

**European Association
of Establishments for Veterinary Education**

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



**FINAL REPORT on the STAGE 1 VISITATION to
the Faculty of Veterinary Medicine, Universidad Alfonso X El Sabio, Madrid, Spain**

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CONTENTS

Introduction

1. Objectives and Strategy
2. Organisation
3. Finances
4. Curriculum
 - 4.1 General Aspects
 - 4.2 Basic Subjects and Basic Sciences
 - 4.3 Animal Production
 - 4.4 Clinical Sciences
 - 4.5 Food Hygiene & Technology and Veterinary Public Health
 - 4.6 Electives, optional disciplines & other subjects
5. Teaching Quality and Evaluation
 - 5.1 Teaching Methodology
 - 5.2 Examinations
 - 5.3 Student Welfare
6. Physical Facilities and Equipment
 - 6.1 General
 - 6.2 Clinical Facilities and Organisation
7. Animals and Teaching Materials of Animal Origin
8. Library and Educational Resources
9. Admission and Enrolment
10. Academic Teaching and Support Staff
11. Continuing Education
12. Postgraduate Education
13. Research

Executive summary

Annex 1: Indicators (ratios)

Annex 2: Decision of ECOVE

INTRODUCTION

The ‘**Universidad Alfonso X El Sabio**’ (called in this report **UAX**) is a private university, which opened a **Faculty of Veterinary Medicine** (called in this report **Establishment**) in 2002. It is located in the university campus of Villanueva de la Cañada, in Madrid. It includes a **Veterinary Teaching Hospital** (called in this report **VTH**) and a Veterinary Teaching Farm (without large animals).

The Establishment has never been evaluated by EAEVE.

Although the Establishment has not (yet) applied for a Stage 2 evaluation, its management is run by a Quality Management System certified by AENOR (a private Spanish Association for Standardisation and Certification), which visits the UAX once a year. The academic part of UAX will also be evaluated in 2015 by ANECA (which is member of ENQA), the official state organism for QA in higher education.

The Self Evaluation Report (SER) was provided with a slight delay. It is the opinion of the team that its content was inadequate. It includes errors, inaccuracies, inconsistencies and lack of key data, together with information irrelevant for the evaluation of the veterinary part of the UAX. However, most corrections of errors/inaccuracies/inconsistencies and most complementary information requested by the experts were provided during the visitation.

1 OBJECTIVES & STRATEGY

1.1 Findings

Although not clearly stated in the SER, the aim of the Establishment is to make profit by providing high quality and competitive veterinary training in agreement with the Spanish laws.

The SER provides a long list of knowledge, skills and competences, which covers the whole veterinary education programme but appears to be a cut & copy of the national legislation. It states that the objectives are in agreement with EU requirements but there is no mention of compliance with EAEVE SOP.

The SER describes in detail its quality management system, which is in agreement with the ISO 9001 standard. However this description is unspecific and not adapted to the peculiarities of the veterinary training. It is therefore difficult to assess if the aim to achieve a high quality veterinary education is monitored adequately.

Although some general information is provided about the strategy of UAX, the SER doesn't mention a clear strategy plan specifically devoted to its Establishment, i.e. what are the specific objectives of veterinary education and research and what are their specific time frame and indicators of achievement. However additional information has been provided to the experts during the visitation.

The main goal is to provide a high quality of teaching in a learning environment where the student can achieve competitive practical skills and updated veterinary knowledge. To improve the quality of the teaching, the Establishment has identified both short-term and long-term objectives.

The short-term objectives (to be achieved in 2015) are:

- increasing the number of anatomic specimens in the Anatomy Museum;
- introducing new species (e.g. exotic animals) in the Experimental farm;
- increasing the caseload in the VTH;
- developing a Chinese Medicine Unit in the VTH;

- increasing the Continuing Education.

The long-term objectives (to be achieved in 2016-2018) are:

- increasing the number of PhD teachers among the whole academic body;
- developing online courses and a distance learning platform available for UAX and extramural graduates;
- developing a minimally-invasive surgery service within the VTH;
- obtaining the accreditation by ANECA of the Establishment.

Funding of these objectives should be made available by the UAX finance department and by grants from the UAX foundation.

These objectives are supervised and implemented through the Academic Committee on an annual basis.

1.2 Comments

Since UAX is a highly centralised institution (see chapter 2), there is no real strategy plan devoted specifically to the Establishment. The described objectives concern mainly the development of the VTH (which contributes to 10% of the Establishment's incomes) but there is no real strategy to increase the research activities and to improve research-based education (see chapter 13).

In the team's opinion, the requirements regarding Objectives & Strategy as they are laid down in Annex I of the SOP are met.

1.3 Suggestions

It is suggested that UAX elaborates a strategy and a business plan for organising and increasing the research activities in the veterinary field and for improving the research-based education and the education to research.

2 ORGANISATION

2.1 Findings

The UAX provides 83 degrees via its 4 schools: School of Technical Studies, School of Health Sciences, School of Social Studies and School of Applied Languages. The 'Faculty of Veterinary Medicine' belongs within the School of Health Sciences. The total number of students is around 8000, 672 of them being veterinary students.

The University's governing bodies are the Administration Body, the Governing Board, the University Senate, the Academic Committee, the Academic Commission, the Postgraduate Committee and the Doctorate Committee.

The SER doesn't provide any information about the organisation of the Establishment, which is even not mentioned in the Organisational Chart (SER: Fig. 2, pg 48). However additional information has been provided to the experts. In fact, the organisation of the UAX is highly centralised and faculties and teaching departments do not really exist.

The Establishment is part of the School of Health Sciences of UAX. Although considered as an independent unit for academic purposes, it is fully governed under a common organisational system. Therefore, there are core administrative departments that handle administration and management, human resources, quality control, finances, and marketing for all the academic units.

The activities of the Establishment's internal organisation team and area coordinators are directed by the Dean-Chief of studies who reports to the Dean of the School of Health Sciences, the Rector and the President of UAX. In fact, the UAX is organised and managed as a private company and not as a traditional public university. Most decisions are taken by the President (who is the largest

shareholder of UAX) after consultation of the Rector, the Deans and the administrative departments. As a result, the Establishment has little autonomy. Meanwhile the highly centralised decision-making process is simple and fast, although unusual for a university.

The Establishment does not have a traditional organisation or division into departments or committees as in public academic institutions. However five sub-units are identified, i.e. Basic Sciences, Animal Production, Hygiene, Food Technology & Safety, Clinical Sciences & Animal Health, and VTH, each of them having an area coordinator. These sub-units have little autonomy but are well coordinated amongst themselves in terms of use of resources.

Each student has a tutor (i.e. a member of the teaching staff, each of them supervising around 25 students) and meet with him/her once a month in order to discuss about all types of problems.

There is no students' organisation in the UAX and the students are not represented in any of the committees. When they have a problem or a complaint, they may send an email to their tutor, teacher or dean, according to the nature of it.

The UAX has created its own foundation (which is independent of the university for fiscal reasons) in order to attract donations for funding buildings, equipment and research projects.

2.2 Comments

The UAX has the advantages and disadvantages of a private organisation.

On the one hand, the organisational chart is simple and short. As a result, the decision-making process is fast, there is no lost of time in bureaucracy and irrelevant discussions and the educational activities are very efficiently organised.

On the other hand, when compared to a public institution, there is a lack of democracy, autonomy and freedom at all levels, i.e. dean, area coordinators and academic staff who have very little impact on the policy and strategy of the Establishment. The teachers have sufficient freedom concerning the content of their courses but they must be in agreement with the general policy of UAX.

Although there is no complain from the students, it is the opinion of the team that students should have an official association in order to officially and democratically send representatives in the relevant committees.

In the team's opinion, the requirements regarding Organisation as they are laid down in Annex I of the SOP are met.

2.3 Suggestions

It is suggested to create a students' organisation and to include a representative of them in the committees involved with curriculum, welfare, biosecurity and professional development.

3 FINANCES

3.1 Findings

Since UAX is a private company, there is no public funding and all incomes of the Establishment are provided by students' fees (10,3M€/year) and clinical services (1M€/year), i.e. around 10% of the total income of the UAX. The tuition fees, which are linked to the number of credits followed by the student, are around 15k€/year/student.

Concerning the outcomes, the SER provides little and inconsistent information. However a more realistic budget has been provided to the experts during the visitation, which partly explains the inconsistencies in the SER. The direct expenses for veterinary teaching are around 2,6M€/year and the overhead veterinary expenses (8,5% of the total expenses for running costs) are around 3,7M€/year.

There is little or no autonomy for the academic staff to use the allocated budget.

Little information is provided in the SER on research funding. Academic staff may apply for external grants. The UAX (or the UAX Foundation) will deduct 10 to 20% of the grant as overhead. UAX provides funding for some research equipment and grants for some PhD students (250k€/year) but these students have also to work in the VTH. The running costs of the research project need to be paid by external funding.

3.2 Comments

Since the budget of UAX is highly centralised and not subdivided into ‘faculties/schools’, it is rather difficult to analyse its finances at the level of the Establishment.

In any way, it appears to the team that, although there is sufficient funding for teaching, there is not enough funding for research coming directly from the UAX budget. So research activities do not seem to be a priority for UAX.

In the team’s opinion, the requirements regarding Finance as they are laid down in Annex I of the SOP are met.

3.3 Suggestions

It is suggested that a part of the UAX budget is specifically devoted to encourage and to fund veterinary research, with an expected positive return on research-based teaching.

4 CURRICULUM

4.1 GENERAL ASPECT

4.1.1 Findings

In Spain current legislation, Royal Decree 1393/2001, established the organisation of Veterinary studies under the conditions laid down by the government in the council of ministers agreement of 14th December 2007. The guidelines are set out in Royal Decree 1837/2008. Basic training in Veterinary Medicine is covered in section 5 of this Royal Decree. The order EU/333/2008 of 13th February establishes the requirements for the recognition of official university degrees that qualify for the exercise of the profession of veterinarian. Article 51, Section 5 of Royal Decree 1837/2008 transposes the Directive 36/2005/EC into Spanish regulations.

There is a duration of studies in Veterinary Medicine of five years with an overall of number of ECTS of 300. 30 ECTS (1 ECTS equals around 25 h workload for the student) are allocated to each semester. Common basic training with 105 ECTS is distributed over the first two years and contains subjects like Animal Anatomy, Biology, Biochemistry, Physiology, Computing, Statistics, Physics and Chemistry for veterinarian, Immunology and Genetics, Ethnology and Business Management for veterinarians, Deontology, Legal Medicine and Veterinary Legislation, Biological agents and Alterations in structure and function. For Clinical Science and Animal Health (3-10 semester) another 105 ECTS are provided. These credits are divided into the subjects Foundation of Diagnostics (18.5 ECTS), Therapy (38.5 ECTS), Obstetrics and Reproductive Pathology (12 ECTS) and Animal Health (30 ECTS). In Animal Production 30 ECTS have to be obtained, whereas in Hygiene, Food technology and Food safety another 24 ECTS are allocated.

The Establishment offers 14 elective subjects of 3 ECTS from which 6 ECTS have to be obtained. The final year is devoted to 24 ECTS supervised externships and in the last semester to 6 ECTS Final year project.

From the total of 6324 curriculum h 1380 are lectures, 669 seminars, 1970 self directed learning, 1729 supervised practical training (576 clinical work) and 438 h are spent for in person tutorials and examinations. Ratios of supervised practical work/theoretical training/ (R6 = 0.84) and ratio of laboratory and non clinical animal work/clinical work (R7=2.28) are above requirements, the ratio of teaching load/self directed learning (R8=3,21) meets the requirements.

The curriculum is aligned with the Bologna process.

4.1.2 Comments

The curriculum is regulated by state law and has low flexibility for the students. From a total of 300 ECTS, only 6 ECTS are electives. The calculations of R6, R7 and R8 in SER are not reproducible, however supervised practical training needs to be extended. In general the curriculum is not very clearly described in the SER, especially the concordance with EU-listed subjects and the ministerial order 333/2008 was difficult to establish. Table 4.2 was not given as curriculum h in EU-listed subjects taken by each student. In the whole, the curriculum is in accordance with 2005/36/EU. There seem to be an appropriate organisation of electives and most extramural work. The EU subjects of Professional Knowledge were not visible in the SER.

In the team's opinion, the requirements regarding General Aspect of Curriculum as they are laid down in Annex I of the SOP are met.

4.1.3 Suggestions

The proportion of self directed learning could be reduced.

4.2 BASIC SUBJECTS & BASIC SCIENCES

4.2.1 Findings

All the subjects included in the Basic Subjects and Basic Sciences represent 105 ECTS in the curricula of the veterinary training (out of 300 ECTS which is the total number of ECTS) for the veterinary education in UAX.

The admission process considers the mark obtained in Selectividad (final graduation exam in high schools). The establishment accepts students from both type of Selectividad exam (life sciences and humanistic sciences), this being one reason why Chemistry, Physics, Biochemistry and Animal Biology are taught to the students during their first year of study. For laboratory and desk based teaching of these topics, shared UAX laboratories are used.

The students are divided into groups for theoretical teaching of about 50-60 students/group. For lectures, there use shared classrooms, belonging to the University. For the seminars, the students are divided into groups of 30. For laboratory and desk based work activities, the students are divided into groups of 30, working with two persons belonging to the academic staff and generally one person from the support staff. The students are divided into working groups of 2-4 for the practical approach of the subjects (microscopy, dissections, necropsies, etc.).

Anatomy is taught during the first year of study, starting with Embryology, followed by Descriptive Anatomy of bones, systems and organs. In the end of the lectures, some notions of Topography and Radiology are presented. The practical activities in Anatomy consist in 3 h/week during both semesters. The students use a collection of 4,000 bones and 10 entire skeletons of different species, preserved organs, fresh organs and in the second semester they perform dissections. The dissections in Anatomy are performed mostly on dog cadavers (4 students/one dog), during 12 weeks. After the dissections the cadavers are frozen on-site and a private firm disposes the cadavers once a month. In

the pathology department, a trolley and hoists are available for the handling of large carcasses and a cold storing room ensures their preservations until they are disposed of by the private firm, i.e. once a month or on call. Some dog cadavers are cremated (at owner's request) by another firm which arrives on-call. Each student is involved in 8 necropsies/year, in carnivorous, herbivorous and birds (seldom pigs), during 3 h at each 3 weeks, completed with another 3 h (each 3 weeks) for organs study.

The biosafety and biosecurity measures are very well implemented for the students. In all laboratories where the students are in contact with chemical substances and biological samples, they are instructed at the beginning of the practical stage. At the beginning of the practical workbook, provided by the teachers, the first pages contain the presentation of biosafety and biosecurity measures, adapted for each laboratory and VTH. All laboratories are provided with eye-washers and showers.

The students cannot progress to the hospital-related subjects, such as Medical Pathology and Nutrition, Surgical Pathology and Surgery and Anaesthesiology modules, if they didn't pass Anatomy, Physiology, Propaedeutics and Physiopathology.

In Chemistry, Physics, Biochemistry, Genetics, Physiology, Pharmacology and Parasitology, some functional, systematic and clinical aspects are presented, which brings the subjects in relation to later courses. The laboratory and desk based work includes 30 h/academic year, studied within a week, in Chemistry, Physic and Biochemistry. Anatomy comprises a total amount of 105 h (3 h weekly/2 semesters), in Physiology & Pharmacy there is a module of 2h/week (30h/academic year). Genetics comprise an amount of 30 h of practical activities, out of which 15 h includes Molecular Genetics (DNA isolation, PCR). Histology, and Parasitology are organised in modules of one week of laboratory and desk based work (15 h).

The teachers in Basic Subjects sciences are full-time teachers or part-time teachers and some of them also teach students from other disciplines and schools (such as pharmacy, dentistry, etc.) of UAX. In Physic & Chemistry, there are 3 full-time and 3 part-time teachers (3 PhD) and 2-3 support staff. In Biochemistry there is 1 full-time & 6 part-time teachers, all 7 being PhD. In Anatomy there are 1 full-time & 5 part-time teachers (2PhD) and 1 support staff. In Genetics and Animal Breeding there are 8 part-time (6 PhD) and 2 technicians and in Histology, General and Special Pathology there are 3 full-time & 3 part-time teachers (4PhD) and 1 technician. The Parasitology is taught by 5 part-time PhD teachers and 2 support staff in UAX laboratories.

4.2.2 Comments

Too few hours of topographical Anatomy is taught at the end of the second semester, using X-ray images, meaning this is not really topographical Anatomy teaching. These methods of teaching topographical Anatomy do not seem to be optimal for preparing the students for clinical education.

In the team's opinion, the requirements regarding Basic Subjects and Basic Sciences as they are laid down in Annex I of the SOP are met.

4.2.3 Suggestions

The team recommend the involvement of clinicians (mainly surgeons and specialists in diagnosis imaging) in the teaching of Anatomy. Less descriptive Anatomy and more topographical Anatomy should be taught. Also, the number of dissections and necropsies on different animal species must be increased in order to improve the clinical approach.

4.3 ANIMAL PRODUCTION

4.3.1 Findings

Animal Production teaching starts in the second year. The total hours offered is 394; 135 as lectures, 51 as seminars, 77 as laboratory and desk based practical training, 52 as non clinical animal work and 30 as clinical work. 456 h are devoted to self-directed learning. The lectures start with Agriculture (Economy, Politics) and Nutrition I in the second year and are completed with Nutrition II, Animal Production and Veterinary Hygiene and Animal Husbandry and Health in the third year of the curriculum. Basics of Animal Ethology and Genetics are taught in the first year. Teaching in Agronomy (cropping, grazing and land use in relation to feed producing animal species) was not present in SER.

Several farms (dairy, beef, poultry, fish, extensive pigs) are included in the practical teaching in Animal Production. The Establishment has a Veterinary teaching farm with 50 laying hens and a pool for trouts, however no cattle and pigs. Hands-on work was observed with chicken and beef cattle.

4.3.2 Comments

The early exposure of students to food-producing animals should be improved, e.g. via the Experimental Farm. Teaching hours in Animal Production subjects seem to be adequate, however real contact with food producing animals in their respective environment needs to be improved. Integration of Ethology and Welfare subjects with Production Technology subject needs to be improved. Animal Production teaching needs to be better integrated with herd-health management teaching at a theoretical and practical level. The awareness of an integrated stable to table food chain concept needs to be improved, since an integrated training with food safety disciplines was hardly visible. There is awareness of biosafety and biosecurity issues.

In the team's opinion, the requirements regarding Animal Production as they are laid down in Annex I of the SOP are met.

4.3.3 Suggestions

It is suggested to implement Agronomy teaching and to improve the teaching of Farm Animal Ethology.

4.4 CLINICAL SCIENCES

4.4.1 Findings

In addition to full-time students, there are students who for special reasons are allowed to take the degree on part-time basis, extending the study period. Students can repeat the exams up to six times, prolonging the study time significantly. Teaching is mainly in Spanish, while textbook and journal languages are Spanish and English. Teachers can upload material as .pdf files on the UAX Intranet, while uploading videos for demonstration of clinical cases and interactive material is not possible.

Practical training of Clinical Sciences in companion animals and horses takes place in the VTH. The clinical training is divided into lectures, supervised seminars, clinical work and self-directed training. Learning outcomes are in place for all topics lectured, and students are evaluated on a regular basis. In the 2nd year, students are allowed clinical work associated with Physiology studies, Physiopathology and Ethnology. Collaboration with clinicians for making Anatomy teaching clinically relevant is not prominent. In the third year clinical propaedeutic training is given on in-house healthy animals. All students receive instructions on biosecurity and handling of hazardous agents at start of their clinical rotation. All students are insured through the UAX.

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

The major part of the clinical sciences training is given in the 4th year. Practical clinical work in the 5th year includes teaching in Obstetrics and Reproduction, externship, elective subjects and a final year project that may comprise a small study or a case report based on literature search. The latter is introduced in this academic year (2014-15) in connection with the new curriculum that started four years ago.

Special pathology is lectured in the 3rd year and includes necropsy training. Students perform necropsies three h every 3rd week, in total ten times. The total number of necropsies per year is satisfactory for small animals, but low for horses and production animals.

In the 4th year the students take part in the VTH activities with clinical rotations for two consecutive weeks in each rotation. The students spend in total four weeks on each of six rotations throughout the year. Diagnostic imaging is not part of the clinical rotation, however, the students follow “their” cases for diagnostic imaging work-up. In the curriculum this training is listed with 30 h of practical work.

In the VTH the students receive clinical training in small groups of 5-6 students. All students do 48 h of weekend and night shifts. Four instruction booklets have been developed for students in the clinical rotation, the books include lists of skills that the students must develop during the year. The performance of the skills are controlled and signed by a veterinarian and completion is controlled before the student is allowed to sit the exam. All students are required to perform castration on male and female cats. Before being allowed to perform the surgeries they have to pass an exam to prove their knowledge on the surgical procedures.

The so called ‘ambulatory large animal clinic’ is part of the surgery rotation, and the students complete between six and ten days during the 4th year with a private practitioner that has a mobile clinic. A caselog is kept by the students, however, it is not clear how the caselog is controlled. There is no 24H ambulatory clinic in the Establishment and the Establishment does not itself have a mobile clinic. There is no vehicle in the Establishment to transport sick production animals to the UAX if this should be of benefit to students’ education in these species. Thus, large animal emergencies are only rarely seen by the students in their regular curriculum. The number of cases and species seen and examined by students in the food-production animal rotation varies, but is generally low. The degree to which the students participate actively in the work-up of clinical cases also varies. Training in reproduction in cattle and horses takes place in the 5th year in the IEGRA Reproduction Centre and includes 24 or 30 (data inconsistent in the SER) h of practical work, including semen collection, artificial insemination and embryo transfer. The number of health heard visits, rabbit and poultry production unit visits and well as caseload in the two latter species are within the recommended numbers for each student. However, there is great variation in the degree of active involvement by the students in the facilities visited.

Practical externship (EMS) comprises in total 600 h. The Establishment has an agreement with a number of facilities for this training. The minimum time a student can spend in one externship site is 150 h, thus the students will rotate through several externship sites based on their interest and preferences. Supervised externship can also be carried out in the VTH, however, the time is restricted to 150 h, and the number of students restricted to a maximum of six. Sites and programmes for externship are chosen in collaboration with the student’s tutor. To quality-control the externship, a “Mentor help guide for students on externships outside the university” and the “Student’s guide to in-company externships” are reported in the SER to be in place. At the end of the period, the company will provide a written evaluation of the student, and the student of the company. The result of the training is evaluated by the tutor.

Students may take part in research activities carried out in the Establishment as a student intern, through voluntary work or to collaboration grants. About 15% of the students are reported to take part in research activities. As a result, the student receives a report from the teacher on the activities performed.

4.4.2 Comments

The teaching in Clinical Sciences in small animals and horses is good, although the caseload is lower than desired. The teaching in food-production animal practice in the regular curriculum is not satisfactory and does not ensure that the students have the necessary day-one skills in these species. An increase in necropsies of food-production animals is necessary to ensure that the students get sufficient experience in Special Pathology.

Furthermore, students may swap the practical sessions between them, which is undesirable since it does not ensure that every single student will follow the minimum curriculum in all disciplines.

In the team's opinion, the requirements regarding Clinical Sciences as they are laid down in Annex I of the SOP are not met, mainly because of lack of clinical and hands-on training (including 24H emergency service) under the supervision of academic staff in food-producing animals.

4.4.3 Suggestions

In order to strengthen the teaching and caseload in production animal diseases, the Establishment should consider bringing sick animals that would otherwise have been destroyed from the farms into the VTH. These animals may later be sacrificed and used for necropsy training and post-mortem meat inspection.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The curriculum of the Food Hygiene, Technology and Safety (FHTS) area includes in total 24 ECTS (600 h) of core subjects: Food Hygiene (300 h), Food Technology (225 h) and Food Safety (75 h). Food Hygiene includes 97 h theory and 78 h practical works which means 125 h (42%) self-directed learning, Food Technology includes 60 h theory and 60 h practical works which means 105 h (47%) self-directed learning and food safety includes 45 h theory and 15 h practical work which means 15 h (20%) self-directed learning. In total, the core subjects include 41% (245 h) of self-directed learning. The extent of FHTS training is 8% (24 ECTS / 300 ECTS). Additionally, students can choose in the fifth year a 150 h extramural training in the FHTS area and one elective course (3 ECTS) in Food microbiology, which are not obligatory. The FHTS module is taught in the 4th and 5th year.

The staff of the FHTS includes 9 teachers. All teachers are working part time (about 30-40%). Additionally, 2 full-time technicians are assisting in the laboratories. Eight of the teachers are veterinarians and one is a pharmacist. Five of the teachers have a PhD. Four of teachers with a PhD have also 3-year specialisation in Food Hygiene from the Spanish Army. One of the teachers working as an official veterinary in a slaughterhouse is teaching the theory of meat inspection concept at the UAX.

The lectures of core subjects in the FHTS area cover all subjects: Food Microbiology, Chemistry, Technology, Control and Inspection. All food types of animal origin but interestingly also vegetables, fruits, cereals, herbs, food additives, natural sweeteners, oils, sweets etc. are included in the lectures. Supervised practical work/training takes place both on-site and externally by visiting food production companies and market places in small groups (about 10 students per teacher). In

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

Food Technology, obligatory practical works in the laboratory/pilot plant cover well the subject. In Food Hygiene, obligatory practical training in meat inspection (ante and post mortem) is missing.

4.5.2 Comments

Based on SER, it is impossible to calculate what training is allocated in the 100 h obligatory extramural work in veterinary inspection; however, it seems that the only obligatory extramural work for all students is the 2-day training in a slaughterhouse. This 2-day training is the only practical training in meat inspection (including ante and post mortem meat inspection), which is low.

All the teachers are working only part time having little time for supervising of PhD projects and other research projects. Meat inspection lectures are held by an official veterinary only and not by any academic person. However, the official veterinary is doing PhD studies on meat hygiene of deer promoting the research-based teaching.

In the team's opinion, the requirements regarding Food Hygiene & Technology and Veterinary Public Health as they are laid down in Annex I of the SOP are met.

4.5.3 Suggestions

The amount of obligatory practical training in ante- and post-mortem meat inspection should be increased.

The research activities in the FHTS area should be increased to better promote research-based teaching.

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

Electives are an integrated part in the curriculum with a total of 6/300 ECTS credits required for fulfilling the educational demands. Eight topics are offered with learning outcomes defined for all subjects. Four topics are offered in the 6th semester, another four in the 9th. Students choose freely among the topics. Elective subject teaching is given by part-time employed scientific staff members and can take place within or outside the E.

A total of 75 h are allocated to elective subjects in the 6th and 9th semesters, respectively, of which about half is classified as self-directed learning. The remaining hours are divided between lectures, seminars, supervised laboratory and desk based practical training. 3 h of supervised clinical work take place in the 9th semester. It is not clear from the SER if clinical work in elective subjects is included in the supervised laboratory and desk based practical training as well. Seven h are allocated to in-person tutorials and examinations. The type of final examination is not specified, however, it is informed that exams varies and may be oral, written or practical.

4.6.2 Comments

Apart from the topic History of Veterinary Medicine, the selection of Elective topics is relevant and concerns fields of veterinary medicine not covered in depth in the regular curriculum. Some of the topics, i.e. Dentistry, Emergency Medicine and Ophthalmology are also covered in the general curriculum, however, it is not clear if this applies to all Electives. It is worth noting that for elective subjects only 3 h in total are allocated to supervised clinical work (Table 4.2). The SER does not include information on where the elective subjects are taught, apart from the topic Exotic and Wildlife Medicine, plus Freshwater Aquaculture, which includes training at the rehabilitation centre.

In the team's opinion, the requirements regarding Electives, Optional Disciplines and Other Subjects as they are laid down in Annex I of the SOP are met.

4.6.3 Suggestions

It is suggested to replace the topic 'History of Veterinary Medicine' with another more relevant one that improves the clinical know-how of the students.

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

5.1.1 Findings

Power Point presentations are used for magistral presentations (lectures) and in seminars there are questions answering, discussions and problem solving. For laboratory and desk based work, generally an introduction is made by the teacher (Power Point presentation) and after that the students are divided in working groups of 2-4 for the practical approach. The Intranet network is used by all the course leaders for uploading the lectures in .pdf format, seminars, questions, problems, messages for students and for checking the attendance to lectures and practicals.

Each course coordinator establishes the general and specific objectives for each studied subject and also the evaluations' criteria which are presented to the students at the beginning of each subject. These criteria always include the assessment of the theory, seminars and practical activities. The assessment of practical activities is made, generally as a written exam, completed with case studies and problem solving. The total amount of the practical activities in the final mark varies between 10-40%, according to the subject.

The students are using for learning the information uploaded by the teacher on Intranet (lectures as.pdf files, questions, problems), the practical work-books and their own hand-notes.

The evaluation of courses and teachers is made by students at the end of each semester, based on an anonymous online evaluation. The access to this data is allowed for the dean, directors of study, human resources department and the Rectorate. At the same time, each teacher has access to his/her own evaluation. The negative results are analysed by the Director of Studies and the teachers. The teachers with positive results are financially rewarded.

In each clinical rotation, there is a practical work-book containing general biosafety and biosecurity measures, practical procedures and a list of clinical procedures. During the clinical rotation, the students must accomplish these procedures and the teacher has to sign it. The students take also hand-notes on the cases they have seen in the clinics and they can also follow-up the cases uploaded in VTH e-records, but only with the help of a clinician.

5.1.2 Comments

In seminars and in practical work the students are asked to solve problems and to discuss and present case-studies. So the teaching is problem-oriented but there is little research-based teaching in the establishment.

In the team's opinion, the requirements regarding Teaching Methodology as they are laid down in Annex I of the SOP are met.

5.1.3 Suggestions

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

It is recommended to implement the using of the standardized work-book for extra-mural activities, mentioning the number of hours for each subject (Food Hygiene, Animal Production and Clinical rotations) and to implement a Student log book (for the skills the student must accomplish).

The Intranet network is well used by the teachers and students, but it could be improved using an e-platform (e.g. Moodle or Blackboard) together with the availability of an ad hoc IT support.

5.2 EXAMINATIONS

5.2.1 Findings

There seems no central examination system available of the Establishment. The examination calendar is decided at the Establishment Board meeting. There are three special periods in the month of January (first quarter), June/July (subjects taught all year round and second quarter) and July (final examinations). There is no set examination form. Subject teachers decide upon the examination system including theoretical, practical and clinical content. The final grade for each subject must take into account, (weighted according by the number of credits) theoretical practical and clinical work. There cannot be two examinations on the same day for two subjects from the same academic year. There are six retakes allowed, which is very rarely occurring.

At UAX there is a minimum academic performance level defined below which students are deregistered from the University: after passing the first full three academic years they must have passed at least 30% of the credits corresponding to the first year and for every two subsequent years they have to pass additional 10% of new credits from the total number. There are no restrictions in passing to the next year except in clinical related subjects. In order to enter Medical Pathology and Nutrition, Surgical Pathology and Surgery and Anaesthesiology students must have passed Anatomy, Physiology, Propaedeutics and Physiopathology. There are no external examiners.

For poorly performing students the subject coordinator has to adopt appropriate measures to improve this situation for instance to consult the tutor or the Psycho-Pedagogical Support Office.

5.2.2 Comments

The examination process seems to run smoothly. Students experience the examinations as fair. The examinations should be distributed in the respective examination periods as evenly as possible. Students say that in average the failure rate per examination is around 20%. There is no established quality evaluation of the examination procedure.

In the team's opinion, the requirements regarding Examination as they are laid down in Annex I of the SOP are met.

5.2.3 Suggestions

None.

5.3 STUDENT WELFARE

5.3.1 Findings

There are residences, sport facilities and dining rooms available. Sport facilities are open from Monday to Sunday to every student.

There is a student support service with the "fundamental aims of the student and family support and assistance service is to assist students at the University and their families in any aspect related to their stay with us and the operation of the institutions activities". A Psycho-Pedagogical Support

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

Office is established made up of a team of psychologists, education experts and family counsellors. There is also a very well organized tutor system of groups of 25 to 30 students and one teacher. The tutor is the first contact person of the student seeking support or advices in all types of study- and personal issues. There is a Professional Guidance Office, who supports the students' future career development and job seeking.

There is also a University Ombudsman "safeguarding the rights and freedoms of teachers, students and management and service staff".

Protection of students against biological and physical hazards is well implemented at the Establishment by teaching and implementing of the respective knowledge and safety measures.

5.3.2 Comments

There is a well-developed student support at the Establishment which is appreciated very much by the students. The very personal tutor system supports the students in many aspects of their student life. The team was impressed by the good relationship between the students and their teachers.

In the team's opinion, the requirements regarding Student Welfare as they are laid down in Annex I of the SOP are met.

5.3.3 Suggestions

None.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

The Establishment is an integrated part of the UAX Villanueva de la Cañada university campus, which houses classroom buildings (building A and D), laboratories (buildings B and C), and the VTH. The experimental farm is located at 30 kilometres in a zoological complex in Navas del Rey.

The external facilities are located at variable distances from VTH and the students reach there with their own cars, because the Establishment does not have its own vehicle.

6.1.2 Comments

Both the teachers and the students are happy with the available facilities.

In the team's opinion, the requirements regarding General Aspects of Physical Facilities & Equipment as they are laid down in Annex I of the SOP are met.

6.1.3 Suggestions

If a vehicle for the transportation of the students from site to site can't be made available, it is recommended to the Establishment to provide a financial compensation and insurance for the students.

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

The organisation of the VTH clinics is divided into companion animal and equine sections. The production animal section is insignificant, due to the small number of these animals coming to the clinic. There are no clinicians in the VTH specially designated to production animals. The

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

companion animal section is further subdivided into internal medicine and surgery, but with joint anaesthesia section and hospitalisation cages. The imaging section serves the whole clinic, as does the clinical laboratory. The pathology section with the necropsy room is in the lower part of the building.

Biohazard and emergency plans are in place for all parts of the VTH, with good information as part of the initial information provided to the students when starting their clinical rotations. Waste management is in place and all biohazards are clearly marked. A maintenance plan is in place for laboratory and clinical equipment.

The VTH runs a year-round 24 h service. The night shift is covered by an intern with experienced backup on call if necessary. The students take part in all the VTH clinical activities year round, including the emergency service. General consultations are received weekdays. In the small animal clinics, there are specific consultation hours throughout the week for different specialities in internal medicine and surgery, i.e. Cardiology, Neurology Oncology, Ophthalmology. About 60% of the cases are referrals but in some specialities the percentage of referrals is higher. The first line practice does not include vaccinations and micro-chipping. Caseload in companion animals is somewhat lower than expected for a teaching hospital, for horses it is sufficient, while for production animals it is very low.

Medical and surgical records are basically digital and laboratory data are entered directly into the records and a PACs system gives digital access to the imaging data. However, paper records (anaesthesia records, cage records) are not digital, nor scanned, but are kept in a separate binder. The students have access to the digital records together with a teacher, however, of the night shift the hospitalisation computer is kept logged in with open access. The computers are old, many with a programme that is not longer supported by Microsoft.

In addition to the clinical facilities, the VTH houses three seminar rooms, each seating 30 students and with audiovisual equipment. The anaesthesia recovery/surveillance room serves as a small seminar room with textbooks available. The veterinarians' offices are in the same building, as are rest rooms and showers for veterinarians and students on night shifts.

The small animal area comprises four consultation rooms, each with basic equipment and a table with fixed height. None of the examination tables in the small animal section can be lowered/elevated. Equipment for performing a good ophthalmic examination when the ophthalmologist is not present is not available, neither in the small animal nor in the equine clinic. There are three fully equipped operating theatres, all with a strict procedure for dressing and aseptic procedures. One of the operating rooms is equipped with a C-bow, another with an operating microscope for microsurgery. Dentistry work is performed in one hospital room. The area for hospitalization comprises 30 cages divided into cat, small and medium/large dogs' room. A room for exotic animals is being constructed. The small animal section has facilities for isolation of two animals. There is no separate entrance from outside the building into this area. The isolation room is not marked, nor are the clean and unclean areas physically divided. A cleaning procedure is in place for disinfecting rooms and facilities when needed. Table meetings are being held twice a day in both the medicine and surgery section.

The small animal section offers a rehabilitation and physiotherapy service that includes a water treadmill, therapeutic laser, equipment for electrotherapy and pulse ultrasound. Both in-house patients and external patients are treated.

The large animal (equine) area comprises two consultation areas with restraining equipment. There are two anaesthesia induction and recovery boxes, with a lifting system in the ceiling for

transportation of anaesthetised horses. This system also runs to the necropsy room for transportation of horse cadavers from the clinic. There are two surgery rooms fully equipped for a modern equine clinic. The ICU unit has five boxes of which two can be separated only in the lower half for partial separation of mare and foal when needed for examination and treatment. Horses can be brought into the isolation unit directly from outside, while the isolation changing rooms for the staff is from inside. Biohazard instructions are in place in the changing areas. The external door is kept locked; however, the isolation unit is not marked. Clinical facilities include a treadmill and a heated swimming pool. Outside facilities include a walker and fields.

The imaging section serves all the clinics. It has two X-ray rooms, one for large and one for small animals. Equipment includes X-ray, ultrasound, CT scanner for small animals and an MRI for use in horses' extremities. The imaging service is well organised and maintained, however there is no specialist radiologist in the VTH.

The anaesthesia section is a central actor in the VTH, performing sedation and anaesthesia to all species for surgical, diagnostic or exploratory procedures. Protocols for pre-, intra- and post-operative (multimodal) analgesia are in place.

The necropsy room is located in the VTH. Necropsies include both small and large animals and the students are actively involved in the work. Students and teachers have separate changing rooms, and they have to pass through a bath with a disinfectant when entering and leaving the necropsy room. There is no marking on the floor to notify about the lowered foot-bath area. A handheld shower is in place. Cadavers are stored in a freeze room until they are removed by an external company which comes once a month. A private company offers cremation of companion animals.

The clinical parasitology section is part of the VTH organisation and operates as a support service for in-clinic animals. It also offers service to external clinics. For teaching purposes, the animal research facilities in the VTH house a small number of healthy animals.

6.2.2 Comments

The VTH is a well-organised and well-equipped clinic that delivers good teaching in companion animals and horses to the students. The caseload for these species is lower than ideal. The production animal clinic is almost non-existent. The formal qualifications of the academic teaching staff are of different levels, with four Diplomates, some veterinarians with PhD, but a high number without additional formal qualifications, but with a long-time clinical experience.

None of the tables in the examining rooms can be lowered/elevated. Some basic equipment for ophthalmologic examination is missing. The clinic computers are old and should be replaced and/or upgraded.

In the team's opinion, the requirements regarding Clinical Facilities & Organisation as they are laid down in Annex I of the SOP are met.

6.2.3 Suggestions

The companion animal clinic should be provided with tables that can be lowered/elevated.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

The bone and anatomical preparations collection comprises specimens from the most common domestic animals and is constantly implemented by new additions. Part of the collection, made of

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

loose bones and some skeletons, is available in a separate classroom, for use as teaching material by the students, every working day from 14,00 to 18,00. A technician is present during these periods for the necessary assistance.

Organs and preserved corpses are kept in a large refrigerated room and preserved in 2% formalin, isopropyl alcohol, and glycerol. Protective clothing, eyewear and a mask, together with a forced air extraction system in the exercise room, provide the necessary protection.

Organs and carcasses are used in different, dedicated periods of the year: fresh large animal organs, coming from the slaughterhouse, are available during the first semester. Small animal carcasses, donated by animal protection associations, are available during the second semester. Preserved organ and carcasses are also at the students' disposal at fixed times, for supervised use, in selected periods before the examinations.

Necropsies appear to be increasing over time. The higher prevalence of pet cases reflects the particular geographic situation of the Establishment which is located far from Animal Production units. While the number of necropsied horses appears to be increasing, other large animal cases are scarce.

The experimental farm (Navas del Rey) appears to be mainly devoted to the preservation of some local breeds of chickens and for the demonstration of the egg production cycle, together with egg quality evaluation. Fishes have been recently introduced and a wild animal recovery centre completes the facilities. No large food-producing animals are present.

At the time of the visitation, neither large ruminants nor swine were housed in the premises of UAX. Two male veal calves will be introduced in the second semester. The number of hospitalised cattle and swine is near zero and most of the clinical teaching in these species is supposed to take place outside the Establishment.

Most of the food-producing animals used for teaching are located outside the Establishment (among 14 food-producing animal farms: 7 are more than 100 Km far, 5 between 50 and 100 Km and only 2 are less than 50 Km from UAX).

Looking at the represented species: 450 dairy cows are located in the Talavera la Nueva district in the Africama Milk Cow Farms; 370 beef cattle under extensive and semi-extensive farming conditions are further present: two near Madrid and the others near Toledo and Salamanca, further beef and fighting bulls farms complete the picture.

Africama has its own veterinarian who is called in case of emergency cases and no emergency service (with students) is provided to cattle and pig farmers (also because of the long distance between the Establishment and the farms).

There is no real ambulatory (mobile) clinic. Clinical work is performed during periods of extramural study and is supervised by part-time teachers during their private clinical activity. Extramural clinical studies are planned for a total amount of 180 h partly devoted to small animal clinic and partly devoted to large animals one.

The range of cited activities, directly performed by the students, varies from hands on left abomasal displacement operations to the drawing a blood from a cow or taking a milk sample. This great variation is largely dependent from the attitude of the farmer/owner of the patient(s). Clinical activities in intensively managed swine farms are impossible because of biosafety measures; they are possible, but difficult, in extensively managed ones because of logistical problems, very rare cases (castrations) have been cited as to be referred to the VTH.

No justification for the numerator (3030) of Ratio 12 could be found. The reported number is possibly referred to the calculation of a mean number of sick animals seen by the students rather than to a documented amount of examined clinical cases.

Based on the gathered information (number of vets involved (4), number of daily hours (6), number of students that practise and the number of extramural study sessions they must take) a more reasonable figure can be proposed at about 1200 “individual food animals consultations outside the Establishment”.

The reported number of herd health visits is also difficult to verify, but always based on gathered information; the figure of 50 is plausible.

IEGRA (Spanish Institute of Animal Genetics and Reproduction) houses an average of 50-60 cattle heads and some horses. There are cows available for rectal examination teaching, bulls and stallions to practice semen collection and freezing. It is used in the third year for familiarisation with cattle of different breeds and during the 5th year by the students for 30 h periods (6 morning bi-weekly sessions of 5 h each) to exercise in reproductive techniques (including semen collection and frozen semen production).

Ovaries and testes coming from the slaughterhouse are prepared in a special necropsy room and used for teaching and practising the recovery of genetic material to be used in in vitro fertilisation and cloning. Most of the cattle housed at IEGRA belong to local and endangered breeds.

Tables on pages 161 and 162 report a long list of foodstuffs with their corresponding quantities. It is however not clear who will use these products, where and how much of each will be available for the average student.

The VTH provides 24/7 service. The available data do not allow to quantify the amount of patients treated in emergency situations.

The amount and nature of consultation work is clearly reflected in the reported numbers of the animals received at the VTH (in 2013 a total of 3,916) mainly dogs, cats and horses. The figures show a certain increase of “other species” (i.e. cattle, pigs and small ruminants).

Table 13 shows an increase in the number of hospitalised cats and in some degree horses. No bovine or pigs have been hospitalised. These species are said to be cared for by the mobile clinic, which obviously doesn't exist.

There are no Establishment vehicles but the proposal of acquiring one has been asked but not yet adopted. This would probably allow for a higher caseload in food-producing animals in the VTH.

7.2 Comments

The availability of food-producing animals for clinical teaching is largely dependent on the localisation of the Establishment. Furthermore in the last years the many cattle farms, which were present around Madrid, have ceased their activity making it more and more difficult for UAX students to reach this type of patients.

In the team's opinion, the requirements regarding Animals & Teaching Material of Animal Origin as they are laid down in Annex I of the SOP are not met, because of the lack of clinical cases in food-producing animals.

7.3 Suggestions

An interesting improvement could be the use of technologically-advanced dummies for clinical training, since they can repeatedly be programmed to simulate pathological conditions at will.

Regarding the low accessibility to large food-producing animals and looking at the logistical problems posed by the transportation of students to the farms, it is suggested to organise a gathering service of condemned food-producing patients which could be used in the VTH for clinical, propedeutical and pathological teaching.

8 LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

The UAX has one single library for all faculties/schools/centres (i.e. around 8.000 students). It contains 640 reading places and 12 computers. It is usually open 08:30 - 22:00 during term time on weekdays and 9:00 - 14:00 on Saturday. The library closes in August.

Several tools for bibliographic search are available for staff and students, e.g. Sapiens, Current Content, Science Direct, Scopus. Students receive a one-hour training mainly devoted to learn how to use Sapiens. Additional training may be provided upon request of a teacher.

An Intranet (MyUAX) has been recently developed and most teachers use it for posting pdf files, PP presentations, timetables, and for organising forum with their students.

58 journals, 49 e-journals, 1445 textbooks and 22 e-books are available in the veterinary field. Additional books can be acquired when specifically requested by a teacher.

Students may loan a book for a maximum of 3 weeks, the most popular ones being available in several exemplars. A VPN system is also available for staff and students in order to allow them to access the intranet when they are not intra mural.

There is only one room in the library to do team work but students can ask to have access to a seminar room when there is one which is empty.

8.2 Comments

The central library contains only 640 seats and 12 computers for 8.000 students. However they do not complain since most of them have a laptop/tablet and since they can join the intranet, databases and e-books & journals from abroad by using VPN.

The formal education on how to use the library and the tools for bibliographic search is limited to a one-hour seminar.

In the team's opinion, the requirements regarding Library and Learning Resources as they are laid down in Annex I of the SOP are met.

8.3 Suggestions

It is suggested to increase the number of veterinary e-books and e-journals available to veterinary students and staff.

More small rooms should also be available for group work.

9 ADMISSION & ENROLMENT

9.1 Findings

There are 672 students enrolled. 120 students are taken up each year. The admission procedure is not stated in a clear way in the SER. Students have to pass a "Spanish Selectividad" general University entrance examination. It's not clear stated in the SER, how students are admitted to

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

Veterinary studies, conditions given in the SER relate to the whole university and are not written specific for the Veterinary curriculum. Special entry conditions are given in general, but not for the Veterinary Medicine degree itself. There is a definition for the expected skills for incoming students defined by the degree's Director; however it's unclear how this list is integrated in the recruiting process. All students have to pass a "general test" to enter UAX.

There is no link evident between the number of students and the Establishment budget. The student fees are around 15.000 € per year. The calculation of these fees regarding to the intake is not given in the SER, but is done by the president's office.

There is a high number of students in the first and second year. There is a mention in the SER that the drop out percentage is around 30 students, due to transfer to another veterinary faculty or to financial problems. Dropouts from the University because of permanent failure of examinations are rare. About 60% of the students finish their studies in regular time.

There are around 1/3 male students and 11% international students, 10% coming from the EU. Foreign students must fulfil the UAX entrance requirements. Their grades are transferred to the Spanish system by a state authority. In the last five years there was an Erasmus exchange programme with 22 partner Universities with 44 incoming and 42 outgoing students.

9.2 Comments

Admission is done according to Spanish laws and a University entrance exam. The Establishment should take activities to reduce the number of students who get stuck in the first and second year of studies in order to reduce the study duration. The establishment should always consider enrolling students of the highest quality, since some students seem to apply to the UAX because it is easier to be admitted.

In the team's opinion, the requirements regarding Admission & Enrolment as they are laid down in Annex I of the SOP are met.

9.3 Suggestions

None.

10 ACADEMIC TEACHING & SUPPORT STAFF

10.1 Findings

The number of academic staff in the veterinary Establishment of the UAX is 132 persons, of which all contribute to teaching. 103 of these (78%) are veterinarians. There are 30 full-time teachers of which 27 are veterinarians, and 102 part-time teachers, of which 76 are veterinarians. Part-time teachers work on average 15,29 h weekly in the Establishment, this equals 38 full-time teachers. Total FTE academic staff is thus calculated to 68,23. PT veterinarians are calculated to 29, FTE. In total FTE can be estimated to 56 (27+29) VS FTE. Interns and residents are not included in this number. The academic non-veterinarian staff members are teaching basic subjects such as chemistry, physics and biology. The support staff involved in veterinary training is 15; five animal care coordinators, three of these being trained veterinary technicians working in the clinic, plus 10 coordinators of practical preparations for classes. There are no structured plans regarding continuing education of support staff, although courses are offered.

The full-time academic teaching staff comprises four American or European Diplomates, two working in the equine section, one in Anaesthesiology and one in Neurology. There is no specialist in Diagnostic Imaging. About one third of the teaching veterinarians have a Spanish PhD, equally

divided between full- and part-time staff members. The majority of the non-veterinarian academic teaching staff has a PhD. The aim (orally presented only) is to have the majority of the staff with a PhD degree by 2016. Some of the staff members have published the result of their research in international peer-reviewed journals, however, the majority have published only nationally.

There are some research activities based on clinical data, however time allocated to research for the teaching staff is sparse. There is no research time paid by UAX included in the working hours for the part-time staff. Thus, 7-10 years part-time study time to obtain a PhD degree is not uncommon. There are no demands for additional postgraduate formal training for the academic teaching staff. Part-time staff members usually have long experience in their field of teaching as their only additional qualifications. Staff members are encouraged to take an in-house course in pedagogy; however, this is not mandatory.

The Diplomates are required to follow a continuing education scheme, while continuing education is not obligatory for other teachers. However, the majority of the full-time staff will normally attend at least one CE course a year. There is no residency programme approved by the relevant European Colleges offered, due to an insufficient caseload. At present there are ten veterinarians following a structured master/residency programme in clinical sciences. Six of these are supervised by a Diplomate, the other four by a skilled veterinarian without Diplomate status. At the end of the three-year programme they receive a diploma from the UAX, however, there is no final exam included.

Teaching staff recruitment is based on “Criteria for Teaching Staff Planning” where certain formal criteria have to be met. It is not difficult to recruit academic staff, and there is little turnover within the staff. Vacant positions are advertised on the university website and in the press. Advertisement of vacancies is done nationally, but not internationally. Outstanding students may be recruited to internships, these positions are also advertised outside the UAX. Internships are offered within the clinical sciences with an organised training programme. There are ten interns, five in internal medicine and five in equine practice. The Establishment delivers doctorate programmes and contributes to Master’s programmes with or without collaboration with other universities.

The teaching staff is evaluated on a regular basis, since evaluation by students is obligatory. The UAX may use a one-time compensation for good evaluation of teaching with an amount of 100-150€.

10.2 Comments

A high number of the full-time veterinarians and the majority of the part-time veterinarians do not have formal qualifications in addition to being veterinary surgeons. The number of veterinary academic teachers with PhD is too low. There are four European or American board certified Diplomates in the clinical sciences. Individual continuing education programmes are not in place for the teaching or support staff.

Research activity may be considered low for an academic institution, and part-time staff members have no time allocated to research.

The full-time (VS FTE) staff is small but sufficient for the number of students educated, at least for pets. Support staff is small for a clinic the size of the VTH. The percentage of part-time teachers is rather high compared to the full-time staff.

In the team’s opinion, the requirements regarding Staff as they are laid down in Annex I of the SOP are met.

10.3 Suggestions

Formal training and formal continuing education for teaching staff should be encouraged and structured.

Research activities should be strengthened.

11 CONTINUING EDUCATION

11.1 Findings

Tables 11.1.1. to 11.1.4. show a total of 23 different Courses organised by the Establishment since 2008. The topics range from Oncology to the Innovation of Armed Forces with particular emphasis on Pharmacology related topics (Pharmacovigilance, use of antibiotics, etc.), and horse clinics.

No information is available about the duration, programmes and participants to these courses.

No organic Continuing Education programme exists.

No specific mention about distance learning is made; it is only generically stated that the veterinarians participate in continuous education among others through conferences, seminars on the Internet on various specialisation topics.

11.2 Comments

The situation about Continuing Education is partly due to the young age of the Establishment and to the fact that continuing education for practitioners is not (yet) mandatory in Spain. Few courses are organised for staff at the end of the second semester but a structured plan is lacking.

In the team's opinion, the requirements regarding Continuing Education as they are laid down in Annex I of the SOP are met.

11.3 Suggestions

It is suggested to organise and consolidate continuing education both for staff and external practitioners.

12 POSTGRADUATE EDUCATION

12.1 Findings

The postgraduate training is organised as a clinical internship, as structured continuing education (called "residency programmes" by the Establishment) and as Spanish PhD doctoral programme.

The clinical internship is organised in two fields: Equine internship and Small Animals internship, during a training period of 1 year (both for 5 student).

The structured continuing education programme (3 years) is organised in VTH and comprises the following courses: Equine internal medicine (1), Small animal internal medicine (1), Anaesthesiology and resuscitation (2), Equine surgery (2) and Small animal surgery (2).

All interns and unofficial residents receive a salary from UAX Foundation during the training programme.

The Spanish PhD programme is implemented in the establishment in which some of the post-graduates are involved.

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

None of the residency programmes are approved by the respective European Colleges. The programmes in small animal surgery and medicine are not supervised by a board-certified Diplomate.

12.2 Comments

It is not quite clear what part of the time is devoted to teaching and what part of the time to the clinical activities in the case of all post-graduation studies.

In the team's opinion, the requirements regarding Post-Graduate Education as they are laid down in Annex I of the SOP are met.

12.3 Suggestions

None.

13 RESEARCH

13.1 Findings

The students have three possibilities to be involved in research activities carried out in the Establishment: (1) as a student intern, (2) through collaboration grants and (3) through voluntary work. In the new curriculum, all students are conducted a project of 6 ETC during the third and fifth years which can be linked to an on-going research project; however, at the moment they seem to be mostly small, independent investigations.

The UAX offers a post-graduate Master's degree in Research Methodology in Health Sciences for the School of Health Science in which Veterinary Medicine Education is one of the four establishments. This Complementary Master is obligatory for the PhD students and is included in the 3rd to 4th years PhD studies. The number of places is 25 per year. At the moment only about 1/3 of the teachers have a PhD; however, the aim of the Establishment is that all teaching staff will have the PhD degree in the near future. At the moment, post-doctoral programmes in veterinary science are missing at the UAX.

Supervising of PhD studies is recommended and supported by the UAX. At the moment, supervisors from other universities are commonly used because of lack of own supervisors. The part-time teachers with a PhD degree are mostly responsible for the supervising of the PhD studies; however, no time or very limited time is allocated for research. Despite of this, most of the young teachers have a high interest for research work.

The SER does not give any information about current research activities in the Establishment. It seems that the research projects are very few. Research projects are mainly funded by UAX grants or private companies. Research results have mostly been published in national papers in Spanish; however, some increase in the number of published international papers can be seen in some disciplines.

13.2 Comments

Teaching should be research based and thus, time should be allocated also for research not only for teaching. International co-operation and visits abroad should be supported to increase the amount of international research. There is a clear lack of research-based teaching and of education to research in the undergraduate curriculum. Furthermore, there is a lack of international peer-reviewed research papers in most disciplines. It is strongly recommended to support the teachers to spend some time abroad especially during their early academic career.

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

In the team's opinion, the requirements regarding Research as they are laid down in Annex I of the SOP are not met, because of a lack of strategy, funding and available time for research activities, with as a result a negative impact on research-based teaching and education to research.

13.3 Suggestions

The time allocated for research should be increased.

The number of publication in international peer-reviewed research papers should be increased.

EXECUTIVE SUMMARY

The Establishment (i.e. the veterinary section of UAX, a private university) has started its activities only a decade ago and has never been evaluated by EAEVE.

The opinion of the team is that the content of the SER was unsatisfactory. It included errors, inaccuracies, inconsistencies and lack of key data, together with information irrelevant for the evaluation of the Establishment. However, corrections of most errors/inaccuracies and most complementary information requested by the experts were provided during the visitation.

The visitation was perfectly organised and the Liaison Officer did a great job to adapt the schedule of the visitation, to search for the requested information and to organise the relevant meetings.

Some areas worthy of praise have been identified by the team, i.e. :

- highly motivated staff;
- high standard of the buildings and facilities and of their maintenance;
- little bureaucracy, efficient organisation and fast decision-making process;
- excellent tutorials.

Some areas of concern have also been identified by the team, i.e.:

- lack of Establishment's strategy for research
- lack of a students' organisation in order to propose their representatives in the relevant committees
- insufficient UAX budget for funding veterinary research activities
- too much descriptive Anatomy and not enough topographical one
- lack of agronomy teaching
- low caseload in most species (both in clinic and necropsy)
- lack of clinical and hands-on education in food producing animals (very low caseload of the VTH, no real 24H ambulatory clinic)
- lack of obligatory practical training in ante- and post-mortem meat inspection
- not enough veterinary e-books & e-journals available on the Intranet for students
- lack of formal training for the teachers
- too many part-time teachers and too many teachers without PhD
- lack of official residency programmes approved by the relevant European Colleges
- lack of research-based teaching and education to research
- lack of publications in international peer review journals in most disciplines.

The potential major deficiencies suggested by the team are:

- lack of clinical and hands-on training (including 24H emergency service) under the supervision of academic staff in food-producing animals;
- lack of strategy, funding and available time for research activities, with as a result a negative impact on research-based teaching and education to research;
- inadequate SER (errors, inaccuracies, lack of key data).

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

Annex 1: Indicators (ratios)

R1:	n° undergraduate veterinary students	=	672	=	9.85	GUIDELINES
	n° total academic FTE in veterinary training	=	68.23	=		<8.381
R2:	n° undergraduate students	=	672	=	9.85	GUIDELINES
	n° FTE total Establishment	=	68.23	=		<9.377
R3:	n° undergraduate veterinary students	=	672	=	11.99	GUIDELINES
	n°. veterinarians FTE in veterinary training	=	56.05	=		<11.057
R4:	n° of students graduating annually	=	103	=	1.84	GUIDELINES
	n° veterinarians FTE in veterinary training	=	56.05	=		<2.070
R5:	n° total FTE support staff in veterinary training	=	15	=	0.22	GUIDELINES
	n° total FTE academic staff in veterinary training	=	68.23	=		0.505-1.907
R6:	supervised practical training	=	1729	=	0.84	GUIDELINES
	theoretical training	=	2049	=		>0.602
R7:	laboratory & non clinical animal work	=	1153	=	2.00	GUIDELINES
	clinical work	=	576	=		<1.809
R8:	teaching load	=	6324.4	=	3.21	GUIDELINES
	self directed learning	=	1970.4	=		2.59-46.60
R9:	total n° hours vet curriculum	=	6324.4	=	10.54	GUIDELINES
	total n° h FH/VPH	=	600	=		8.86-31.77
R10:	hours obligatory extramural work in veterinary inspection	=	14	=	0.02	GUIDELINES
	total n° hours FH/VPH	=	600	=		0.074-0.556

FINAL REPORT AS ISSUED BY ECOVE ON 20 MAY 2015

					GUIDELINES
R11:	$\frac{\text{n}^\circ \text{ of food-producing animals seen at the Establishment}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{20}{103}$	=	0.194 >0.758
					GUIDELINES
R12:	$\frac{\text{n}^\circ \text{ of individual food-animals consultations outside the Establishment}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{1200}{103}$	=	11.6 >8.325
					GUIDELINES
R13:	$\frac{\text{n}^\circ \text{ of herd health visits}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{50}{103}$	=	0.485 >0.326
					GUIDELINES
R14:	$\frac{\text{n}^\circ \text{ of equine cases}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{260}{103}$	=	2.52 >2.700
					GUIDELINES
R15:	$\frac{\text{n}^\circ \text{ of poultry/rabbit cases}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{60}{103}$	=	0.58 >0.407
					GUIDELINES
R16:	$\frac{\text{n}^\circ \text{ of companion animals seen at Establishment}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{3563}{103}$	=	34.6 >48.06
					GUIDELINES
R17:	$\frac{\text{n}^\circ \text{ poultry flocks/rabbits production units visits}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{10}{103}$	=	0.097 >0.035
					GUIDELINES
R18:	$\frac{\text{n}^\circ \text{ necropsies in food producing animals + equines}}{\text{No. of students graduating annually}}$	=	$\frac{42}{103}$	=	0.407 >1.036
					GUIDELINES
R19:	$\frac{\text{n}^\circ \text{ necropsies in poultry/rabbits}}{\text{No. of students graduating annually}}$	=	$\frac{74}{103}$	=	0.718 >0.601
					GUIDELINES
R20:	$\frac{\text{n}^\circ \text{ necropsies in companion animals}}{\text{No. of students graduating annually}}$	=	$\frac{156}{103}$	=	1.51 >1.589

Annex 2: Decision of ECOVE

The Committee concluded that the following major deficiencies had been found:

1. Lack of clinical and hands-on training (including 24H emergency service) under the supervision of academic staff in food-producing animals
2. Lack of strategy, funding and available time for research activities, with as a result a negative impact on research-based teaching and education to research
3. Inadequate SER (errors, inaccuracies, lack of key data)

The Faculty of Veterinary Medicine, Universidad Alfonso X El Sabio is classified after Stage 1 evaluation as holding the status of: **NON APPROVAL**.