obstetrics and Gynaecology	1 day	Antalya 01-04 November 2013
Food controller course	Republic of Turkey Ministry of Food, Agriculture and Livestock	½ day	Istanbul 15 November 2013
Cataract operation from every aspect and ophthalmic examination and diagnostic methods	Veterinary Academy	2 days	Istanbul 16-17 November 2013
Cornea structure and diseases	Veterinary Academy	1 day	Istanbul 16 January 2014
Training for experimental animals usage certificate	Yeditepe University	1 day	Istanbul 16 January 2014
Experimental Animal models course	Bağcılar Training and Research Hospital	2 days	Istanbul 3-4 February 2014
Consensus discussion platform	MSD Husbandry	1 day	Istanbul 7 February 2014
Laparoscopy courses on swine model	Dr. Sadi Konuk Research and Training Hospital	2 days	Istanbul 7-8 March 2014
Workshop for veterinary public health training and organization in our country	Diyarbakır Chamber of Veterinary Surgeons	3 days	Diyarbakır 21-23 March 2014
Food safety training	Food Safety and Hygiene Academy	2 days	Sakarya 1-2 April 2014
Training for practical scientific research project preparation	TUBITAK	2 days	Şanlı Urfa 5-7 April 2014

Training of slaughter animal welfare and animal welfare in slaughterhouses	FAO, TIKA, RSPCA and Veterinary Public Health Association	5 days	Ankara 5-9 May 2014
Quality and food safety training	IU-FVM and IU CEC (Continuous Education Centre)	2 days	Istanbul 24-25 May 2014
Laparoscopy courses on swine model	Dr. Sadi Konuk Research and Training Hospital	2 days	Istanbul 6-7 June 2014
Vaccination programmes and small animal dermatology	Interhas Tıbbi ve Kimyevi Ürünler Ticaret ve Sanayi A.Ş.	1 day	Izmir 8 June 2014
Training for practical scientific research project preparation	TUBITAK	2 days	Nevşehir 23-26 June 2014
Training for experimental animals usage certificate	Yeditepe University	1 day	Istanbul 1 September 2014
Trichophytosis and newborn diseases	Interhas	1 day	Kırklareli 9 September 2014
Training for practical scientific research project preparation	TUBITAK	2 days	Gaziantep 9-12 September 2014
Trichophytosis and newborn diseases	Interhas	1 day	Istanbul 19 September 2014
Workshop for determination and prioritization of the R&D priorities of the healthcare area on evidence basis	Ministry of Health	3 days	Bolu 26-28 November 2014
Training for practical scientific research project preparation	TUBITAK	2 days	Zonguldak 20-22 December 2013
Animal nutrition panel	TUBITAK	1 day	Ankara 12 December 2014
Training for People who will start a business	Tekirdağ Metropolitan Municipality	1 day	Tekirdağ 23 December 2014

11.2. COMMENTS

- Comment on the quality of the continuing education programmes in which the Faculty is involved.
- Comment on the degree of participation of veterinarians in the continuing education programmes in which the Faculty is involved.

The Faculty organizes trainings, seminars, congresses, conferences and meetings to increase the professional knowledge and skills of both of our students and graduates in line with the requirements of the developing technology and the needs of the service and production sectors. While a part of these meetings are organized by our establishment, another part is supported by the participation of the Faculty academicians in the organizations.

Training can be summarized in three groups. The first group includes the certificated training programmes. These programmes are specified with the feedback of the employees of the sector and/or students. In our country, changes have been made in the legislation within the responsibility area of Veterinary Medicine and the organization and structure

of the Ministry of Food, Agriculture and Livestock, which is the responsible ministry.

Training can be provided by the academicians of the Faculty or with the organizational support of the Continuous Education Centre (CEC) of our University and also through cooperation with external establishments.

Practical and theoretical trainings, which are given through various veterinary chambers cooperating with external establishments, are especially significant. Thanks to this training, an opportunity has emerged to provide many associates with practical up-to-date information over a wide area of Turkey. Food safety and quality management systems (ISO9000-ISO22000), certificate programmes for experimental animal usage, animal welfare and nutrition can be given as examples for training delivered on quite different topics. Details of such training programmes are given in Table 11.1.

In addition, academicians of the Faculty support the programme of the orientation training provided by the Ministry of Food, Agriculture and Livestock for its personnel that will subsequently be employed in routine inspections.

Other training activities that can be considered with continuous education are the educational seminars, courses and meetings held by our student clubs. Educational programmes of these clubs are open to the general public and a great number of veterinary surgeons and students also attend them. Activities performed in this scope are elaborated in Chapter-5, Faculty Club Activities.

Also, our academicians participate in numerous scientific congresses, meetings, panels or presentations. In addition, a great number of our colleagues who continue their Master and Doctoral education in the departments of the Faculty give seminars for current topics within the scope of their training programmes. Among these activities, scientific research congress of the Scientific Research Club International Veterinary Medicine Students, which has been hosted regularly by the Faculty for 17 years, has a special importance. This organization enables the veterinary students to establish international communication, share information, follow up-to-date scientific information and participate in various research activities for presenting them in this congress.

11.3. SUGGESTIONS

Although the Faculty plays an active role in continuing education, it would be useful to assess the requirements with concrete methods and organize them on a regular basis. It is also necessary to advertise such continuing education for larger potential audiences The presence of an actively working Continuous Education Centre in our University is a powerful aspect for the Faculty in order to arrange such meetings.

CHAPTER 12

POSTGRADUATE EDUCATION

This heading covers all further training leading to a diploma-special postgraduate studies, Ph.D. courses, research training programmes, and national or European College specialized qualifications.

Please provide details of all postgraduate training opportunities in tabular form under "Factual Information".

12.1. FACTUAL INFORMATION

Post-graduation activities within the Faculty are carried out centrally by the Institute of Health Sciences which is connected to Istanbul University. Two separate programmes are implemented:

Doctoral programme and
Master programme

Doctoral programmes take 4 years, master programmes take 2 years. The first two years of the doctoral programme and the first year of the master programme are allocated for field specialization courses. Students have to give at least one seminar within this period. After taking the doctorate courses in the doctoral programme, students are subjected to both verbal and written proficiency exams. This exam is assessed by a jury which consists of five academics including the participation of more than one academician from other universities. This exam is not applied for the master programme. However, a thesis must be prepared in both programmes.

The budget for these programmes is supported by the Scientific Research Project Unit of Istanbul University. At the end of the programme, these are submitted in Turkish providing abstracts in English. Success of these theses is evaluated by an examination commission with participation from external faculties. It is obligatory to publish the theses in a journal within the scope of SCI at the end of the programme.

12.1.1. CLINICAL SPECIALTY TRAINING (INTERNS AND RESIDENTS)

- Indicate whether students involved in this training receive a grant or a salary.
- Indicate any programmes that are certified by the European Board of Veterinary Specializations.

No post-graduation intern or resident programmes are available in the Faculty as well as in Turkey.

Certificated educational seminars and workshops are held on various topics within the scope of in-service training and they are open to external participation.

Table 12.1. Post-graduation training courses*

Clinical Discipline	Number of Interns	Number of Residents	Diploma or title anticipated

*It is not applicable in Turkey.

12.1.2. RESEARCH EDUCATION PROGRAMMES

No training programmes are supported by the European Specialty College. However, PhD degree can be given for the post-graduation doctoral education in Istanbul University Faculty of Veterinary Medicine.

Table 12.2a. Number of research students enrolled in different programmes

Type of degree	Fulltime	Part time	Duration
PhD	187	-	4 year
Master	46	-	2 year
Other doctoral level		Not applicable	

Table 12.2b. Number of master and doctoral students according to departments (2014)

Master Programme	Number of Students
Internal Medicine	4
Obstetrics and Gynaecology	2
Reproduction and Artificial Insemination	2
Microbiology	6
Physiology	1
Pharmacology and Toxicology	1
Anatomy	4
Animal Nutrition and Nutritional Diseases	1
Food Hygiene and Technology	25
Total	**46**
Doctoral programme	
Internal Medicine	7
Surgery	16
Obstetrics and Gynaecology	10
Reproduction and Artificial Insemination	18
Pathology	6
Microbiology	31
Virology	6
Parasitology	2
Physiology	6
Biochemistry	5
Pharmacology and Toxicology	11
Anatomy	4
Histology and Embryology	3
Animal Breeding and Husbandry	7
Animal Nutrition and Nutritional Diseases	20
Food Hygiene and Technology	35
Total	**187**

12.2. COMMENTS

Comment on the number of postgraduate diplomas/titles awarded annually.
Comment on the percentage of veterinarians participating in postgraduate research training programmes.

Number of students in the master programme is 46 and the number of students in the doctoral programme is 187 within the Faculty.

In-service trainings are given below for the last year.

- Artificial Insemination Course with Recto-Vaginal Method in Cattle
- Homeopathy in Equine Training
- Homeopathy in Veterinary Medicine Training
- Introduction to Cardiology 1 Seminar
- Food Safety and Hygiene Academy / Conscious Antibiotic Usage in Clinic and Veterinary Laboratory Support-Receiving Seminar
- Experimental Animals Usage Certificate Course
- Biocidal Product Implementation
- Basic Training of Quality And Food Safety Systems
- ISO 9001:2008 Quality and ISO:22000 Food Safety Management System Training Programme
- From Hive to Table: Research on the Existence of Parasite, Viral and Microbiologic Factors Risking the Health of Honeybees, Honey and Consumers and Determination of the Interaction between them
- Nutrition of Dairy Cattle, Ration Preparation and Feeding Methods
- Nutrition of Feeder Cattle, Ration Preparation and Feeding Methods
- Nutrition of Sheep and Goats, Ration Preparation and Feeding Methods
- Poultry Nutrition, Ration Preparation and Feeding Methods
- Latest Technologies in Red Meat and Meat Products From Storage To Distribution and Their Effects On The Shelf Life
- Cataract Operation From Every Aspect and Ophthalmic Examination and Diagnosis
- Cataract Operation From Every Aspect and Ophthalmic Examination and Diagnosis 2
- Meat and Meat Products and Milk and Dairy Products Technology
- Wild Animal Diseases Course
- Cornea Structure and Diseases
- Consensus Discussion Platform
- Course of Experimental Animal Models
- Basic Training of Quality And Food Safety Management System
- Coronavirus Scientific Board Meeting
- Training For Practical Scientific Research Project Preparation (4 different courses)
- Certificate Programmes of Continuous Education Application and Research Centre

12.3. SUGGESTIONS

The Continuing Education Centre of Istanbul University has been founded 5 years ago and makes significant progress every year. Our academicians can make more use of this unit which takes the needs of both our associates and the market into account. Training for reduced payment or no payment can be provided for the participating veterinary surgeons within the scope of the Revolving Resources Services of Istanbul University.

CHAPTER 13

RESEARCH

The details requested under this heading relate only to research experience offered to students during their undergraduate training, for example through project work.

13.1. FACTUAL INFORMATION

Indicate the involvement of undergraduate students in research, including the time spent, percentage of students involved and outcome required.

During their undergraduate course, an exposure to scientific research is very important for students. Istanbul University Faculty of Veterinary Medicine takes an active role in such student research.

The important positive effects of students conducting or participating in research activities strengthen the academician and student relations. These activities also make students better understand scientific terminology and scientific ethics.

On the other hand, the participation of students in research activity is voluntary. Many educational specialists believe that student research and medical education should be considered together as a whole.

Furthermore students find the opportunity to meet with scientists and students from different faculties or countries and work together with them. Participating in research activities helps students to decide on their own future careers and gives an important infrastructure for those who want to start academic life in future. Academicians may find the opportunity to know and choose their future colleagues.

Istanbul University Faculty of Veterinary Medicine finds it important to encourage students to participate in research activities.

The Scientific Research Club established and operated by the students of the Faculty has organized 17 International Veterinary Medicine Students Scientific Research Congresses so far. The first 4 of these activities were at national level, and the other congresses were at international level with scientific committees.

In these congresses, a small participation fee is received from the students for all scientific sessions and for social programs which include accommodation, trips and food, and the rest of the financial support is provided by the Faculty and sponsors.

There were totally 84 presentations in the last congress. 52 of which were oral and 32 were posters. The total number of students participating in this congress was 700. 550 of them were from various national universities and 150 students participated from 16 different countries.

All participants received certificates in the congress. The presentations were assessed by a jury. Presentations that were found worthy gained awards. Awarded project competitions were organized for the second time in the 17th Congress.

The first scientific veterinary medicine journal "Zoom" in Turkey has been published by Istanbul University Faculty of Veterinary Medicine students since 2004 and it operates under Scientific Research Club. Its purpose is to direct the students to conduct research and present opportunities to share their research with other students. Therefore, priority is given to the articles of the veterinary Faculty students in this journal. The studies which attract the attention of the students conducted by the lecturers and veterinarians are also published.

The journal, which has published 18 issues so far, is prepared by the students at all stages from its design to its editing.

The 17th and 18th issues were prepared as a bilingual edition, in Turkish and English. Articles were received from Sweden, Greece, Indonesia and Bangladesh; the distribution of the journal in the 17th International Veterinary Medicine Students Scientific Research Congress, and then distributed to students all over the world as an e-journal, gained acceptance as an international journal. The positive reactions for this edition encouraged the journal to continue to be published as an international journal.

Istanbul University Veterinary Faculty students IVSA-Istanbul Club is a member of International Veterinary Students Association which was established in 1953 in Germany, and has membership from Veterinary Faculties of 50 different countries with 30.000 members.

The Research Fund of Istanbul University (BAP) and the Scientific and Technological Research Council of Turkey (TUBITAK) supply financial support for student research as well as various private foundations.

Health, Culture and Sport Department of Istanbul University (HCS) provides food, accommodation, healthcare, social and sports facilities to students from all campuses. It also funds our students to join scientific congresses and educational travels. For this reason, the HCS Department provides travel and remuneration for the students who perform oral presentations in national and international congresses. Also it provides food and accommodation for the students coming from other countries.

Istanbul University Technology Transfer Centre (TTC) supports the students in terms of calls for national and international grant programs and provides assistance during the application, management and conclusion processes of these programs. Applied Entrepreneurship lectures at undergraduate level are provided in all faculties of the

University, and students who succeed in these lectures are provided with assistance to make use of Turkey Small and Medium Enterprises Development Organization (KOSGEB) grant programs.

Students may participate in the training activities free of charge. The students are assisted in the process to obtain a patent and license for their inventions and innovations, and their intellectual and industrial property rights are protected.

As well as many other laboratories established within Istanbul University, there is a Central Advanced Analyses Laboratory (CAAL=MERLAB) which organizes informative training activities about the infrastructure of the laboratory for students. The analysis part of the projects and studies in which students take part are supported by the CAAL. The numbers of projects conducted by students were 36 in the year of 2013, and 21 in 2014 while 9 in 2015.

VET*istanbul* Group which is a formation of scientific, academic and social cooperation was established under the coordination of Istanbul University Faculty of Veterinary Medicine in 2013. The aims of the group are to improve academic and cultural relationships, and to enable the sharing of educational and research opportunities among the partner Veterinary Education Establishments not only for academicians but also for the students.

All students who are in the tenth semester should be actively participating in a research project for graduation. The education is concluded with this thesis project and students must work independently under the supervision of a Faculty member of the IU-FVM.

13.2. COMMENTS

Comment on the opportunities for students to participate in active research work.

In veterinary education, benefits of involving of students in researches and international mobility are very clear. This type of efforts should establish and continue, and the students should be encouraged in this regard.

13.3. SUGGESTIONS

Will students be given more opportunity to participate in research activities?
If so, how will this be done?

Recent years, our students have been participated to international scientific congresses which were organized or participated by the Faculty's academicians. Our students can be encouraged to produce projects or to join research programmes by increasing the number of students via supplying more financial support. Particularly, it has been planned that the increasing number of students will participate several international scientific congresses which will be organized by VET*istanbul* Group (3th at Sarajevo University (Bosnia and Herzegovina), 4th Kazakh National Agrarian University (Kazakhstan), 5th Ss Cyril and Methodius University in Skopje (Macedonia)).

In addition, it has been planned to increase the presentation awards at International Veterinary Medicine Students Scientific Research Congresses for not only our students but also for guests and foreign students.

ANNEX I. *Curriculum according to semesters and credits (per weeks, 1 semester=14 weeks).*

1st SEMESTER					
Courses	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Medical Physics	2		2	2	3
Chemistry	2	1	3	2,5	3
Medical Biology	3	2	5	4	4
Anatomy I	4	4	8	6	7
Biometrics	2		2	2	3
History of Veterinary Medicine	2		2	2	3
Ataturk's Principles and History of Turkish Revolution I	2		2	2	2
Turkish Language I	2		2	2	2
Foreign Language I	2		2	2	2
Elective Course (Group I)	1		1	1	1
Compulsory Courses (Total)	**21**	**7**	**28**	**24,5**	**29**
Elective Courses (Total)				1	1
Semester(Total)				**25,5**	**30**
Elective Courses (Group I)					
Fine Arts I	1		1	1	1
Physical Training I	1		1	1	1
History of Civilization	1		1	1	1
Veterinary Anatomy Terminology	1		1	1	1

2nd SEMESTER					
Courses	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Anatomy II	4	6	10	7	7
Genetics	2		2	2	2
Histology I	2	1	3	2,5	3
Physiology I	4	2	6	5	5
Biochemistry I	3	2	5	4	4
Ataturk's Principles and History of Turkish Revolution II	2		2	2	2
Turkish Language II	2		2	2	2
Foreign Language II	2		2	2	2
Elective Course (Group II)	1		1	1	1
Elective Course (Group III)	2		2	2	2
Compulsory Courses (Total)	**21**	**11**	**32**	**26,5**	**27**
Elective Courses (Total)				**3**	**4**
Semester (Total)				**29,5**	**30**
Elective Courses (Group II)					
Fine Arts II	1		1	1	1
Physical Training II	1		1	1	1
Communication Techniques	1		1	1	1
Animal Rights	1		1	1	1
Elective Courses (Group III)					
Disasters Culture	2		2	2	2
Scientific Research Techniques	2		2	2	2

3rd SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Embryology	2		2	2	2
Animal Breeding and Husbandry I	3	1	4	3,5	4
Histology II	3	2	5	4	4
Physiology II	3	2	5	4	4
Biochemistry II	3	2	5	4	4
General Microbiology	2	2	4	3	4
Feed Stuffs and Feed Technology	2	2	4	3	4
Elective Course (Group IV)	2		2	2	2
Elective Course (Group V)	1		1	1	2
Compulsory Courses (Total)	**18**	**11**	**29**	**23,5**	**26**
Elective Courses (Total)				**3**	**4**
Semester(Total)				**26,5**	**30**
Elective Courses (Group IV)					
City Culture and Istanbul	2		2	2	2
Biotechnology	2		2	2	2
Sign Language	2		2	2	2
Elective Courses (Group V)					
Anatomy of Exotic Animal	1		1	1	2
Feed Legislation and Quality Control	1		1	1	2
Food and Nutrition Culture	1		1	1	2
Exercise Physiology	1		1	1	2
The Use of Instruments in Biochemistry Laboratory	1		1	1	2
Anatomy of the Laboratory Animal	1		1	1	2

4th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Animal Welfare	2		2	2	2
Immunology and Serology	2	2	4	3	4
Animal Breeding and Husbandry II	3	2	5	4	5
Animal Nutrition and Nutritional Diseases	3	1	4	3,5	5
Laboratory Animals	2	1	3	2,5	3
General Parasitology	1	1	2	1,5	2
Ethology	2		2	2	2
Radiology	1		1	1	1
Epizootiology	2		2	2	2
Topographic Anatomy	1	1	2	1,5	2
Elective Course (Group VI)	1		1	1	2
Compulsory Courses (Total)	**19**	**8**	**27**	**23**	**28**
Elective Courses (Total)				**1**	**2**
Semester (Total)				**24**	**30**
Elective Courses (Group VI)					
Area Elective Courses					
Physiology of Exotic Animals	1		1	1	2
Organic Animal Nutrition	1		1	1	2
Food Chemistry	1		1	1	2
Common Elective Courses					
Nutrition of Laboratory Animals	1		1	1	2
Biochemical Differences of Animals	1		1	1	2
Animal Blood Bank	1		1	1	2

5th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Bacteriology and Mycology	4	2	6	5	6
Virology	3	2	5	4	5
Entomology	1	1	2	1,5	2
Helminthology	2	2	4	3	3
Food Hygiene	2		2	2	2
Food Safety	2		2	2	2
Internal Clinical Examination Methods	2		2	2	2
Surgery Clinic Examination Techniques	2		2	2	2
Clinical Practices (Surgery-Internal Medicine)		4	4	2	2
Elective Course (Group VII)	1		1	1	2
Elective Course (Group VIII)	1		1	1	2
Compulsory Courses (Total)	**18**	**11**	**29**	**23,5**	**26**
Elective Courses (Total)				**2**	**4**
Semester (Total)				**25,5**	**30**
Elective Courses (Group VII)					
Area Elective Courses					
Biochemistry of Exotic Animals	1		1	1	2
Shelter Feasibility and Hygiene	1		1	1	2
Food Processing and Preservation Techniques	1		1	1	2
Vector Control	1		1	1	2
Avian Anatomy	1		1	1	2
Elective Courses (Group VIII)					
Common Elective Courses					
Biochemistry of Metabolic and Hereditary Diseases	1		1	1	2
Viral Vaccine Preparation Techniques	1		1	1	2
Bee Diseases	1		1	1	2
Laboratory Animal Parasites	1		1	1	2
Clinical Biochemistry	1		1	1	2

6th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Meat Inspection	2		2	2	2
Meat Hygiene and Technology	2		2	2	2
Milk Hygiene and Technology	2		2	2	2
Pharmacology I	3	2	5	4	4
Anaesthesia and Reanimation	2		2	2	2
Protozoology	2	2	4	3	3
General Pathology	2	1	3	2,5	3
Clinical Practices (Surgery-Internal Medicine)		4	4	2	2
Fish Diseases	1		1	1	1
Population Genetics	2		2	2	2
Food Hygiene Practices		3	3	1,5	1
Elective Course (Group IX)	1		1	1	2
Elective Course (Group X)	1		1	1	2
Elective Course (Group XI)	1		1	1	2
Compulsory Courses(Total)	**18**	**12**	**30**	**24**	**24**
Elective Courses (Total)				**3**	**6**
Semester (Total)				**27**	**30**
Elective Courses (Group IX)					
Area Elective Courses					
Nutrition of Exotic Animals	1		1	1	2
Organic Animal Breeding	1		1	1	2
Hygienic Controls in Food Production Facilities	1		1	1	2
Biochemistry of Immunology and Tumors	1		1	1	2
Avian Physiology	1		1	1	2
Elective Courses (Group X)					
Area Elective Courses					
Exotic Animal Parasites	1		1	1	2
Nutrition in Culture-Based Fisheries	1		1	1	2
Food Legislation	1		1	1	2
Fluid Electrolyte Therapy	1		1	1	2
Avian Biochemistry	1		1	1	2
Elective Courses (Group XI)					
Common Elective Courses					
Fish Pathology	1		1	1	2
Food Environment and Public Health	1		1	1	2
Viral Zoonoses	1		1	1	2
Animal Genomes	1		1	1	2
Clinical Bacteriology	1		1	1	2
Pathology of Laboratory Animals	1		1	1	2

7th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Special Pathology (A)	4	2	6	5	5
General Surgery and Operation Techniques	2		2	2	3
Obstetrics and Gynaecology I	4		4	4	4
Internal Medicine I	3		3	3	3
Pharmacology II	3		3	3	3
Clinical and Pathology Practices (A)		5	5	2,5	3
Food Practices		2	2	1	1
Elective Course (Group XII)	1		1	1	2
Elective Course (Group XIII)	1		1	1	2
Elective Course (Group XIV)	2		2	2	4
Elective Course (Group XIV)	2		2	2	4
Compulsory Courses(Total)	**16**	**9**	**25**	**20,5**	**22**
Elective Courses (Total)				**4**	**8**
Semester (Total)				**24,5**	**30**
Elective Courses (Group XII)					
Area Elective Courses					
Pathology of Exotic Animals	1		1	1	2
Water Buffalo Nutrition	1		1	1	2
Special Histological Examination Methods	1		1	1	2
Diagnostic Imaging Methods in Internal Medicine	1		1	1	2
Poultry Parasites	1		1	1	2
Elective Courses (Group XIII)					
Area Elective Courses					
Internal Diseases of Exotic Animals	1		1	1	2
Nutrition of Pets	1		1	1	2
Management of Food Establishment	1		1	1	2
Antineoplastic Drugs	1		1	1	2
Poultry Nutrition	1		1	1	2
Elective Courses (Group XIV)					
Common Elective Courses					
Material Submission and Reporting	1		1	1	2
Emergency Surgical Applications	1		1	1	2
Zoonotic Parasites	1		1	1	2
Doping	1		1	1	2
Clinical Pharmacokinetic	1		1	1	2
Veterinarian Services in Municipalities	1		1	1	2
Reproductive Ultrasonography	1		1	1	2

8th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Special Pathology (B)	4	2	6	5	5
Foot Diseases and Orthopaedics (A)	3		3	3	3
Obstetrics and Gynaecology II	4		4	4	4
Internal Medicine II	3		3	3	3
Reproduction and Artificial Insemination I	2		2	2	2
Special Surgery	3		3	3	3
Forensic Medicine	1		1	1	1
Clinical and Pathology Practices (B)		5	5	2,5	3
Elective Course (Group XV)	1		1	1	2
Elective Course (Group XVI)	1		1	1	2
Elective Course (Group XII)	1		1	1	2
Compulsory Courses(Total)	**20**	**7**	**27**	**23,5**	**24**
Elective Courses (Total)				**3**	**6**
Semester (Total)				**26,5**	**30**
Elective Courses (Group XV)					
Area Elective Courses					
Bacterial and Fungal Diseases of Exotic Animals	1		1	1	2
Herd Health and Management	1		1	1	2
Poultry Meat Hygiene and Technology	1		1	1	2
Drug Usage in Bee, Fish and Exotic Animals	1		1	1	2
Avian Medicine	1		1	1	2
Elective Courses (Group XVI)					
Area Elective Courses					
Viral Diseases of Exotic Animals	1		1	1	2
Assisted Reproductive Technologies in Farm Animals	1		1	1	2
Aquatic Food Products Hygiene and Technology	1		1	1	2
Gynaecologic Emergency Interfere	1		1	1	2
Pathology of Poultry	1		1	1	2
Elective Courses (Group XVII)					
Common Elective Courses					
Behavioural Disorders in Animals	1		1	1	2
Clinical Parasitology	1		1	1	2
Reanimation in Newborns and Neonatology	1		1	1	2
Molecular Diagnosis of Diseases	1		1	1	2
Eye Diseases	1		1	1	2
Hematopathology	1		1	1	2
Pathology of Tumors	1		1	1	2
Elective Courses (Group XVII)					
Common Elective Courses					
Practical Entrepreneurship	2	2	4	3	5

9th SEMESTER					
Course	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Internal Medicine III	4		4	4	4
Managerial Economics of Animal Breeding	2		2	2	2
Toxicology	2	2	4	3	3
Foot Diseases and Orthopaedics (B)	3		3	3	3
Reproduction and Artificial Insemination II	2		2	2	2
Poultry Diseases	2	1	3	2,5	3
Clinical Practices		5	5	2,5	2
Professional Ethics and Veterinary Legislation	1		1	1	1
Elective Course (Group XVIII)	5		5	5	10
Compulsory Courses(Total)	**16**	**8**	**24**	**20**	**20**
Elective Courses (Total)				**5**	**10**
Semester (Total)				**25**	**30**
Elective Courses (Group XVIII)					
Area Elective Courses					
Exotic Animal Surgery	1		1	1	2
Slaughterhouse and Veterinary Medicine	1		1	1	2
Clinical Oncology and Chemotherapy	1		1	1	2
Elective Courses					
Area Elective Courses					
Reproductive Disorders in Exotic Animals	1		1	1	2
Food Quality Management Systems	1		1	1	2
Gynaecologic Oncology	1		1	1	2
Elective Courses					
Area Elective Courses					
Drug Residues and Public Health	1		1	1	2
Oncologic Surgical Procedures	1		1	1	2
Assisted Reproductive Techniques in Fowl	1		1	1	2
Elective Courses					
Common Elective Courses					
Assisted Reproductive Techniques in Cats and Dogs	1		1	1	2
Emergency in Internal Medicine	1		1	1	2
Physiotherapy Methods	1		1	1	2
Neurosurgery	1		1	1	2
Geriatric Diseases in Cats and Dogs	1		1	1	2
Udder Health and Control Programme	1		1	1	2
Advanced Imaging Techniques	1		1	1	2
Clinical Endocrinology	1		1	1	2
Special Food Products Hygiene and Technology	1		1	1	2
Molecular Techniques Used in the Diagnosis of Parasitic Diseases	1		1	1	2
Small Animal Dentistry	1		1	1	2

10th SEMESTER					
Courses	**Theoretical**	**Practical**	**Total**	**Credit**	**ECTS**
Elective Course (Group XIX)		40	40	20	30
Elective Courses (Group XIX)					
Tracking Programme of Poultry Breeding and Diseases		40	40	20	30
Tracking Programme of Food Hygiene and Technology		40	40	20	30
Tracking Programme of Animal Breeding and Husbandry		40	40	20	30
Tracking Programme of Clinical Laboratory Diagnostics		40	40	20	30

Graduation Total Credit	254
Graduation Total ECTS	300

Compulsory Course Credit	209
Elective Course Credit	45
Total Credit of Compulsory and Elective Courses	254
Elective Course Ratio	18%
Graduation ECTS	300
Elective Course ECTS	74
Elective Course ECTS Ratio	25%

ANNEX II. *Common elective courses and elective courses according to tracks (per weeks, 1 semester=14 weeks).*

Track	Theoretical	Practical	Total	Credit	ECTS
Exotic Animals					
Anatomy of Exotic Animal	1		1	1	2
Physiology of Exotic Animals	1		1	1	2
Biochemistry of Exotic Animals	1		1	1	2
Nutrition of Exotic Animals	1		1	1	2
Exotic Animal Parasites	1		1	1	2
Pathology of Exotic Animals	1		1	1	2
Exotic Animal Internal Medicine	1		1	1	2
Bacterial and Fungal Diseases of Exotic Animals	1		1	1	2
Viral Diseases of Exotic Animals	1		1	1	2
Exotic Animal Surgery	1		1	1	2
Reproductive Disorders in Exotic Animals	1		1	1	2
Food Hygiene and Technology					
Food Chemistry	1		1	1	2
Food and Nutrition Culture	1		1	1	2
Food Processing and Preservation Techniques	1		1	1	2
Hygienic Controls in Food Production Facilities	1		1	1	2
Food Legislation	1		1	1	2
Special Histological Examination Methods	1		1	1	2
Management of Food Establishment	1		1	1	2
Poultry Meat Hygiene and Technology	1		1	1	2
Aquatic Food Products Hygiene and Technology	1		1	1	2
Slaughterhouse and Veterinary Medicine	1		1	1	2
Food Quality Management Systems	1		1	1	2
Drug Residues and Public Health	1		1	1	2

Track	Theoretical	Practical	Total	Credit	ECTS
Clinical Sciences					
Vector Control	1		1	1	2
Biochemistry of Immunology and Tumors	1		1	1	2
Fluid Electrolyte Therapy	1		1	1	2
Diagnostic Imaging Methods in Internal Medicine	1		1	1	2
Antineoplastic Drugs	1		1	1	2
Drug Usage in Bee, Fish and Exotic Animals	1		1	1	2
Behavioural Disorders in Animals	1		1	1	2
Clinical Oncology and Chemotherapy	1		1	1	2
Gynaecologic Oncology	1		1	1	2
Oncologic Surgical Procedures	1		1	1	2
Animal Breeding and Husbandry					
Feed Legislation and Quality Control	1		1	1	2
Organic Animal Nutrition	1		1	1	2
Shelter Feasibility and Hygiene	1		1	1	2
Organic Animal Breeding	1		1	1	2
Nutrition in Culture-Based Fisheries	1		1	1	2
Water Buffalo Nutrition	1		1	1	2
Nutrition of Pets	1		1	1	2
Herd Health and Management	1		1	1	2
Assisted Reproductive Technologies in Farm Animals	1		1	1	2
Poultry Breeding and Diseases					
Anatomy of Poultry	1		1	1	2
Avian Physiology	1		1	1	2
Avian Biochemistry	1		1	1	2
Poultry Parasites	1		1	1	2
Poultry Nutrition	1		1	1	2
Avian Medicine	1		1	1	2
Pathology of Poultry	1		1	1	2
Assisted Reproductive Techniques in Fowl	1		1	1	2

Common Elective Courses	Theoretical	Practical	Total	Credit	ECTS
Exercise Physiology	1		1	1	2
The Use of Instruments in Biochemistry Laboratory	1		1	1	2
Anatomy of the Laboratory Animal	1		1	1	2
Feeding of Laboratory Animal	1		1	1	2
Biochemical Differences of Animals	1		1	1	2
Animal Blood Bank	1		1	1	2
Biochemistry of Metabolic and Hereditary Diseases	1		1	1	2
Viral Vaccine Preparation Techniques	1		1	1	2
Bee Diseases	1		1	1	2
Laboratory Animal Parasites	1		1	1	2
Clinical Biochemistry	1		1	1	2
Fish Pathology	1		1	1	2
Food Environment and Public Health	1		1	1	2
Viral Zoonoses	1		1	1	2
Animal Genomes	1		1	1	2
Clinical Bacteriology	1		1	1	2
Pathology of Laboratory Animals	1		1	1	2
Material Submission and Reporting	1		1	1	2
Emergency Surgical Applications	1		1	1	2
Zoonotic Parasites	1		1	1	2
Doping	1		1	1	2
Clinical Pharmacokinetic	1		1	1	2
Veterinarian Services in Municipalities	1		1	1	2
Reproductive Ultrasonography	1		1	1	2
Gynaecologic Emergency Interfere	1		1	1	2
Clinical Parasitology	1		1	1	2
Reanimation in Newborns and Neonatology	1		1	1	2
Molecular Diagnosis of Diseases	1		1	1	2
Eye Diseases	1		1	1	2
Hematopathology	1		1	1	2
Pathology of Tumors	1		1	1	2
Assisted Reproductive Techniques in Cats and Dogs	1		1	1	2
Emergency in Internal Medicine	1		1	1	2
Physiotherapy Methods	1		1	1	2
Neurosurgery	1		1	1	2
Geriatric Diseases in Cats and Dogs	1		1	1	2
Udder Health and Control Programme	1		1	1	2
Advanced Imaging Techniques	1		1	1	2
Clinical Endocrinology	1		1	1	2
Special Food Products Hygiene and Technology	1		1	1	2
Molecular Techniques Used in The Diagnosis of Parasitic Diseases	1		1	1	2
Small Animal Dentistry	1		1	1	2

ANNEX III. *Denominators of IU-FVM and EAEVE*

RATIO	FORMULA		IU FVM	EAEVE
R 1	*Number of undergraduate veterinary students* / *Number of total FTE academic staff in veterinary training*	995/160	**6.219**	**8.381** (Max.)
R 2	*Number of undergraduate students* / *Number of total FTE academic staff*	995/309	**3.220**	**9.377** (Max.)
R 3	*Number of undergraduate veterinary students* / *Number of FTE veterinarians in veterinary training*	995/157	**6.338**	**11.057** (Max.)
R 4	*Number of students graduating annually* / *Number of FTE veterinarians in veterinary training*	116/157	**0.739**	**2.070** (Max.)
R 5	*Number of total FTE support staff in veterinary training* / *Number of total FTE academic staff in veterinary training*	*149/160*	**0.931**	**0.505-1.907** (Recommended range)
R 6	*Supervised practical training* / *Theoretical training*	*1836/2814*	**0.652**	**0.602** (Min.)
R 7	*Laboratory & non clinical animal work* / *Clinical work*	*1106/730*	**1.515**	**1.809** (Max.)
R 8	*Teaching load* / *Self directed learning*	*4650/126*	**36.904**	**2.59-46.60** (Recommended range)
R 9	*Total number of hours in the vet curriculum* / *Number of hours in FH /VPH*	*4650/210*	**22.142**	**8.86-31.77** (Recommended range)
R 10	*Number of hours obligatory extramural work in veterinary inspection* / *Number of hours in FH /VPH*	*80/210*	**0.380**	**0.074-0.556** (Recommended range)

RATIO	FORMULA		IU FVM	EAEVE
R 11	*Number of food-producing animals seen at the Establishment* / *Number of students graduating annually*	158/116	**1.362**	**0.758 (Min.)**
R 12	*Number of individual food-animals consultations outside the Faculty* / *Number of students graduating annually*	3140/116	**27.069**	**8.325 (Min.)**
R 13	*Number of herd health visits* / *Number of students graduating annually*	48/116	**0.410**	**0.326 (Min.)**
R 14	*Number of equine cases* / *Number of students graduating annually*	317/116	**2.733**	**2.700 (Min.)**
R 15	*Number of poultry / rabbit cases* / *Number of students graduating annually*	113/116	**0.974**	**0.407 (Min.)**
R 16	*Number of companion animals seen at the Establishment* / *Number of students graduating annually*	15286/116	**136.400**	**48.061 (Min.)**
R 17	*Number of poultry flocks / rabbits production units visits* / *Number of students graduating annually*	6/116	**0.051**	**0.035 (Min.)**
R 18	*Number of necropsies of food producing animals + equines* / *Number of students graduating annually*	185/116	**1.594**	**1.036 (Min.)**
R 19	*Number of necropsies of poultry / rabbits* / *Number of students graduating annually*	228/116	**1.966**	**0.601 (Min.)**
R 20	*Number of necropsies of companion animals* / *Number of students graduating annually*	265/116	**2.284**	**1.589 (Min.)**