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Universidad Zaragoza

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**European Association
of Establishments for Veterinary Education**



VISITATION REPORT

To the Faculty of Veterinary Science, University of Zaragoza, Zaragoza, Spain

On 17 – 21 February 2020

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Introduction

The Faculty of Veterinary Science of Zaragoza (FVZ), a part of the UNIZAR (University of Zaragoza) was first founded in 1847, as the second veterinary Establishment in Spain, which initially had a three-year syllabus. It was renamed Faculty of Veterinary Science of Zaragoza in 1943 and introduced a nationally accepted curriculum of 5 years in 1971. The actual curriculum was established in 2010-2011, based on national and European legislation.

The FVZ was visited by EAEVE for the first time in 2006, when two category-one deficiencies were found, one connected to the low amount of intramural hands-on clinical training in the core curriculum and the second based on the need for improvement of the Faculty engagement in farm animal teaching and clinical services. The FVZ was revisited in March 2010 and acquired full approval.

The FVZ is located in the Miguel Servet Campus of the University of Zaragoza (UNIZAR). This includes as main areas the Aulario, the Central, the Zootechnia buildings, the Veterinary Hospital, the Food Technology Pilot Plant. The Encephalopathy building and the VTH along with the Agro-Food Institute of Aragon and the Animal Experimentation unit are independent management units. Presently the Establishment has 773 undergraduate and 108 active PhD students and 78 Official master degree students. The Establishment admits annually 146 students and graduates an average of 138 students (for the last three years).

The main development the FVZ went through since the Re-visitation in 2010 included three domains: a) Organisation, b) Curriculum and c) Infrastructure. From the Organisation point of view, a new QA system was implemented in 2010/2011 with a Quality Assurance Committee (QAC), a Degree Assessment Committee (DAC) and also Advisory Ethics Commission for Animal Experimentation and teaching procedures, as well and the Health and Safety Committee were established. Further, the VTH created an academic commission to cooperate with the QAC and for that renewed its regulation. b) A new Veterinary Degree was officially authorised in 2010, including development in the learning outcomes and evaluation procedures, activities and competences of the graduates, as well as resources. c) The infrastructure was also improved with new computers, multipurpose and study rooms were added and the projection equipment was renewed. A transporter was adapted for cadavers and clinical

cases and a disinfection system for such vehicles was created. The necropsy room was renewed; the VTH changed its isolation facilities for small animals, opened a room for patients with suspected transmissible diseases, improved its equine facilities with building a new riding arena and transformed two swine boxes in farrowing rooms. The Animal Experimentation Service facilities were improved (new cages, automatic feeders, etc.). Similarly, new equipment was purchased for medical imaging (digital radiology equipment), surgery, ophthalmology, EKG, new computers for anaesthesiology. The slurry collection system was renewed to be adequate.

The ESEVT SOP 2016 is valid for this Visitation.

1. Objectives and Organisation

1.1. Findings

1.1.1. Brief description of the Strategic Plan

The strategic plan of the FVZ envisages the presence in the scientific, social and cultural life of Aragon but also Spain, by setting objectives that target development of teaching and also professional development. Some of the objectives are: organisation of teaching and development of new continuing and postgraduate education, evaluating the existing programmes, management of the budget and staff (hiring new staff), supporting the students' delegations to perform their activities.

The SWOT analysis stresses as strengths of FVZ: the location in a very potent agricultural and animal farming area, the interest for the veterinary profession (8.6 candidates/place), the cooperation with other institutions, service providers, stakeholders, farmers, very good clinical and administrative facilities, the well-organised curriculum, especially in species-oriented clinical activities, a well-equipped and run VTH, good tutor and mentoring programs, access to e-learning and digital learning (Digital Competence and the Digital and Multimedia Service Unit), an in-house developed management platform for the use of the students (personalized schedules, customized practice groups, enrolled subjects).

As main weaknesses, FVZ included the very strict legal framework in administration and financing, decreasing public funding, slow staff replacement and too numerous staff with temporary contracts, high level of bureaucracy, small numbers of support staff in some areas and reduced participation of students in classes and satisfaction surveys.

The FMVZ represents an active part in the development of the area therefore it has the opportunity to organise and internationally promote a Master in Global Health, while the two other official master degrees in Animal Nutrition and Food Quality, Safety and Technology are considered reference masters of the UNIZAR. Partnerships, students' and teachers' mobilities and cooperation in research programs are also considered openings to improvement.

The threats the FMVZ experiences include financial difficulties to support one of the most costly educational programs in UNIZAR and also research and achievement of ideal numbers of teachers and support staff. Changes in nutritional habits as spreading of vegetarian and vegan diets and also decreasing interest in farmed animals among the students represent other threats.

1.1.2. Brief description of the Operating Plan

The Operating Plan of FVZ envisages objectives in five major areas: Academic and organizational actions, Improvement actions on teaching and research facilities, Teaching and support staff, Improve teaching, research and community services and Others. In the academic and organisational part, objectives such as revision of biosecurity in laboratories and in clinical activities, an improved evaluation of the teaching staff, drawing technical guidelines for the practical sessions and avoidance of overlaps of theoretical and practical activities are planned. In the second section, mainly infrastructure renewal is planned, such as new boxes and a new infectious diseases hospitalisation unit for small animals are included. In Teaching and support staff section, enhancement of staff stability, avoidance of replacing permanent staff with temporary one and improved staff assessment

are added. The timeframe for some of the objectives is 2019/2020 while for other is continuous.

1.1.3. Brief description of the organisation of the Establishment

The organisation of the leadership and different bodies involved as well as their tasks are regulated by national law (University Organic Law - LOU) and further by the Statute of UNIZAR.

The FMVZ includes four Departments (Anatomy, embryology and genetics, Animal Pathology, Animal production and food science, Department of Agricultural Sciences and the Natural Environment). Other ten departments are partially involved in educational activities of the FMVZ (Department of Pathological Anatomy, Legal and Forensic Medicine and Toxicology, Department of Biochemistry and Molecular and Cellular Biology, Department of Pharmacology and Physiology, Department of English and German studies, Department of applied Physics, Department of Design and Manufacturing Engineering, Department of Chemical Engineering and Environmental Technology, Department of Applied Mathematics, Department of Microbiology, Preventive Medicine and Public Health, Department of Analytical Chemistry). Besides those, independent units such as the VTH, Animal Experimentation Unit (SEA), and the National Centre for Encephalopathies are involved in training activities.

Departments are run by the Department Council consisting of all full time teachers and also representatives of researchers, temporary teachers and students, and are supported by an Economic and Teaching Committee and two Contracting Committees autonomously to manage their budget approved by the UNIZAR Government Council. The Departments are operational units that coordinate the teaching activities and forward initiatives of the teaching staff to the Faculty Council. The VTH has a Council (teachers involved in clinics, representatives of residents, undergraduate students, technical staff) which elects a Director. The VTH is also economically independent but decides on its own fares subsequently approved by the UNIZAR Government Council.

The FVZ is led by the Faculty Council, which includes the Management Team and other 60 members (representatives of: teachers and researchers-39, of students-18, support staff-3). It elects and revokes the Dean, approves the new degrees and courses or removal of old ones, approves the strategic decisions, institutes the criteria for the organization and coordination of teaching activities).

The Dean is elected from the body of full professors and represents the FMVZ and is assisted in the accomplishment of duties by the Management Team, consisting of maximum 5 Vice-Deans and the Faculty Secretary. The FVZ also has 7 Committees: the Permanent Committee of the Faculty Council, managing everyday matters (7 members: the Dean, representatives of: teachers and researchers-3; representatives of students-2, support staff -1); the Quality Assurance Committee to manage the quality of the degree, assessment of the teaching activity and studies, approval of the Teaching Guidelines and students' complaints (chaired by the Dean, 9 members, representatives of: teachers-5, students-2, support staff-1); the Continuity Committee for managing student's complaints regarding enrolment, continuity and re-admission (Dean or delegated chair, representative of: teachers-1, students-1, the Faculty Manager who acts as Secretary); the Degree Assessment Committee for the annual degree assessment (2 full time teachers, 3 students, a veterinarian, an external QA expert and the coordinator as the chairman); the Delegated Health and Safety Committee for describing the health risk prevention and working condition programs (the Dean, the Faculty Manager and 2 representatives of teachers and support staff); the Library Committee for managing the library resources; the Audio-visual Committee for estimation of audio-visual resources and their improvement.

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

The Dean proposes the strategic plan to the staff, students and stakeholders in Faculty Council annually and is responsible along with the Vice-Deans to put it in practice, assess its progress and compliance, which is brought to staff, students and stakeholders on the website.

1.2. Comments

The leadership of FVZ has a very good representation of all categories involved in teaching and training, including students, and, to some extent, stakeholders. The feedback from all those involved in the process is forwarded to the decisional bodies and it is considered for the further development of the Plan. The Operating plan of the Establishment, named Annual Innovation and Improvement Plan is broadly presented in Appendix 1, setting all bodies that are responsible for approval of different actions. The objectives in different categories are to some extent overlapping the category.

1.3. Suggestions for improvement

In order to increase the transparency of the decisional process, the Establishment could improve its stakeholder representation percentage in the decisional bodies.

1.4. Decision

The Establishment is compliant with Standard 1.

2. Finances

2.1. Findings

2.1.1. Brief description of the global financial process of the Establishment and its autonomy on it

The global financial process of the FVZ is governed by two laws: The University Organic Law 6/2001 and 4/2007 (LOMLOU), which sets the economic and financial framework of the Spanish Public Universities, and dictates the distribution of finances allowing the fulfilment of its tasks, and The University System Ordinance Law in Aragon (LOSUA), 5/2005 providing rules to differentiated financing from the Government of Aragon. The latter refers to basic financing, distribution of finances by achievement of goals, infrastructure investments, research, funds allocated to the improvement of university-society relationship. Considering as reference the year 2013, a financing model has been approved for the UNIZAR for 2016-2020, assigning the minimum basic financing: Official Degrees and Masters: 85%, PhD and non-official Masters: 60% and Research management: 85%. The budget allocation to each financially independent compartment depends on the teaching activity and functioning, bibliographic needs, incentives for teaching results and EPT planning.

The main expenditures are the task of UNIZAR (personnel expenses, investments, maintenance – energy, journal subscriptions) while the FVZ only has financial autonomy to manage the decentralised expenditures (maintenance of own premises, office consumables, trips, etc.). The VTH is self-funded, therefore it can use all its income for its own purposes.

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

The general expenditures of the Establishment slightly increased from 2016 to 2018, averaging the yearly amount of 10,589,333.32 Euro. The VTH costs stayed almost the same (2018 – 1,570,165; 2017 – 1,585,735 and 2016 – 1,590,199 Euro). The revenues slightly decreased in 2018 compared to 2016, with a yearly average of 1,582,033 Euro. The Establishment compared the costs between UNIZAR, FVZ and the VTH, indicating the coverage percentages.

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

Due to slow economic recovery, a slight increase is expected above the minimum allocated by the law (see above).

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

An estimate of 250,000 Euro is expected to be invested. No separate costs for various investments listed, planned for either FVZ or the VTH are provided, except their source (UNIZAR or FVZ) are

indicated.

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

As mentioned above, the financial autonomy of the FVZ except for use of the decentralised fund is very low. The Management Team distributes the yearly budget according to the action plan and considering the cumulated needs of the departments. At the VTH its Council decides how the funds are distributed.

For all major expenses, once requested and approved by UNIZAR, they are included in the UNIZAR budget. The Faculty Council reviews both the FVZ and the VTH budget, already approved by the VTH Council. Both the Faculty and the VTH Councils provide accountability to the university community and stakeholders.

2.2. Comments

Due to the very low autonomy of the FVZ to manage the available funds, except decentralised expenditures, it is very difficult and bureaucratic to engage any major expenses. The contribution of staff, students and stakeholders feedback to changing the budget is minor, all financing processes being regulated by the Spanish and regional laws.

2.3. Suggestions for improvement

The Establishment should look for alternative financing resources, i.e. lifelong learning courses, international/national research projects, services, etc. to be able to increase its autonomy and cover its needs.

2.4. Decision

The Establishment is compliant with Standard 2.

3. Curriculum

3.1. General curriculum

3.1.1. Findings

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

The curriculum of FVZ follows the principles laid down in Directives 2005/36/EC and 2013/55/EU and the List of subjects and Day One Competences approved by the European Coordination Committee on Veterinary Training (ECCVT). The veterinary degree is regulated by the Royal Decrees 1837/2008, 581/2017 and Order ECI/333/2008, and it is recognised by the Royal Decree 96/2014 to be equivalent with master's level. The Establishment has autonomy to change the curriculum. The training is 5 years long, it includes 5 modules (Common Basic Training; Clinical Sciences and Animal Health; Animal Production; Hygiene, Technology and Food Safety; Protected Practices/Final Degree Project), it is not divided into Bachelor and Master phase, and there is no tracking system. A speciality of FVZ is the integrated clinical teaching that is highly appreciated by teachers and graduates. No comprehensive overview of how the curriculum and the teaching guidelines respond to the Day One Competences is available. A total of 300 ECTS credits can be collected during the studies, absolving compulsory subjects results in 256 ECTS credits (85,3%), for supervised internship and final degree dissertation 30 ECTS credits (10%), and for optional subjects and other activities 14 ECTS credits (4.7%) are given. The syllabus of training was designed at the UNIZAR, assessed and verified by the National Agency for Quality Assessment and Accreditation (ANECA). In order to adapt the syllabus to the changing demands annual coordination takes place. The learning outcomes of the program are regularly evaluated at the end of the teaching period involving members of the department councils, coordinators of the different subjects and the Quality Assurance Commission. All teaching activities

are harmonised and the timetable is published in July.

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

All subjects mentioned in the Directives 2005/36/EC and 2013/55/EU and Day One Competences of ECCVT are in the curriculum of FVZ as compulsory subjects.

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

The curriculum is continuously evaluated by the Quality Assessment Committee, and its findings together with its recommendations are published in the annual quality and learning outcomes report. The report is based on different surveys among stakeholders (academic and support staff, students, external practitioners etc.), analysis of data and external reports. When overlaps, redundancies and omissions are identified, an improvement plan is set up and the curriculum is adjusted in order to rectify them. The communication between students and teachers is very effective; recommendations are implemented within a year.

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

Nine electives are offered to students. Six ECTS credits are given for Scientific English for veterinarians; the value of the other subjects is 3 ECTS. A total of 12 ECTS credits have to be collected from electives, so students have to absolve 3-4 ones. In case of too many applicants, the selection of the students is based on their academic record. An additional 2 ECTSs are given for B1 language training.

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

The curriculum is continuously evaluated by the Quality Assessment Committee. It is composed of three students, two academic staff members, an external professional or graduate, an external expert on teaching quality and it is chaired by the coordinator of the degree. Academic and staff members, external practitioners, members of the department councils, coordinators of the different subjects are asked about their opinion, success and performance rates and reports are analysed.

3.1.2. Comments

The curriculum meets the requirements outlined in the EU directives on veterinary education and the ESEVT SOP 2016.

An elaborate matrix on how each course corresponds to each of the Day One Competences could provide a coherent overview of the curriculum and its compliance with the ESEVT Standards.

3.1.3. Suggestions for improvement

None.

3.2. Basic sciences

3.2.1. Findings

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

All basic subjects and basic sciences mentioned in the EU Directive and the SOP 2016 are taught in the Establishment. Basic subjects have 155 hours (96 theoretical, 59 practical), and 1108 hours are devoted to basic sciences (750.5 theoretical, 357.5 practical), so basic subjects and sciences comprise 34.5% of the total curriculum hours. A total of 70% of teachers of basic sciences are veterinarians, and basic subject are taught from a veterinarian point of view focusing on the needs of the clinical training.

3.2.2. Comments

The proportion of basic subjects and basic sciences can give a solid basis to clinical training at the FVZ.

3.2.3. Suggestions for improvement

None.

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

3.3.1. Findings

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

The first 3 years of study are mainly devoted to teaching the basic veterinary sciences. In the 4th year, the students receive integrated courses for each species (ruminants, small animals, equine, porcine, aquatic and exotics animals), including theory, seminars and some practicals. Therefore, from the 1st up to the 4th year, the students are progressively trained for clinical skills.

In the 5th year, the theoretical learnings and clinical skills are applied by putting the students in real clinical situations, facing clinical cases (8 weeks for companion animals in VTH, 2 weeks ambulatory clinics). Students from the 5th year are involved in the emergency activities for at least one week.

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

From their first years of study, students begin to have practical work intended to illustrate their theoretical courses but also to prepare them for the clinic.

During the first two years, these are mainly practical works related to basic courses such as histology / cytology / physiology / biochemistry / microbiology and parasitology. In ethology, they learn to restrain domestic animals.

In the 3rd year, as part of the General Surgical Pathology, Surgery and Anaesthesiology course, they learn the basics of surgery on cadavers (8h) homeostasis, surgery and suturing of hollow organs, suturing of the abdominal wall. They also have 13 hours devoted to anaesthesia (pre-operative assessment, induction, maintenance, pain management).

As part of the anatomical pathology course, students perform autopsies on all domestic species (10h). They also learn to identify lesions on organs confiscated in slaughterhouses. As part of the propaedeutic course, students learn to evaluate behaviour, to take clinical constants, to examine the cardiac, respiratory, digestive and nervous systems in all domestic species. They also review clinical cases. They are involved in care during parturition.

During the 4th year, students are trained through clinical exercises, thanks to an integrated course system. For companion animals, they are included in consultations in internal medicine, surgical and obstetric pathology, as well as in hospitalizations and necropsy. For the equine clinic, they do case-based learning sessions. Many fields of equine medicine are reviewed (lameness, limb dissection, exploration of the male and female genital systems, purchase examination, autopsy).

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

Clinical Practice: Small, Exotic and Equine Animals

This course aims at enabling students to apply, in a real professional context, the knowledge and skills acquired in the previous years with respect to the clinic of the species whose individual pathologies are attended by veterinarians: horses, dogs and cats and exotics.

The subject is developed in the context of the last year of the Degree, when the students have already received theoretical and practical clinical training and are ready to apply it in the clinic. They acquire under appropriate supervision a first clinical and practical experience.

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Group size per teacher: Always between 5 or 6 students per teacher.

Dogs and cats

Clinical Care in medical consultation or surgery (77 hours): Practical sessions on general medical consultations (9h), medical specialities (36h, i.e. 2 weeks 4h/day) and operating rooms of the VTH (32h, i.e. 8 days, 4h/day).

Autonomous work and study (15 h): Dedicated to the preparation and conduct of examinations.

Exotic Animals

Two practice sessions of 3.75 h each, one in VTH consultations and other outpatient clinics, with Associate teacher. They will complete the weeks of dog / cat consultation.

Autonomous work and study (5 h): Dedicated to the preparation of the examination.

Emergency, UCI and Hospitalization: 13 hours with tutorship and voluntary activities

Emergency with tutorship:

Five practical sessions (the first of 3 hours and the remaining four of 2.5 hours), are held in the emergency department, ICU and hospitalization of the VTH with the clinical cases. In the periods in which there are no cases to attend, seminars are given on emergencies, Intensive Care Unit (ICU); fluid therapy protocols; Interpretation of analytics; communication skill; Management of surgical instruments; traumatic injury.

The following procedures are performed on cadavers: Intubation, Oesophageal, tracheal, urine, peritoneal tube placement.

Emergency voluntary Activities

Voluntary clinical assistance during VTH guard shifts tutored by VTH veterinary staff: In the afternoon for a week (up to 7h), Overnight for a week (up to 30h), In the weekend (up to 16h) and localizable emergencies for a week.

Assistance to VTH during non-school period is possible and according to the number of students interested, there are schedules to prevent overload of staff.

Due to the location of Establishment (periphery of the city), the load of emergency patients is variable. The need for emergency patients is satisfied by assistance to emergency clinics outside the Establishment: 8h emergency as an extramural training supervised by assistant teachers at the private Emergency clinics in Zaragoza.

Necropsy sessions

Clinical sessions in the necropsy room with cases of canine/feline and equine from the VTH or referred by other veterinarian species (7.5h), scheduled with sessions necropsy of other species included in the Clinical Practice of Production Animals

Horses

Hospital clinical practices in the area of Large Animal VTH (22.5 h): 3.5 h with equine patients; 8.5h with bio-models; 1.5 h Trans-rectal examination training in equine cadaver preceded by a preparatory workshop 1 h; 3.5 h nerve blocks and major surgical interventions in the head; 3.5 h surgical techniques limbs.

Autonomous work and study hours (15 hours)

Outpatient practices in equestrian centres or stud farms (7 h) as ambulatory clinical equine patients with assistant professors with mobile clinics (two sessions of 3.5 hours each).

Seminars about main locomotor pathologies in equine patients (2 h)

Seminars about issues of interest to students (1 h)

Supervised visits to equestrian centres to analyse real problems and a previous seminar about identification and reproduction (1.5 h).

3.3.2. Comments

Among the EU-listed subjects (Annex V.4.1 of EU Directive 2005/36/EC as amended by EU Directive 2013/55/EU) the curriculum provides all subjects related to Clinical Sciences in small animals and exotics.

The curriculum is well organised and complete for the theoretical courses. There are numerous seminars and practical works. Students have access to clinical activities namely during the last year of the curriculum (but already partly in the 4th year).

The number of European Diplomates with clinical topics (internal medicine, surgery, anesthesiology, diagnostic imaging, dermatology, ophthalmology) is low.

Biosecurity is part of a course given at the start of the 1st and 4th year, rather than a specific course on biosecurity. The radioprotection teaching is integrated in a 1.5-hour course about the generalities for radiography, which seems rather short.

There is no formal simulation laboratory (« skills' lab ») to learn basic clinical procedure on manikins, skills being taught in different disciplines, mainly on cadavers and their parts (as specified above in 3.3.1.2. and 3.3.1.3.). Companion animals' clinics and SCRUM have their own computerised system, which allows clinical case retrieval. The clinical case report for the equine intramural clinical activities exists on paper, which makes the retrieval rather difficult; extramural activities (companion animals, horses and ruminants) have no system of clinical record.

3.3.3. Suggestions for improvement

There is no common computerised system to record the clinical cases throughout the different clinical activities. The use of a common clinical program could improve the opportunity for students to perform cases studies. It could also facilitate administrative work and compatibility.

Future investments to have some advanced diagnostic imaging tools and to have a merged skills' lab, including different work-stations should be considered.

The Establishment and the University should encourage the employment of European diplomates, particularly in the clinics. This strategy could raise the level of clinical services and lead to the opening of residences, which will attract young veterinarians from all over Europe.

3.4. Clinical Sciences in food-producing animals (including Animal production)

3.4.1. Findings

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

In respect to the education in clinical sciences in food-producing animals, the Establishment provides some basic introductory knowledge during the 1st year: as example, the SER indicates that in the subject Ethnology and Animal Welfare students are trained to restrain livestock species.

However, it is from the 3rd year that courses on clinical sciences in food-producing animals start to be delivered "ad hoc".

During the 3rd year, the students are offered the general knowledge regarding surgery, internal medicine, reproduction and imaging diagnostic as well as post-mortem diagnostic.

During the 4th year, the teaching method moves to a species-oriented system: the structures of the training is by way of species integrated courses. These courses range from production, clinic, herd health, post mortem diagnostic, control of diseases to public health and legislation.

The 5th year is finally devoted to the clinical rotation/practice. Also in these cases the teaching methods are species-oriented in order to enable students to apply, in a real professional context, the knowledge and skills acquired in previous courses with respect to the clinic of the different species.

Generally speaking, it can be said that in respect to food-producing animals and animal production, all the subjects listed in the EU Directives are included.

No elective or optional courses related to specific aspects of the medicine/clinic of food-producing animals are offered by the Establishment.

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

During the 4th year, the teaching methods prior to the clinical rotations start to be characterized by species-oriented integrated courses that, in respect to food-producing animals, address ruminants, poultry, rabbit, porcine and bees.

The syllabus of the different courses provided as appendix of the SER, clearly depicts all the details regarding the courses.

The integrated courses offer the basic competences on production, pathology, clinics and health of the different food-producing species. They are thought to prepare the students to approach the clinical rotations that they will find during the 5th year.

The practical lessons for the integrated courses are offered at the facilities located in the main campus (e.g. teaching unit, animal research centre, teaching laboratories, necropsy room, computer room) or in other facilities outside the faculty (Research Centre of the Aragón Government-CITA, regional slaughterhouse, Mercazaragoza) or also during visits to livestock/commercial farms.

For the practices students are divided in groups of 6-8 students or 12-14 students.

A period of EPT is organized already during the 4th year in order to give the students the possibility of carrying out the EPT during the summer time before starting the 5th year.

3.4.1.3. Description of the core clinical rotations, emergency services and herd health visits in food-producing animals and the direct involvement of undergraduate students in it.

The clinical rotation/practice starts in the 5th year, and is organized in a way to allocate groups of 5-6 students to a teacher.

The structure devoted to the clinical rotation is the VTH but only small ruminants (mainly sheep) are visited as patients at the VTH (SCRUM = small ruminant medical service). This represents a kind of consultancy to practitioners that refer small ruminant cases without being charged for this kind of support and has to be considered very useful for the practical training of the students who – as seen during the Visitation - participate very actively. During the Visitation, the SCRUM provided the experts with a detailed report together with the number of the patients/animals used for clinical training and demonstrated a strong involvement of the students in the activities, including the presentation of clinical cases by students at different congresses.

With the exception of the clinical activity carried out at the small pig and chicken farms located directly at the campus, the position of the Establishment in the urban area and the particular economical condition related to the local farming systems and biosecurity risks prevent the Establishment from having an efficient intramural clinical activity related to the food-producing animals. In order to compensate this situation, the Establishment has prepared a structured and well organized extramural training. This is managed by practitioners that are employed by the Establishment as “associate teachers” (two for cattle medicine, three for pig medicine). Associated teachers are hired also for the training in poultry and rabbit health. All the above mentioned practitioners (associate teachers) are responsible both for the presentation of patients/clinical cases to the students and for the visitation of herd in the context of the herd health.

In order to be hired, associate teachers pass a strict process of selection. A curricular practical experience is compulsory apart from meeting the strict technical and clinical standards.

Emergency service is organized in case of necessity at the SCRUM. In respect to cattle medicine, one of the associate teachers involves students in night emergency service in case his intervention is requested by farmers.

The training related to post-mortem diagnostic is carried out directly at the facilities of the Establishment. The Establishment has signed a contract with a governmental agency (Sociedad Aragonesa de Gestión Agroambiental) that every week provides a cadaver of bovine species for the training of the students in post-mortem diagnostic.

The EPT is organized starting as from the 4th year with 4 weeks of preclinical training in food-producing animals. Other 8 weeks of EPT in food-producing animals are then planned during the 5th year.

The agreements/contracts between the providers of EPT and the Establishment are regulated by “Universa”, the Unit of the University of Zaragoza which manages this kind of contracts. The system is quality assured. During the Visitation the Establishment provided the ESEVT experts with some copies of the agreements between providers of EPT and the Establishment.

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

The training in animal production is offered mainly in the first years with the following courses: ethnology and animal welfare at the 1st year, economics and business at the 1st year, animal nutrition at the 2nd year, agronomy at the 2nd year, animal nutrition at the 2nd year, quantitative and molecular genetics in animal breeding at the 2nd year.

The Establishment does offer two elective courses in animal production, and precisely in: External Morphology: Morphological Assessment and Identification and Bee Production and Health.

No courses of animal production related to the major farming species are offered to the students as electives or optional.

On a voluntary base students apply for an involvement in practical activities at the VTH during their free time. As an example, at the SCRUM up to 50 students are “enrolled” as “intern” in organized shifts for participating in the clinical activities. Moreover, up to 80 students are available for nursing care of the lactating animals). “Intern” students are present also in the companion animal clinics and horse clinic. Some students apply to voluntarily “follow” the associate teachers in their private practice.

3.4.2. Comments

Generally speaking, it can be said that the rotation of the students is well-organised and students are actively involved in the activities. During the Visitation the students showed a high grade of satisfaction as also demonstrated by their enthusiasm and desire for extending their participation in the clinical activities by applying for voluntary internship during their free time.

Among the EU-listed subjects (Annex V.4.1 of EU Directive 2005/36/EC as amended by EU Directive 2013/55/EU) the curriculum provides all subjects related to Clinical Sciences in food-producing animals.

Among the EU-listed subjects (Annex V.4.1 of EU Directive 2005/36/EC as amended by EU Directive 2013/55/EU) the curriculum provides all subjects also related to Animal Production.

Referred to clinical rotation, the VTH offers an efficient and practice-oriented teaching in small ruminants’ medicine (mainly sheep), whereas for the other main food-producing species the clinical training is mainly based on extramural training supervised by practitioners enrolled as teaching staff with the position of associate teachers.

3.4.3. Suggestions for improvement

None.

3.5. Food Safety and Quality (FSQ)

3.5.1. Findings

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

The course “Food Hygiene, Inspection and Control” (14 ECTS, Annual, Year 5) provides training on “Hygiene, Technology and Food Safety”. The course aims to teach the responsibilities of public health protection, and to provide an integrated approach to food safety (from farm to table), food hygiene, inspection and control of animal foodstuffs or foodstuffs of animal origin.

The course includes participatory lectures (9 ECTS, 90 h), practical sessions (3 ECTS, 30 h) and a practicum (2 ECTS). The practicum includes practical work in a slaughterhouse (24 h) and in food-processing pilot plant (6 h).

Lecture programme: 32 one-hour divided into two parts:

- Part I (45 hours): General concepts and basics of prevention and control of prevention and control of food safety, food control and food inspection (Lessons 1 to 11);
- Part II (45 hours): Hygiene, inspection and food control of food of animal origin (meat and meat products, milk and dairy products, fish and fishery products and seafood, egg and egg products, as well as ready-to-eat products and catering Establishment) (Lessons 12 to 32).

3.5.1.2. Description of the teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Practical sessions (10 laboratory and case study sessions), where each student spends 30 hours to learn and acquire food legislation skills (3 hours, 30-36 students per group), rules governing the exercise of official food sampling and control (3 hours, 30-36 students per group), surface analysis and water control as part of the control of hygiene in the food industry (3 hours, 10-12 students per group), compliance to the process hygiene criteria and food safety criteria (2 sessions of 3 hours, 10-12 students per group), case studies of food shelf life and food-borne outbreaks (3 hours, 10-12 students per group), and fish and shellfish identification as well as freshness assessment and fish inspection; (3 hours, 10-12 students per group). Study of the methodology for the development and implementation of a HACCP plan in the food industry (9 hours) (2 sessions of 3 hours, 20-24 students per group), followed by an exhibition, discussion and assessment of the HACCP model developed by the students (3 hours, 10-12 students per group). Teachers from the staff of the human nutrition and food science unit of the Faculty of Veterinary Science, plus associate teacher who is an external expert on good hygienic practices and HACCP services to food companies collaborates in the HACCP teaching.

Slaughterhouse practicum (24 hours) provides in situ/practical qualifications and skills required for working as official veterinarians (responsible for auditing and inspection tasks): 3 seminars and 5 practical sessions. Slaughterhouse seminars (3 hours) taught to 4 groups (24 students per group):

Official control on fresh meat in the slaughterhouse, hygiene and certification in slaughterhouse, and official audits in slaughterhouse: Practical sessions (5-12 students per group) in the municipal *Mercazaragoza* slaughterhouse and meat market (multi-species – bovine, porcine, ovine, caprine and equine): daily tasks of slaughterhouse official veterinarians, such as the verification of compliance with rules on animal welfare (protection of animals at the time of slaughter and during transport), the hygienic control and HACCP audits, ante-mortem and post-mortem inspection, official food chain information and document control. Other aspects covered are: slaughterhouse requirements, meat storage, animal identification, specified risk material and other animal by-products, laboratory testing, health marking, and actions following controls, including veterinarian decisions. These aspects are taught by two associate teachers from staff of competent authority specifically engaged to the slaughterhouse practicum.

Practicum in the food processing pilot plant (6 h): students develop specific skills on good hygiene practices in the food industry. Students design and develop good hygienic practices. Teachers are from the human nutrition and food science unit staff of the Faculty of Veterinary Science, including an associate teacher who is an external expert on good hygienic practices and HACCP services to food companies.

“Food Technology” block (12 ECTS, Annual, Year 5) provides knowledge on the composition and quality parameters of food and on the fundamentals of the processes of alteration, conservation and processing of food of animal origin. This part consists of 100 hours divided in 70 hours for lectures in classroom, 20 hours for laboratory and 10 hours for seminars. Laboratory activities consist of 5 sessions of 4 hours. Practical cases are presented to be solved by students with the support of the professor and some person working in the food industry is invited to do a presentation.

Practicum in Food Technology

30 hours (4 h of lectures, 18 h of activities in the pilot plant and 8 hours for the presentation of the work conducted in the pilot plant).

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The pilot plant simulates a food company conducting all steps required for the elaboration of a specific food: quality control of the raw material, elaboration of the foods, control of the final products. Activities include: Hygiene, inspection and food control; moreover, good hygienic practices are carried out for the corresponding food elaborated during this activity. The Plant is equipped with unitary equipment for the processing of foodstuffs including thermal treatment (retort, plate heat exchanger pasteurizer, tube in tube sterilizer, liquid chiller, nitrogen freezer, freezing tunnel, data logger for temperature control and cold and freezing chambers), extraction (solid/ liquid extraction system, ultra-filtration unit, crystallization unit), drying (freeze drying and tunnel dryer) and packaging (heat seal vacuum, modified atmosphere packaging and skin packaging).

There are also small complete food processing lines for dairy products (raw milk tank, mixing tank, yogurt system with double jacketed agitated vessels and incubator, homogenizer, cream separator, cheese production, butter production, ice cream production), meat products (meat cutter, meat grinder, fine meat mincer, stuffer, slicer, convention and smoking oven, meat injector, massaging bowl, boiling, moulds), wine production, olive oil production and bakery, with appropriate equipment. Other food processing equipment is available: pasta making extruder, vegetables and apple preparation.

Laboratories: microbiology (incubators, microscopes, systems for automatic microbiological analysis, etc.); Physical and chemical analysis laboratory (for raw materials and products: pH- meter, spectrophotometer, and instruments for analysis of fat, protein, fiber, and for physical analysis: viscometer, texturometer and colorimeter) and unit operation laboratory. Other facilities are the kitchen and sensory laboratory for evaluation of flavour, texture, colour, by using panellists. All the laboratories guarantee the complete evaluation of quality and safety of food products and food handling environment.

5th year students must do a Practicum in the Pilot Plant during 3 weeks to acquire hands-on experience in food hygiene (prerequisites, self-control and HACCP) and food technology of foodstuffs of animal origin. Also, they do practical work in slaughterhouses, food industries, official laboratories, catering facilities and research Centres to get experience in inspection and control of foodstuffs of animal origin as well as in food technology and food quality control.

3.5.2. Comments

The course is very comprehensive and exceeds the standard. Access to the slaughterhouse is convenient as it is part of the city. The sharing of facilities with the Food Technology course is beneficial to the veterinary students. Some staff and students suggested that Food Technology could be moved from the 5th year to 3rd or 4th year.

3.5.3. Suggestions for improvement

None.

3.6. Professional knowledge

3.6.1. Findings

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

The following subjects are taught throughout the curriculum as part of Professional knowledge:

- Professional ethics & behaviour is part of the compulsory subject “Deontology, Legal Veterinary Science and Bioethics” in the second semester of the 3rd year. To ethics and behaviour are dedicated 10 hours of lectures and 3 hours of desk-based work
- Veterinary legislation is part of the compulsory subject “Deontology, Legal Veterinary Science and Bioethics” in the second semester of the 3rd year. To legislation are dedicated 20 hours of lectures and 3 hours of desk-based work
- Veterinary certification and report writing are essential part of two subjects: “Clinical practice: Small, exotic and equine animals” and “Clinical practice production animals”. The report writings are made in emphasis of “Day one skills”. According to the curriculum, there are 5 hours of

lectures dedicated to this subject. There is also an optional subject in the Curriculum “IT Tools for Vets” in the 1st semester of any year of study, which includes 5 hours of autonomous work by the student to learn how to use a Microsoft Word to write and present a report.

- Communication skills are part of the compulsory subject Deontology, Legal Veterinary Science and Bioethics in second semester of 3rd year. To communication skills are dedicated 60 hours of supervised self-learning.
- Practice management & business is part of the subject “Economics and business” from Basic Education in second semester of the 1st year of study. 15 hours of lectures, 2 hours of supervised self-learning and 6 hours of desk-based work of this subject are dedicated to practice management.
- Information literacy & data management is covered by 50 hours of supervised self-learning provided by the Faculty Library through the Moodle virtual teaching platform or by training sessions offered by the libraries of the UNIZAR centres.

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

The University of Zaragoza (UNIZAR), as an Institution, has well described rules for external practical training for all students from all its faculties. For this purpose, the UNIZAR runs the Employment and Orientation Service called Universa. EPT of the Veterinary Faculty is based on this rule in accordance with the Curriculum.

EPT is an obligatory subject in the last year of study before the final thesis is defended. For practical reasons (to allow students to finish the studies in the end of June in the 5th year instead of September or later), it has become common practice to allow the students to perform it in summertime after the 8th semester. The minimum extent of EPT is 135 hours. Students have basically two options:

1. Choose a provider of EPT (company/institution) from Universa list (Appendix 3) and run the application, acceptance and agreement of EPT through the online form. Universa provides all the necessary paperwork between student, Faculty and EPT provider (assignment, insurance etc.). The VTH also offers a few positions for EPT. Before the EPT starts, there must be written agreement between the Universa (on behalf of the University), which is an integral part of the Memory of Activities.

After finishing of the EPT, the evaluation of this subject is fulfilled by:

- The Memory of Activities – the Diary written by the student, student’s evaluation of EPT included
 - The Student Evaluation Questionnaire completed by the Tutor in the Company/ Institution which provided the EPT with the evaluation mark
 - The Tutor qualifies the Student using the Final Student Qualification Form and evaluation mark
 - The final student’s evaluation is the average of these two marks
2. Students can choose EPT provider on their own. If acceptable, all the necessary paperwork is done with assistance of Universa. The evaluation of the EPT is done the same way as in the first Option.

The evaluation afterwards follows the same steps as in Option 1.

The responsible person for the overall supervision of the EPT is the Vice-Dean for International Relations, Students and Postgraduate Studies. She signs the contracts and acts as the liaison between the University and the company.

3.6.2 Comments

The Establishment provides adequate attention to subjects oriented to Professional knowledge. The goals of this knowledge are met either during regular subjects listed above or during the clinical integration courses. There is also extramural training for the students either in Food producing animals and recently also in Companion animals and exotics, especially in Emergency services. This latest extramural training is provided in private clinics, where the Assistant teachers work.

EPT is well organised and supervised on several levels, which are adequately evaluated, and all these procedures are easily traceable.

From the Professional knowledge point of view, the Communication project ran by the Companion animals’ clinic is highly valuable. This project is done in cooperation with psychologists from the

other Faculties of UNIZAR and serves for modulation of critical situations between the veterinarian and owner of the companion animal (like the euthanasia, situations with money concern etc.) as well as the learning tool of basic communication skills (opening and closing of the visit, asking open questions etc.). This project was also awarded in a “project contest” organised by UNIZAR for all the Faculties. These projects have the ambition to become an integral part of the Curriculum.

3.6.3 Suggestions for improvement

A closer adherence of the Establishment to “Day one skills” either in Professional knowledge subjects or in the EPT program could be considered.

3.7. Decision

The Establishment is compliant with Standard 3.

4. Facilities and equipment

4.1. Findings

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

The Veterinary Faculty of Zaragoza is located in University of Zaragoza Campus, occupying a total area of 78.764 m². The FVZ is well connected by car as it is close to the Zaragoza ring road; the location is also well served by public transport.

An important issue is related to its location inside an urban area - it is not possible to build up more premises and namely a pedagogic farm inside the campus. Consequently, the surfaces for housing animals are limited and they have some problems to lodge animals, especially large animals such as horses and farm animals. Nevertheless, during the visit, it was noted that certain areas occupied by sheep on the farm could have been fitted out to accommodate cattle.

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

-) lecturing, group work and practical work:

Wide rooms are mainly used for lecturing large groups and therefore for theoretical classes due to their great capacity. The rooms are equipped with multimedia devices and computers, wheelchair access and some have air conditioning. They are adequate in number and surfaces.

There is a very high number of smaller rooms that are used for group work, where either teachers can organize discussion wards or students can meet up for group tasks.

Laboratories and rooms for clinical practices are fully equipped with different multimedia devices. Small teaching farms lodge different animal species mainly used in preclinical subjects. Biosecurity is a priority, so laboratories are compliant and properly signposted accordingly to the national and regional legislation. Students must observe the biosecurity rules and wear the personal biosecurity equipment on each practice.

-) housing healthy, hospitalised and isolated animals:

The whole surface is reduced, especially for housing and hospitalisation of large animals and horses. Two isolation boxes for horses are under construction on the site of the livestock facilities, but are not functional to date.

-) clinical activities, diagnostic services and necropsy:

- Small Animal Area:

Ten consulting rooms: one of them for chemotherapy application (well organized from a security and biosecurity point of view) and another for ultrasound examinations. There are four surgery rooms, one of them for orthopaedics surgery and another one for dentistry procedures. There are two

hospitalization areas: one for Non-Infectious patients and one for Infectious patients (biosecurity rules well respected):

– The Small Animal Internal Medicine Service includes first-opinion consultations (2 rooms) and specialty consultations: dermatology, neurology, oncology, urology, cardiology, endocrinology, reproduction and ethology.

– The Small Animal Surgery Service includes consultations and surgery procedures of soft tissue surgery, orthopaedics, ophthalmology, dentistry and interventional radiology procedures.

- Large Animals:

Large Animal hospital activities are divided into 2 main areas: the equine medicine and surgery service and the small ruminant medical service (SCRUM).

SCRUM activity is carried out in the livestock facilities outside the hospital building and equine medicine and surgery service is performed within the hospital facilities.

The Necropsy service depends on the Animal Pathology department and gives support to the VTH and Food Animals clinicians. Samples are received from private veterinary clinicians and used for teaching purposes at all times. The necropsy room serves for all animal species and students are involved under the supervision of the professor.

During the Visitation, it was noted that the students came to the necropsy room with their personal equipment (boots and lab coat) and left with this equipment. There is a cleaning/disinfection system for the boots, but they have to wash their lab coats on their own. There are no special recommendations for this cleaning (boiling the laundry for example). There is no book to sign for people entering the room, therefore no identification of people who pass through it day by day. Finally, there is no written procedure in case of identification of a contagious animal (disinfection, official contacts, contact with visitors, information for visitors, students, closure and isolation of the room).

The equine medicine and surgery service.

The equine medicine and surgery service is ensured by two veterinary surgeons and one vet for anaesthesia and critical care; one person is in charge of performing various functions such as storage, cleaning stalls, etc. An ambulatory equine practitioner (i.e. associate teacher) collaborates with the service staff in some elective or emergencies cases.

In addition to this staff, this service has 18 internal students (undergraduate students of the 4th and 5th year), who perform guards in small groups of 24 hours in situ at the hospital. Interns actively participate in all clinical duties in the equine clinical service of the VTH (medicine, surgery, anaesthesia, emergencies and hospitalization).

The equine medicine and surgery service provides 24-hours/365-days continuous care to equine patients and emergency service, with veterinary surgeons and/or interns on site with a clinician on call who is in charge of taking the emergency phone calls.

These service facilities are composed of 7 stall boxes, 2 of which are suitable for intensive care or mother-foal stall, 2 operating theatres with their respective induction-recovery padding boxes, 1 small store-Pharmacy, 1 equine, radiology room, 1 examination room and 1 riding tracks for lameness examination.

Two boxes for isolation are under construction on the site of the farm, near the sheep quarantine boxes. These boxes are not yet functional.

The pharmacy store, the emergency laboratory and the cleaning and sterilization services are shared with the Small Animal Services.

Practical outpatient sessions in equine clinic that are taught to students in the 5th year, are carried out by associate teachers, (practitioners working part-time in teaching), in equestrian centres or stud farms within the geographical environment of Zaragoza.

Four mares and two geldings are available at the farm complex for teaching purposes in reproduction, propaedeutics and radiology and ultrasound practical sessions.

The small ruminant medical service (SCRUM)

SCRUM activity is carried out in the livestock facilities outside the hospital building. The objective of this service is based on advice and diagnostic support to all veterinarians of small ruminants, as well as on collaboration with companies, veterinarians, farms or institutions that serve to complement the practical training of students or act as sponsors of teaching activities. This service has 20 internal students (undergraduate students of the 4th and 5th year), who perform guards in small groups of 24 hours in situ at the hospital.

-) FSQ & VPH:

The FVZ Pilot Plant is equipped with unitary equipment for processing foodstuffs including thermal treatment, extraction drying and packaging.

There are also small complete food processing lines for dairy, meat, wine, olive oil, bakery.

Moreover, there are several laboratories: the microbiology laboratory, the physical and chemical analysis laboratory and the unit operation laboratory. Other facilities are the kitchen and sensory laboratory for evaluation of flavour, texture, colour, by using panellists. All the laboratories guarantee the complete evaluation of quality and safety of food products and food handling environment.

5th year students must do a Practicum in the Pilot Plant for 3 weeks to acquire hands-on experience in food hygiene (prerequisites, self-control and HACCP) and food technology of foodstuffs of animal origin. Also, they do practical work in slaughterhouses, food industries, official laboratories, catering facilities and research Centres to get experience in inspection and control of foodstuffs of animal origin as well as in food technology and food quality control.

-) Study and self-learning:

There are two study areas, the library and a study room, located in the Aulario building and the Veterinary Clinical Hospital, respectively; with 772 m², and space for 357 students, endowed with Wi-Fi connection and air conditioning.

There are 2 computer rooms with 42 computers available for all students of the FVZ. The students can also make use of all seminar rooms under previous demand.

-) Catering

There is a central cafeteria located in the Aulario Building open from 8.00 a.m. to 8.00 p.m. Moreover, buildings have automatic food and beverage vending machines.

-) Locker rooms

There are 87 lockers that students can use in the Aulario Building, and a few more in the dressing room at the teaching farm and the VTH.

-) Accommodation for on-call students

The School has 2 small apartments in the clinical area of small and large animals at the VTH, both fully equipped with beds, microwave and some furniture. In the small animal clinics, these apartments are not available for undergraduate students and only reserved for the post-graduate students doing a “residency”. Consequently, the undergraduate students are not allowed to sleep on the site.

-) Leisure

One important aspect is the space for the Students’ Union, there is a room with a meeting area and two more small rooms for different student’s associations. There are 13 student associations in the School so students can practice different cultural, sport, and professional activities as well as developing other social aspects.

For practicing sport activities, students have to go to the main campus of UNIZAR.

4.1.3. Description of the adequacy for the veterinary training of the vehicles used for student's transportation, ambulatory clinic, live animals and cadavers transportation

Students are transported to the extra-mural clinical activities by taxi provided by the Establishment. There are three vehicles in the School:

- A small truck used for collecting big animals.
- A Nissan pickup, equipped with a small trailer in order to transport live and dead animals and a Van for the individual transportation of large animals, mainly horses and cows.
- A Renault Van with an equipped cage for the transport of live and dead animals.

The School also makes use of private transport for large animals, mainly for live ones.

For the transport of dead animals all vehicles have an official permit. However, the transport of dead animals by private owners is forbidden at national level, therefore the School has an agreement with the certified company of the Regional Government to bring dead animals to the Establishment (mainly large animals). Drivers have special license to transport dead and live animals.

There is no written protocol for the disinfection of these vehicles. One of the vehicles has holes in its floor to allow liquids to drain during washing. However, these holes also remain open during transport. Although dead animals are placed in plastic containers, these holes should be plugged. A platform has been built in order to have a dedicated place to wash and disinfect the vehicles but it is not yet functional.

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

The teaching rooms are equipped with modern technical equipment, like PC, beamer, in parts with smart boards and intercommunications systems. Regarding the laboratory practices, departments have specific equipment and security material to carry out this kind of practices. The equipment used on research projects are often used for practices, above all in pre-clinic practices and basic subjects. In the clinics, the basic clinical equipment is adequate. However, more specialized medical devices and materials are not available, namely for diagnostic imaging: e.g. arthroscope, and equipment for advanced diagnostic imaging (MRI, CT, angiography ...)

4.1.5. Description of the adequacy of the biosecurity rules in the Establishment

Training about Security in laboratory practice and clinics for all students of Veterinary and Food Technology Science Degrees is organized by the Veterinary School and the Prevention and Occupational Risk Unit of the Zaragoza University (UPRL), which is held in the general conference room for new students at the beginning of the new academic course and is compulsory for all students. All new students must sign a form that declares to be the student's responsibility to observe and apply the preventive and safety measures in practice sessions and research works and to be aware that the breach of these mentioned norms implies the impossibility of accessing the mentioned practical sessions or even expulsion.

The procedures and rules to follow in case of work accident inside the laboratories can be found at the entrance of the labs, at different points within the buildings.

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

The programme for maintaining and upgrading the current facilities and equipment, or acquiring new ones depends on the Dean's team of the School, Departments, Direction of Veterinary Clinic Hospital and in some aspects, on the Experimental Animal Service; the General Assemblies of the School, Departments, Hospital, and the experimental animal Commission, which decides the priorities for upgrading the facilities or acquiring new equipment according to the available budget. In some special conditions or big equipment or infrastructures, Departments and Faculty Direction ask for economical support to the Head of the UNIZAR, using reserved funds for acquiring or making them.

4.2. Comments

Generally speaking, the premises for theoretical courses, seminars and practicals as well as the laboratories are numerous and well equipped. The companion animal clinics are well organised, biosecurity rules are well applied. Some important equipment is missing, namely for advanced diagnostic imaging.

There is no accommodation for the undergraduate students during the night shift in companion animals.

There are some weak points with respect to biosecurity, which lead to non-compliance with the ESEVT Substandards.

During the visit, it was founded that:

-) there are several medical emergency boxes empty;
-) there are very few posters indicating the rules of security and biosecurity in the clinics;
-) the water taps are opened and closed by hand and not with the elbow;
-) in the equine clinics, there is a suboptimal number of soap and bottles of alcohol to disinfect hands;
-) in the equine clinics, several refrigerators are used to store pieces of dead horses and entire dogs. It is not appropriate to clutter the corridor with these refrigerators (dangerous for both the students and the horses).
-) the students are using their own personal protective tools in the necropsy room, protective material not being provided by the Establishment, except for aprons. In case of the introduction of an eventually contagious animal in the necropsy room no written procedures for the further conduct are available.
-) There are no fully functional isolation rooms for the equine species, nor for ruminants.
-) The procedure for disinfection of the vehicles used to transport dead or live animals is not performed in a protected place (no liquid containment). A vehicle used for dead and live animals has permanent holes in its floor. The cadavers are transported in containers.

4.3 Suggestions for improvement

- Use more posters for explaining security and recommending biosecurity in the clinics;
- Find another place for the refrigerators;
- Improve and multiply the material for hand wash, namely in the equine clinics;
- Finalize the installation of the isolation boxes for horses;
- Set up isolation boxes for sheep
- Complete the vehicle disinfection platform
- Provide complete protection equipment to the students at the necropsy room and set up a signatory for all persons entering the necropsy room
- Write the emergency biosecurity procedures and make them available for every person who works in the clinics (for clinical cases) and in the necropsy room.

4.4. Decision

The Establishment is compliant with Standard 4, except for Substandards 4.6, 4.7, 4.13 and 4.15.

The Establishment is not compliant with Substandard 4.6, 4.7 and 4.15 because of inadequate definition and implementation of biosecurity rules.

The Establishment is not compliant with Substandard 4.13 because isolation facilities for equine are not fully operational.

5. Animal resources and teaching material of animal origin

5.1. Findings

5.1.1. Brief description of the global strategy of the Establishment about the use of animals and material of animal origin for the acquisition by each student of Day One Competences. Animals and materials of animal origins are provided for the training across the five years of study, but

especially during the pre-clinical and clinical courses when the training is structured mostly with a species oriented structure.

The animals and the materials of animal origin for the preclinical training are mainly provided by the so called “teaching unit” located at the campus, the farm of the “Experimental Animal Research Service (SEA)” located at the campus, the “Centre of Agricultural Research and Technology of Aragon” (CITA), the regional slaughterhouse located in the town, and equestrian centres or stud farms within the geographical environment of Zaragoza.

For the clinical training as well as the post-mortem diagnostic the Establishment relies on animals and material originating from the intramural activity of the VTH (companion animals, horses and small ruminants) and from the extramural activity supported by practitioners that are employed as “associate teachers” and that take students to livestock commercial farms (bovine, swine, poultry and rabbit). Moreover, other private practices as well as private clients submit deceased animals for post-mortem diagnostic. Horses that have to be euthanized for other reasons (bad prognosis, etc.) are used for simulation of rectal palpation on the cadavers hung in a stock.

The Establishment is seeking to increase the use of models in the training especially of surgery and reproduction.

5.1.2. Description of the adequacy for the veterinary training of the enrolled students of:

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

Practical training in anatomy is mainly based on organ and bones from the museum and department of osteology and organs as well as material originating as mentioned above. Only dogs (around 32 per year) are used for studying in dissection courses or demonstration during anatomy and embryology lectures. The number of necropsies is above the indicator level for all animal species considered in the ESEVT Indicators. After necropsies, interesting organs are stored (cooled, frozen or formalin fixed) for further utilization. The Establishment has signed a contract with a governmental agency (Sociedad Aragonesa de Gestión Agroambiental) that every week will provide a cadaver of bovine species for the training of the students in post-mortem diagnostic.

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

All the animal species considered by the ESEVT are adequately made available for the pre-clinical training. Thanks to agreements with commercial sheep farms, upon request sheep are provided to the SCRUM/teaching unit for didactic purposes (one-way animals).

-) the number of visits in herds/flocks/units of food-producing animals:

The practitioners employed as associate teachers guarantee an adequate number of visits to herds/flocks/units of food-producing animals for the pre-clinical and clinical training as well as for the training related to the herd health.

During each single visitation, a small group of students has the possibility of visiting two or three herds.

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

The intramural activity of the VTH (companion animals, horses and small ruminants) as well as the extramural activity guaranteed by the associate teachers in food-producing animals, allow the students to gain clinical educational experience and hand-on training in all animal species considered by the ESEVT. The location of the Establishment in the urban area and the particular economical condition related to the local farming system and biosecurity risks prevent the Establishment from having an intramural clinical activity for the bovine species, which is therefore compensated by the extramural activity.

Extramural training is additionally offered to the students also for horses and companion animals. Altogether, the number of the patients is above the ESEVT indicator levels.

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

The organization of the practical activity gives evidence that there is a reasonable balance between species and disciplines. Companion animals and exotic pets are respectively 80% and 95% first opinion patients at the VTH, whereas small ruminants are referred patients. The food-producing animals are first opinion patients because they are direct clients of the practitioners enrolled as associate teachers.

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

The clinical activities of the VTH are split by animal species and are organized as follows:

- a) companion animals clinic, including the emergency service, the hospitalization areas, the first opinion and specialty consultation ambulatories, the surgery rooms, anaesthesia service and finally the exotic animal service;
- b) equine clinic, including internal medicine and surgery;
- c) small ruminants medical service (SCRUM);
- d) common services such as pharmacy store, emergency laboratory and cleaning and sterilization services transversally shared by all clinics;
- e) supporting diagnostic services belonging to other structures, such as the necropsy service, histology and pathology lab, parasitology, virology, bacteriology, infectious diseases laboratories.

The small animal internal medicine services offer different specialty competences, organized in one or more days a week, with opening hours usually between 10:00 and 14:00. The emergency service of the small animal area is open 24-hours/365-days.

The equine medicine and surgery service is also open 24-hours/365 days. “Intern” students and postgraduate master students are present on site for continuous clinical care to equine patients and emergency service, whereas surgeons are available on call.

The equine clinic also offers an outpatient service carried out by associate teachers (practitioners working part-time in teaching), mostly in equestrian centres or stud farms within the geographical environment of Zaragoza.

The small ruminant medical service (SCRUM) mostly receives referral cases sent by private practitioners for diagnostic support. Due to the particular diagnostic role as well as for biosecurity reasons, the animals admitted to SCRUM are not sent back to the original farmers, but utilized for didactical activity or euthanized for further diagnostic investigation. In case of recovered animals, these can be considered for slaughter. The SCRUM also offers extramural support to farms especially by sending students during the lambing time to help farmers taking care of the new-born lambs. The SCRUM has numerous agreements with private companies that very efficiently support the economical sustainability of the didactical and scientific activities.

All clinics have enrolled associate teachers for teaching support both intramurally and extramurally.

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

The Establishment organizes the groups by the way of a database that enables students attending the intramural and extramural activities to be divided into small and functional groups. In respect to the clinical training at the VTH, students are split into groups (24 groups or 48 groups) whose size depends on the activity. The groups rotate through the different services, one week each service. Altogether, the size of the groups is around 5-6 students per teacher, and this is valid both for the intramural and the extramural activities. The sizing of the groups is also based on the necessities of meeting the biosecurity and welfare requirements.

When the students attend the extramural activities at the farms, they are supervised by the practitioners enrolled as associate teachers. In respect to the extramural activities, students are

transported to the farms by a minibus or taxis with driver by the way of a contract with a private company.

In respect to the hands-on involvement, the Establishment has organized a system that allows the practical training in clinical procedures as from the 3rd year. In the 4th year, intra-mural (VTH and teaching units) and extra-mural activities (farms with associate professors) are structured for providing adequate opportunities for hands-on involvement. The syllabus of the clinical courses reported in the appendices to the SER clearly describes the practical activities requested to the students in each course. Students also have the possibilities of increasing their hands-on involvement by the way of a voluntary participation to the clinical activities of the VTH (internal students).

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

An electronic patient record system (QVET) is utilized at the companion animals clinic. It is efficient and continuously actualized. It enables the retrieval of the information related to the examined animals. Students are familiar with the system.

An efficient Google-based database is used by the SCRUM for the recording of their patients. The clinical data is retrievable and the students are familiar with the procedure for downloading the information. The system also allows the storage of clinical pictures.

In the equine clinic the medical record is based on the recording of the clinical data on a register book. The information related to the patient can be retrieved.

The extramural activity related to food-producing animals and horses is not recorded in a structured medical record system with an effective retrieval scheme. Although during the Visitation the Establishment provided the ESEVT experts with a summary of the clinical cases the practitioners have presented to the students, during their visitation at the farms, no evidence was provided of the presence of a record system (electronic or paper based).

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

The Establishment adopts procedures in compliance with the European regulations, with the indication of regional competent authority and with the indication deriving by the Agreement on Openness on Animal Research, promoted from the Federation of Scientific Societies in Spain (COSCE), with the collaboration of the European Association of Research Animals (EARA).

The Ethics Committee for Animal Experiments is the one that authorizes all the procedures related to the protection of animals. The committee is set at the university level and is responsible for the protection and welfare of animals used for experimental and other scientific purposes, including the teaching activities with animals and the veterinary clinical trials. The committee also promote the 3R concept in educational and research activities.

Any student or staff (academic and support) can communicate by the way of “ad hoc” mailbox any complaint or suggestion related to animal welfare issues to the Ethics Committee.

The Establishment is seeking to increase the use of models in the training especially of surgery and reproduction.

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

The QA structure has developed a system to involve staff, students and stakeholders in the “management” of the decision in respect to the teaching methods and requested amount of animal deriving teaching material. However, the number of animals used in teaching is decided by the Departments on the base of the available budget and the Spanish regulation for protection of animals. The use of animals is authorized by the Advisory Ethics Commission for Animal Experimentation.

The VTH has a commission that is responsible for informing and coordinating teaching assistance imparted in the VTH.

5.2. Comments

The Establishment is strongly committed to providing students with an adequate quantity and quality of material of animal origin as well as healthy and diseased animals for an adequate practical training in all areas. During the Visitation the students demonstrated commitment and direct involvement in all the clinical activities. In all situations they are active participants in the work up of patients. Moreover, the students demonstrated high grade of satisfaction as confirmed by the fact that many of them are active participants in voluntary "intern" schemes and find the scheme useful as a learning resource. The students highly recommended the necropsy teaching and felt the animal material resources were more than sufficient to aid their comprehension of pathology. During the Visitation the cadaver of a horse euthanized for humane reason was used for rectal palpation practical being much appreciated by the students as a very useful and insightful learning opportunity.

The several agreements that the SCRUM has set with private companies and farmers enable the clinic for small ruminants to further increase the number of patients during the period of intense teaching activity. An agreement with a small animal private practice enables the SCRUM to carry out high standard imaging diagnostic in an economically sustainable way.

As several factors disable the introduction of bovine patients at the faculty campus, the intramural clinical training related to bovine medicine is compensated by extramural activity. However, although the direct experience in farms with practitioners is of paramount importance for the acquisition of competences in food-producing animals, the low intramural activity in these species somehow penalizes the possibility for the students to follow up the course of a clinical case that might be facilitated by the presence of patients at the facilities of the VTH. This would also increase the possibility of a more adequate experience in surgical cases in cattle.

The fact that a structured medical record system maintained in an effective retrieval system is not in use for the recording of the patients examined in the context of the extramural activity related to the equine and food-producing animals has to be considered in partial compliance with the ESEVT Substandard 5.6.

5.3. Suggestions for improvement

It is suggested to the Establishment to consider the possibility of organizing a minimum of structured intramural activity also for bovine species. This might offer the students the possibility of better following up clinical cases in terms of more time for the clinical investigation of the patient, observation of the evolution of the disease course and response to therapy and finally surgical experience.

The Establishment should set up a recording system related to the caseload acquired during the bovine and equine extramural activity where all the patients are officially recorded. The system (preferably based on an electronic database) should allow the retrieval of the information in order to be efficiently used as support for the teaching, research, and service programmes of the Establishment.

It is suggested to the Establishment to consider the opportunity of changing the current system of recording of patients utilized at the equine clinic (VTH) toward an electronic based system in order to facilitate the retrieval of the information.

5.4. Decision

The Establishment is compliant with Standard 5, except for Substandard 5.6.

The Establishment is partially compliant with Substandard 5.6. because the medical records of equine and ruminants seen extramurally are not effectively retrievable.

6. Learning resources

6.1 Findings

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

The library of FVZ belongs to the library network of the UNIZAR comprising 21 libraries. In addition to the faculty library there are 5 subsidiary libraries at different departments. The library is located in an 820 m² large space; it has a reading room with 234 seats and an office for study groups. There are 25,042 bibliographic records in the library of FVZ and 2,200 periodical titles from which 127 are current subscriptions. A total of 91,658 e-books (25% related to veterinary medicine) and 29,356 e-periodicals (20% in veterinary medicine) of the university library are also available for UNIZAR members all the time. A head librarian, 2 graduate librarians and 6 other staff members are working in the library, which is open on workdays between 8:15 and 21:15. Opening hours are extended till 2.15 a.m. in the exam period. There are 7 desktop computers in the library but students have access to all computer rooms at the FVZ equipped with 136 desktop computers. Basic software (Microsoft package and other open source software) and statistical softwares are installed on all computers.

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

The institutional virtual campus of UNIZAR “Anillo Digital Docente” (ADD) is the official platform for virtual teaching, and it includes an e-learning platform (Moodle), an open course platform (Open Course Ware, OCW) and an electronic portfolio (Mahara). Students have access to the Moodle database and other learning resources on their phone and outside of the facility. Students found this useful as a learning resource. FVZ has an in-house developed management platform and own audio-visual service unit helping teachers in producing multimedia teaching materials. Most degree subjects, a total of 55 combined courses for students of FVZ together with Mentoring Program are available in the Moodle platform, and further postgraduate studies are on the virtual campus. Eleven courses are offered on the OCW platform and several teachers use their own platforms, too. Students also have access to Moodle Open Courses, Digital repository of the UNIZAR, Massive Open Online Courses managed by Miriadax platform, UNIVERSA online training courses for skills training, entrepreneurship and job search. The university offers a teaching qualification program available for new teachers and general courses are also offered to all teachers on the use of the virtual campus, e-learning, teaching methodologies and didactics.

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

The whole campus is covered by Wi-Fi. Virtual Private Network (VPN) gives access to library resources and other data from outside the UNIZAR all the day around.

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

New students receive information on the use of learning resources at the Welcome Day, at the beginning of the first academic year and through the mentoring program. The library provides continuous training for students; it has a Basic Digital Competence course, virtual courses on computer and information skills, use of bibliographic databases etc. In addition, there are call-in sessions for students, researchers, clinicians and faculty members around the year and a support service attended by librarians is also working.

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

Academic staff members and students can recommend books to be brought, and selection criteria for purchase are annually defined by the academic staff. Journals, databases and other electronic

resources are acquired by the Library Service Unit of UNIZAR. The Library Users' Committee including representatives of the departments and the head of the library manages everything related to the library and its resources.

6.2. Comments

Digital learning materials are widely used at FVZ, and the learning resources at the Establishment meet the requirements.

6.3. Suggestions for improvement

Students would like to have further access to the Library for studying during exam periods via longer opening hours.

6.4. Decision

The Establishment is compliant with Standard 6.

7. Student admission, progression and welfare

7.1. Findings

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

The website <https://estudios.unizar.es/estudio/ver?id=130> specifies procedures in English.

Applicants must pass the University Access Exam (EvAU) with a general phase and a specific phase with subjects related to the area of interest. All students must pass both phases. There is a Selection Committee. There is no recruiting committee and no private interviews are conducted. Access is determined by a single final mark and students who pass that cut-off mark are admitted.

Student Admission procedures and bodies involved are the same for all UNIZAR studies and are established by national law. The number of new-admission students should comply with that established in the official document of the UNIZAR Veterinary Degree approved by ANECA i.e. 146 admissions. The admission criteria are thus determined by the regional and national legislation; the University of Zaragoza does not have the tools to modify the number of students admitted.

A percentage of places is reserved for students with special situations: 3% for students over 25 years old, 1.5% for students over 45 years, 1.5% for over 40-year-old, 3% for university graduates, 5% for students with a degree of disability.

Tuition is paid by students – these are referred to as “standard students” and in 2019 constituted 101 of new students, the remaining 44 are” full fee students” who receive a grant financing 100% of the tuition fee.

In general, students are considered full time students. However, in some circumstances some students do enrol part time. The distribution of full and part time students in 2018-2019 was 12 and 761.

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

Admission is based on the teaching capacity required to achieve a satisfactory standard, based on the available facilities and staff, to provide for students to develop both theoretical and practical content correctly in the facilities and with the existing teaching staff.

The FVZ meets the biosecurity and welfare requirements and the size of the groups is appropriate according to the safety devices of the labs. (See also standard 4 for comments on biosecurity).

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

Full time students have 8 years to finish their veterinary studies; part time students have no restriction.

Full time students have to pass: 6 ECTS at the end of the first year of enrolment; 30 ECTS at the end of the second; 60 ECTS (part time 36) at the end of the third and subsequently, a minimum of 18 ECTS more on each academic year from the fourth year of enrolment onwards.

Students are referred to the University Guidance Plan and the Tutoring Action Plan. Students can contact the Examining Board and Permanency Committee for appeals.

The official attrition rate is 8.86%, 8.39% and 7.64% in the last three years. The lower the academic performance and success, the higher the probability of dropping out; the attrition rate is higher for “full fee” students than for standard students. In the event that students abandon their studies, and before this happens, they are advised by the Coordinator of the Degree and Vice-Dean and the Vice-Dean of Students, although there is no specific survey for this purpose.

7.1.4. Brief description of the services available for students

A number of services are available – and accessible on the web – including mentoring and career programmes, associations etc. Apart from services provided by the Faculty, students associations and clubs provide support and services.

Students are represented in organisations, to organise services for students. The Student Delegation is elected among the student delegates and sub-delegates of each class of the veterinary degree, and by students representing Associations. The responsibility of the Delegation of Students is to represent the whole student community before the Management of the Centre, and they are the ones who regulate the different Associations, always with the approval of the FVZ Management Team. They also organize different recreational activities in the Establishment. In addition, Faculty Council representatives are elected among students by the veterinary degree students, and as well as the students representation in the Degree Assessment Committee, Mobility Committee and Quality Assurance Committee.

The University “Office for Supporting Diversity” (<http://ouad.unizar.es/>) is responsible for providing necessary support to disabled and ill students and seeks to implement appropriate adaptation measures: physical, ergonomic or support. After an assessment of each case, the Office issues a report to the faculty and professor involved indicating the adaptation measures to be implemented.

The general procedure for handling suggestions and complaints allows for anonymous submission. The procedure for suggestions, complaints and claims for the improvement of the degree does not allow it, nevertheless, depending on the nature of the content, it can maintain anonymity on its various proceedings.

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

Admission procedures are regulated by law.

7.2. Comments

Student surveys – available on the web – demonstrate a high level of satisfaction; this was supported by the Team’s meetings with students.

From conversation with students: they had a clear understanding of the admission process, complaints process and felt they were well represented.

The students are very active and enthusiastic participants within their own organisations and the faculty.

It was commented by students and student representatives they would like to reduce the group sizes. Currently they are 4-6 persons but the students would prefer groups of 4.

The fact that admission is regulated by law does not allow the Establishment to revise procedures for admission.

7.3. Suggestions for improvement

None.

7.4. Decision

The Establishment is compliant with Standard 7.

8. Student assessment

8.1. Findings

8.1.1. Brief description of the student's assessment strategy of the Establishment

The global student assessment is decided by the same boards involved in teaching planning and is annually approved by the Faculty Council (see also 3.3.1).

Assessment of theoretical knowledge is mainly based on written exams and evaluated through continuing assessment and evaluation of supervised works. Pre-clinical practical skills are evaluated through continuing assessment, written reports. Practical exams are sometimes made on healthy animals, organs, cadavers, patients or in the laboratory, depending on the subject.

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

The “teaching guidelines” – the description of each course in the curriculum – specify assessment procedures and methods for each course, along the lines of Day One Competences. The guidelines are available online, in Spanish and English. Students use a logbook in Rotations to certify Day One Competences. Student logbooks are assessed by the teacher or the coordinator of each subject.

The teaching guidelines are made public between May and June.

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

Feedback is based on a follow-up of the student progress through a system of individualised tutorials by teachers.

Every student has the right to individual review of all exams, tests or works carried out for evaluation. An application can be presented to the Dean, and in case the student does not agree with the Dean's resolution an application can be presented to the Rector of the UNIZAR, whose resolution exhausts. The procedures for how to conduct the “examination reviews” are public: <http://www.unizar.es/sg/doc/6.1.AcuerdoNormasEvaluacionMODIF.pdf>

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

The evaluation procedures are proposed by the Department Councils, discussed in the coordination meetings and subsequently approved by the Faculty council.

Assessment strategies and methodologies are discussed in the Quality Assurance Committee; it approves the modification and improvement proposals.

Examination seasons are defined by the University Government and included in the Academic Calendar for each course. The draft for the examination calendar of the Faculty is elaborated by a representative of the Committee for Assessment and Improvement of the Curriculum, together with academic staff and student representatives.

The calendar of exams is disclosed in July (before the academic year starts) on the faculty website and posted in a notice board next to the Academic Office.

8.2. Comments

The SER suggests bringing the student's enrolment dates forward, to allow the start of the teaching period to be at the beginning of September, however the School has no autonomy to do so as those

dates are established by the UNIZAR Government Council.

Students are happy with the examination and feedback in its current form. They felt the feedback was constructive and timely.

8.3. Suggestions for improvement

None.

8.4. Decision

The Establishment is compliant with Standard 8.

9. Academic and support staff

9.1. Findings

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

All teachers involved in the different subjects listed in the EU Directives must be accredited by ANECA in the corresponding subject areas, including training and research activities. Each academic year, the QA System reviews the subject description guides and elaborates an annual report.

The teachers are regularly evaluated through the DOCENTIA programme developed by ACPUA and managed in the Establishment and by the Vice-Rectorate for QA. Last year, all the academic staff of the Establishment obtained a positive evaluation in the DOCENTIA programme.

Pedagogical and IT training are proposed to staff through the ‘Instituto de Ciencias de la Educación’ (ICE). Specific trainings in biosecurity and biosafety are periodically proposed to the relevant staff (not compulsory).

Programmes for continuing training of academic and support staff have been implemented, through courses dealing with quality culture, definition and assessment of competences, assessment of learning results, academic management, and use of e-learning.

The UNIZAR programme ‘Innovation and Improvement of Teaching Quality projects’ offers to teachers the possibility to apply for funding for new initiatives to improve and set up innovative teaching techniques. In the last ten academic years, the Establishment has developed 231 innovative projects.

Each academic year, the Departments present to the Faculty Council the position requests to increase and/or replace their staff. The Council evaluates the requests and, if approved, they are submitted to the Rectorate, which evaluates them. The final decision is also based on the staff annual action plan and the funding availabilities.

For permanent academic positions, a competitive examination is completed. The candidates must previously have the required accreditation, in which teaching, research and management activities are evaluated. The evaluation is carried out by an examining board composed of teachers belonging to the specific subject area.

For temporary positions, the selection and recruitment are performed through contracting committees of the subject area, which evaluate the records of the candidates.

The selection and recruitment of support staff directly depends on the UNIZAR Rectorate, which decides its number depending on the estimations from the UNIZAR Staff Report and on the request from the Establishment. The UNIZAR can hire both permanent and temporary staff.

The VTH can propose to contract clinical, technical and administrative staff from its own budget. The contracting system follows the same regulations and procedures as the UNIZAR.

Temporary academic staff have the possibility to accede to a permanent position through an examination process (public, open access, and with the participation of an examining board), once they have obtained the accreditation by ANECA or by the QA regional agencies for those permanent positions.

Permanent staff can be promoted to an upper level in the teaching career through the same type of examinations, once they are accredited by ANECA. Since 2011, this process for stabilisation and promotion of the UNIZAR teaching staff has been limited, due to restrictions in public funding, but the programme has been reactivated since 2016.

The results of the DOCENTIA-UNIZAR evaluation are also taken into account for a limited annual wage supplement in the teacher's salary given by the regional authorities.

Promotion and relocation of the UNIZAR support staff are also possible, mainly by means of free examinations to accede to a superior category or to move to another service within the same category. Admission and assessment criteria are published on the Establishment's website.

Full-time teachers cannot undertake outside work. In case of services or development of research agreements with companies, the UNIZAR has specific rules controlled by the OTRI.

Part-time teachers are allowed to do outside work and, in the case of Associate Teachers, outside work is mandatory to get this position; knock out taxes are charged to staff in case they take outside work.

Every year, students take online surveys to evaluate teachers and subjects.

An advisory committee also assesses the teachers' self-evaluation reports, as provided through the DOCENTIA programme. Both surveys are analysed by the Technical Evaluation Committee of the University and a final report is completed by the Teaching Activity Quality Committee. In the event of a negative evaluation, the teacher will get a warning and bonus payments will be discontinued.

The research activity of the staff is also externally evaluated by the National QA Agency for Research by 6-year periods.

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

The number of FTE teaching staff is rather stable during the last three academic years. 90% of the teaching staff are veterinarians, which includes 12 EBVS Diplomates from 3 disciplines, i.e. European College of Veterinary Pathologists (ECVP), European College of Small Ruminant Health Management Medicine (ECSRHM) and European College of Animal Welfare and Behavioural Medicine (ECAWBM).

There is no formal strategy to form/ recruit Specialists in other disciplines. It seems that the University Organic Law 2001/6 represents a limit for this possibility.

The number of support staff is also stable during the last three academic years.

The ESEVT Indicators related to staff are within the ranges.

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

Departments report which areas need more personnel, determine the allocation of the new academic staff, as well as the number of hours and type of teaching. Departments' proposals must be approved by the UNIZAR Government Council annually. In case of sickness or maternity leave, UNIZAR has established an emergency hiring process that has to be approved by the Departments in order to avoid teaching being left unattended.

Support staff Manager approves new hiring support staff requests. This responsibility is shared with the manager of the Establishment and the director of the relevant department. Needs are assessed depending on the technical support needed for theoretical and practical teaching and for clinic and research activities. Support staff new vacancies are discussed at the UNIZAR Negotiating table with worker's union and stakeholders' representatives.

At the Establishment level, the assessment of the staff activity is conducted and approved yearly by the Faculty Council through reports of the Dean's Office, the Vice-Deans for Academic Organisation and Quality, the QA System, and the Staff Management Service.

At the UNIZAR level, the assessment of the staff is carried out by the Vice-Rectorate for Quality and the Vice-Rectorate for Academic Affairs

The VTH works as an independent management unit whose Director is elected by the VTH Council among the academic staff of the Animal Pathology Department. Personnel expenditures of the VTH are afforded by UNIZAR, with the exception of the grants given to resident students.

9.2. Comments

The total number, qualifications and skills of all staff involved with the programme, including teaching staff, technical, administrative and support staff, is sufficient and appropriate to deliver the cursus programme and fulfil the Establishment's mission.

Nevertheless, there are very few European diplomates to support the clinical activities.

9.3. Suggestions for improvement

An increase in the number of European diplomates to improve the quality of mainly clinical teaching would be suggested.

9.4. Decision

The Establishment is compliant with Standard 9.

10. Research programmes, continuing and postgraduate education

10.1. Findings

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

Degree in Veterinary Medicine is recognised as level 3 Master in MECES. Students have to write a diploma work based on own research or literature review. Diploma works are evaluated by three professors and they are defended in front of a committee.

Research topics include Zoonosis and Emerging Diseases, One Health, Genetic, Physiology and Biochemistry of animal diseases and comparative with humans, food safety, new technological processes for food. Thematic lines include Basic Sciences, Animal Health, Medicine and Surgery, Animal Production and Food Technology. Researchers also belong to different Research Institutes: Agro-food Institute of Aragon (IA2), The IIS of Aragón, which is the Health Research Institute, made up of the Miguel Servet University Hospital, Lozano Blesa Clinic University Hospital, UNIZAR and Health Science Institute of Aragon, Research University Institute of Engineering in Aragon (I3A), The Centre for TSE and Emerging Animal Diseases, organized into: TSE and Rabies diagnosis Laboratory of Aragon, Research and Counselling Centre for TSE from the Ministry of Agriculture, Food and Environment, Associated Laboratory of the Consumer Agency of Spain and Aragon, Food Security and Nutrition, CIET (Transmissible and Emerging Disease Centre) for BSE and scrapie diseases.

Programmes include Collaboration scholarships which fund 10 students during the last three full academic years, within Pathology, Animal Production and Food Science, Agricultural Sciences and Anatomy, Embryology and Genetic Departments; Voluntary work. Microbiology and Immunology (30 second year students to slaughters and laboratory work to process the samples taken.); Animal Production and Welfare (6 students, farms and laboratory work); and Meat Quality group (3 students each year): UNIVERSA. Extracurricular practical activities, 386 practical activities last year; SCRUM (Small Ruminants Service): 80 students in extracurricular practical activities; Undergraduate Dissertation. (6 ECTS)

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

FVZ has 16 Diplomates of the European Colleges among its academic staff, and 10 teachers accredited by the Spanish Small Animal Veterinarians Association.

Other ways include: Aim of specialization within different Veterinary areas; Small Animals Consultations attended by Veterinary Degree professors supported by residents (R1, R2 y R3); 11 Postgraduate Resident students of first and second year (R1&R2), and 2 of third year (R3) at the Small area of the VTH, which collaborate with 4th and 5th year intern students (30) and with all 4th and 5th year students from rotations of 4th and 5th year subjects; PhD Medicine and Animal Health students occasionally interact with undergraduate students.

SCRUM students with resident of the ECSRHM (European College of Small Ruminants Health and Management) are in charge of organizing the clinical service. European College of Veterinary Pathologist ECVP residents check post mortem cases, and discuss with undergraduate students.

Veterinary Sciences are based on knowledge arising from scientific method research and evidence-based medicine, and, consequently, their teaching is permanently linked to scientific activities. Professors communicate their knowledge to the students in both lectures and practical classes; knowledge partially obtained from their research projects, and collaborations with Research Institutes (IA2, IIS and I3A).

From the second year onwards, collaborations in research practical activities with different Departments (described in 10.1.1. as “voluntary work”), therefore, students are aware of the importance of scientific research for their training as future veterinarians which allows them to see and interact with innovative techniques that are carried out in research.

At the Small Ruminants Veterinary Teaching Hospital and Porcine Service, works are submitted to posters or oral communications in national scientific events such as Conferences at Official Professional Colleges at Zaragoza, Teruel and Navarra, or at International Congress of Small Ruminants Health and Management.

Equine Research is collaboration with research groups of this Faculty (LAGENBIO) as well as Human Medicine. Students take part in the elaboration of posters or oral communications in the two main annual equine congresses: The International Congress of Medicine and Equine Surgery (SICAB) and the Annual Congress of the Spanish Association of Equine Practitioners (AEVEE).

Undergraduate students collaborate at national Livestock Fairs, (FEMOGA) & (FIGAN). Students organize seminars, workshops and international meetings like AVAFES (Veterinary Association for the Care of Exotic and Wildlife) and IVSA (International Veterinary Students Association).

Out-research activities, once a year (Science Week and the Night of the Researchers.) Postgraduate students together with some undergraduate provide a workshop, to open Science to society at the city of Zaragoza. The FVM Library offers elective ECTS courses on the Bibliographic search and managements, databases and scientific specific searches.

FVZ programme takes suggestions or external requests from professionals or scientific organizations, colleagues and teacher’s initiatives. Effort is made to offer courses in all main areas of employment, Small Animals and Small Ruminants Clinics and Pathology, Animal Health, Animal Production and Food Safety. FVZ has also a close relationship with the Official Veterinary Professional College from Zaragoza, Huesca and Teruel (the three Aragon provinces).

Postgraduate programmes include Master’s Programme in Swine Health and Production: European Colleges (Veterinary Pathology and Small Ruminants Management) and continuing education for undergraduate students through Chairs by professional companies like Royal Canin. It is expected that there will be 6 PhD students in the academic year 2021-2022 in Translational research. A new official Master’s Degree in One Health will be launched starting on the 2020-2021 academic years (30 students.), jointly with the Veterinary Schools of Munich and Toulouse.

10.1.3. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of research, continuing and

postgraduate education programmes organised by the Establishment

Research: The Research Commission of UNIZAR gives advice about research policy and services, annual and multi-annual priorities. RC evaluates and proposes to the competent body the resolution of the University research projects. This commission also follows and verifies the research activity of the University of Zaragoza, accredits training researchers and communicates new research projects release and research fellowship calls through the iUNIZAR bulletin and the SGI (research management service) webpage. Research groups from the FVZ belong to the IA2, whose headquarter is located at the FVZ. The governing body of IA2 decides the IA2 strategic research lines in its four Divisions. IA2 acts as Project manager and promoter, facilitates the transference of research results to the society and communicates to all members.

Research strategy is based on UNIZAR validated groups integrated by multidisciplinary members. The activity of the FVZ can be framed in 10 areas of Veterinary Sciences: Animal Health; Animal Medicine and Surgery; Food Technology, Safety and Hygiene; Animal Production, Nutrition, and Genetics; Toxicology and Pharmacology; Animal Physiology, Endocrinology; Biochemistry, Molecular Biology and Biomedicine; Veterinary Anatomy and Embryology.

Continuing education programs: UNIZAR has a permanent training plan for teaching and research staff, agreed with the PDI Sectorial Board (BOUNIZAR 6-18). ICE, in collaboration with the Vice-Rectorate for Academic Policy, Information Technology and Communication, Scientific Policy, Students and Employment and Culture and Social Projection, offers continuing education activities. The annual courses offer is communicated to the university community through the iUNIZAR bulletin. Researchers and professors of the FVZ offer continuing education courses for Health Administration Veterinarians of the Government of Aragon (CIEETE). In the last 3 years, 23 continuing education courses (2-5 days long).

Postgraduate education programmes: Three one-year-long Master's Degrees: Health and Pig Production, Food Quality, Safety and Technology and Animal Nutrition. Students are mainly non-veterinarians.

Education programmes (5): Master's Degree in Small Animal Clinic I and II; University Extension Certification in Sheep and Goat Clinic (2018-2019); Specialization Diploma in Small Ruminant Clinic; University Expert in Anaesthesia and Small Animal Surgery. FVZ offered 7 clinical postgraduate programs in the last 3 years.

PhD programmes, involving other schools of UNIZAR (Biochemistry and Molecular Biology; Food Quality, Security and Technology; Animal Breeding; Biomedical and Biotechnology Sciences and Animal Medicine and Health).

10.2. Comments

FVZ has wide research activities that can help research-based training and students can participate in them. FVZ offers several postgraduate degree and continuing education programmes in different fields of the profession.

10.3. Suggestions for improvement

None.

10.4. Decision

The Establishment is compliant with Standard 10.

11. Outcome Assessment and Quality Assurance

11.1. Findings

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

-) has a culture of QA and continued enhancement of quality;

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Since the last Visitation in 2010, a Quality Assurance System (QA) was implemented in 2010/2011, with the support from the regional accreditation agency ACPUA (member of ENQA), who has the mandate by law to accredit the regional university programmes. The Establishment was accredited by ACPUA in 2016.

The FVZ Quality Management System for monitoring and supervising the student learning outcomes and processes during the whole degree. Roles, responsibilities, tasks etc. are outlined in the document “Resolución de 2 de Mayo de 2017” https://zaguan.unizar.es/record/48144/files/Texto_refundido.pdf. The specific procedures and documents for the Establishment are found at <https://estudios.unizar.es/estudio/ver?id=130>.

The QA system is embedded in the “Quality Assurance Committee” and the “Degree Assessment Committee”, with the “Coordinator” being the operative link between the two committees.

- The Coordinator of the degree: the fundamental agent of the quality system is the Degree Coordinator who acts as the academic manager of the degree and coordinates the activities of the different subjects and modules to ensure that they are appropriate to the learning objectives of the degree; conducts the periodic processes of evaluation of the degree; and proposes and promotes continuous improvement actions.
- The Quality Assurance Committee: is responsible for the QA of the degree regarding planning, organization, teaching and assessment. It assures and monitors the quality of the degree, coordinates the assessment of the teaching activity and studies, approves the Teaching Guidelines and provides a channel for the student’s complains. It reports directly to the Faculty Council. It is composed of 9 members: 5 teachers, 2 students and 1 representative of the support staff and is chaired by the Dean or a delegated full time teacher.
- The Degree Assessment Committee: reports an annual assessment of the degree to the Quality Assurance Committee to be approved or declined. It includes eight members: two full time teachers, three students, an active external professional veterinarian, an external quality expert and the coordinator as the chairman.

-) operates ad hoc, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;

The Establishment operates these mechanisms, as illustrated in figures in the SER, illustrating the annual cyclical “Quality Assessment and Learning Outcomes Approval Procedure” and “Innovation and Improvement Plan Approval Procedure”.

The Quality Assessment and Learning Outcomes Report and the Annual Innovation and Improvement Plan feeds into the elaboration of the “strategic plan” for FVZ.

-) collects, analyses and uses relevant information from internal and external sources for the effective management of their programmes and activities (teaching, research, services);

Curricular overlaps, redundancies, omissions and lack of consistency, transversality and/or integration of the curriculum are evaluated by the Degree Assessment Committee, which aims to assess the quality of the degree, summarized in the annual quality and learning outcomes report (public). The sources include: Surveys of the subjects of the Veterinary Degree; Academic and support staff surveys; Meetings of the Veterinary Degree Evaluation Commission; Information provided by Student representatives to the Evaluation Commission; Information on external practices; ACPUA reports.

Students make online surveys to evaluate teachers and subjects, to feed into the assessment. There are two surveys: one for the evaluation of teaching (subjects) and another for the evaluation of teaching activity (teachers). Access to surveys on mobile platforms has been established to improve the number of responses, and students have proposed more “student focussed” surveys, that will be implemented in the coming semester. The results of the surveys are public.

-) informs regularly staff, students and stakeholders and involves them in the QA processes;

The mentioned committees include staff and students - and the Degree Assessment committee an external stakeholder.

-) closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;

The PDCA cycle is closed by the annual (public) “Annual Innovation and Improvement Plan”. For each proposed improvement action it must be indicated whether it has been: executed, in progress, pending or rejected. Some of the pending actions can be included again in the next Plan.

-) is compliant with ESG Standards

The QA system is built on and compliant with ESG standards.

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

The QA processes are most notably applied for the curriculum (Standard 3), monitoring and supervising the student learning outcomes and processes during the whole degree. Other QA processes than those applied in the Establishment’s QA system are related to recruitment (standard 9) where in the case of permanent positions, a competitive examination is called, the evaluation is carried out by an examining board composed of teachers, and candidate’s competencies are assessed by an external accreditation body.

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

Staff, students and stakeholders have place in the committees developing (Quality Assurance Committee), implementing, assessing (Degree Assessment Committee) and revising the QA process. Students' opinions are taken into account mainly through their representatives both in the Degree Assessment Committee, where they give their opinion on how the course has been developed and propose improvements, and through the Quality Assurance Committee, where students' representatives are 25% of the total members. They also participate in the Faculty Council. All the students participate through the opinion reflected in the surveys, and through the complaints, allegations and suggestions that any of them, either personally or jointly, can make to the president of the Quality Assurance Committee. Many of these complaints, in turn, are channelled to the Degree Assessment Committee, to propose corrective measures.

There are two external agents in the Degree Assessment Committee. A graduate in Veterinary with professional experience and a professor from the support programme for the quality system of qualifications of the Institute of Education Sciences, appointed by the Rector. The former gives his opinion on the competences and contents of the degree according to his professional experience and the latter provides a quality judgment on the teaching methodologies used.

11.2. Comments

The formal involvement of stakeholders in the QA process is officially limited to membership of the Quality Assessment Committee, but advice is being sought by other routes (colloquia, joint meetings, agreements, etc.).

11.3. Suggestions for improvement

To ensure the involvement and input of various types of stakeholders in the process relating to QA and adjustment of the curriculum, it could be considered to establish a type of formal “external stakeholder/employer” for annual meetings with Faculty involved in the QA process.

11.4. Decision

The Establishment is compliant with Standard 11.

12. ESEVT Indicators

Name of the Establishment: Faculty of Veterinary Medicine, UNIZAR, Zaragoza, Spain					
Date of the form filling: December 10, 2019					
		Establishment values	Median value	Minimal value	Balance
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.225	0.16	0.13	0.099
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.651	0.87	0.59	0.061
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.634	0.94	0.57	0.067
I4	n° of hours of practical (non-clinical) training	833.333	905.67	595.00	238.333
I5	n° of hours of clinical training	705.000	932.92	670.00	35.000
I6	n° of hours of FSQ & VPH training	222.667	287.00	174.40	48.267
I7	n° of hours of extra-mural practical training in FSQ & VPH	130.000	68.00	28.80	101.200
I8	n° of companion animal patients seen intramurally / n° of students graduating annually	100.161	70.48	42.01	58.152
I9	n° of ruminant and pig patients seen intramurally / n° of students graduating annually	2.053	2.69	0.46	1.589
I10	n° of equine patients seen intramurally / n° of students graduating annually	1.366	5.05	1.30	0.068
I11	n° of rabbit, rodent, bird and exotic seen intramurally / n° of students graduating annually	1.598	3.35	1.55	0.053
I12	n° of companion animal patients seen extramurally / n° of students graduating annually	0.361	6.80	0.22	0.138
I13	n° of individual ruminants and pig patients seen extramurally / n° of students graduating annually	7.205	15.95	6.29	0.910
I14	n° of equine patients seen extramurally / n° of students graduating annually	1.807	2.11	0.60	1.212
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	1.590	1.33	0.55	1.043
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.152	0.12	0.04	0.107
I17	n° of companion animal necropsies / n° of students graduating annually	1.622	2.07	1.40	0.222
I18	n° of ruminant and pig necropsies / n° of students graduating annually	3.451	2.32	0.97	2.480
I19	n° of equine necropsies / n° of students graduating annually	0.101	0.30	0.09	0.008
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	2.393	2.05	0.69	1.700
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.135	0.20	0.06	0.072
I22*	n° of PhD graduating annually / n° of students graduating annually	0.198	0.15	0.09	0.110

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All the indicators provided by the Establishment are in the positive balance range. The total number of practical non-clinical hours (I5) exceeds the minimum by 40%. The extramural practical training in FSQ & VPH is above the minimum by 28.45% (I7). The number of companion animal patients seen intramurally/number of students graduating annually (I8) also has a high balance, which is even higher than the minimal value. The number of necropsies in ruminants and pigs (I18) and also rabbit, rodent, bird and exotic pet necropsies (I20) well exceed the minimal value, as mentioned in the description of Standard 5.

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

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

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4.3. Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number, size and equipped for the instructional purposes and must be well maintained. The facilities must be adapted for the number of students enrolled.	X		
4.4. Students must have ready access to adequate and sufficient study, self-learning, recreation, locker, sanitary and food services facilities.	X		
4.5. Offices, teaching preparation and research laboratories must be sufficient for the needs of the academic and support staff. 4	X		
4.6. Facilities must comply with all relevant legislation including health, safety, biosecurity and EU animal welfare and care standards.			X
4.7. The Establishment's livestock facilities, animal housing, core clinical teaching facilities and equipment must: -) be sufficient in capacity and adapted for the number of students enrolled in order to allow hands-on training for all students -) be of a high standard, well maintained and fit for purpose -) promote best husbandry, welfare and management practices -) ensure relevant biosecurity and bio-containment -) be designed to enhance learning.			X
4.8. Core clinical teaching facilities must be provided in a VTH with 24/7 emergency services at least for companion animals and equines, where the Establishment can unequivocally demonstrate that standard of education and clinical research are compliant with all ESEVT Standards, e.g. research-based and evidence-based clinical training supervised by academic staff trained to teach and to assess, availability for staff and students of facilities and patient4s for performing clinical research and relevant QA procedures. For ruminants and pigs, on-call service must be available if emergency services do not exist for those species in a VTH. The Establishment must ensure state-of-the-art standards of teaching clinics which remain comparable with the best available in the private sector.	X		
4.9. The VTH and any hospitals, practices and facilities (including EPT) which are involved with the curriculum must meet the relevant national Practice Standards.	X		
4.10. All core teaching sites must provide dedicated learning spaces including adequate internet access.	X		
4.11. The Establishment must ensure students have access to a broad range of diagnostic and therapeutic facilities, including but not limited to: pharmacy, diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services and necropsy facilities.	X		
4.12. Operational policies and procedures (including biosecurity, good laboratory practice and good clinical practice) must be taught and posted for students, staff and visitors.	X		
4.13. Appropriate isolation facilities must be provided to meet the need for the isolation and containment of animals with communicable diseases. Such isolation facilities must be properly constructed, ventilated, maintained and operated to provide for animal care in accordance with updated methods for prevention of spread of infectious agents. They must be adapted to all animal types commonly handled in the VTH.			X
4.14. The Establishment must have an ambulatory clinic for production animals or equivalent facilities so that students can practise field veterinary medicine and Herd Health Management under academic supervision.	X		
4.15. The transport of students, live animals, cadavers, materials from animal origin and other teaching materials must be done in agreement with national and EU standards, to ensure the safety of students and staff and to prevent the spread of infectious agents.			X
Standard 5: Animal resources and teaching material of animal origin			
5.1. The number and variety of healthy and diseased animals, cadavers, and material of animal origin must be adequate for providing the practical training (in the area of Basic Sciences, Clinical Sciences, Pathology, Animal Production, Food Safety and Quality) and adapted to the number of students enrolled.	X		
5.2. It is essential that a diverse and sufficient number of surgical and medical cases in all common domestic animals and exotic pets be available for the students' clinical educational experience and hands-on training.	X		
5.3. In addition to the training provided in the Establishment, experience can include practical training at external sites, provided this training is organised under direct academic supervision and at the same standards as those applied in the Establishment.	X		
5.4. The VTH must provide nursing care skills and instruction in nursing procedures.	X		
5.5. Under all situations students must be active participants in the workup of patients, including physical diagnosis and diagnostic problem oriented decision making.	X		
5.6. Medical records must be comprehensive and maintained in an effective retrieval system (preferably an electronic patient record system) to efficiently support the teaching, research, and service programmes of the Establishment.		X	
Standard 6: Learning resources			
6.1. State-of-the-art learning resources must be available to support veterinary education, research, services and continuing education. Timely access to learning resources, whether through print, electronic media or other means, must be available to students and staff and, when appropriate, to stakeholders. State-of-the-art procedures for bibliographical search and for access to databases and learning resources must be taught to undergraduate students.	X		
6.2. Staff and students must have full access on site to an academic library, which is administered by a qualified librarian, an Information Technology (IT) unit, which is managed by an IT expert, an e-learning platform, and the relevant human and physical resources necessary for development by the staff and use by the students of instructional materials.	X		
6.3. The Establishment must provide students with unimpeded access to learning resources which include scientific and other relevant literature, internet and internal study resources, and equipment for the development of procedural skills (e.g. models). The use of these resources must be aligned with the pedagogical environment and learning outcomes within the programme, and have mechanisms in place to evaluate the teaching value of innovations in learning resources.	X		
6.4. The relevant electronic information, database and other intranet resources must be easily available for students and staff both in the Establishment's core facilities via wireless connection (Wi-Fi) and from outside the Establishment via Virtual Private Network (VPN).	X		
Standard 7: Student admission, progression and welfare			
7.1. The selection criteria for admission to the programme must be consistent with the mission of the Establishment. The number of students admitted must be consistent with the resources available at the Establishment for staff, buildings, equipment, healthy and diseased animals, and materials of animal origin.	X		

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7.2. In relation to enrolment, the Establishment must provide accurate information in all advertisements regarding the educational programme by providing clear and current information for prospective students. Further, printed catalogue ⁴ and electronic information must state the purpose and goals of the programme, provide admission requirements, criteria and procedures, state degree requirements, present Establishment descriptions, clearly state information on tuition and fees along with procedures for withdrawal, give necessary information for financial aid programmes, and provide an accurate academic calendar.	X		
7.3. The Establishment's website must mention the ESEVT Establishment's status and its last Self Evaluation Report and Visitation Report must be easily available for the public.	X		
7.4. The selection and progression criteria must be clearly defined, consistent, and defensible, be free of discrimination or bias, and take account of the fact that students are admitted with a view to their entry to the veterinary profession in due course.	X		
7.5. The Establishment must regularly review and reflect on the selection processes to ensure they are appropriate for students to complete the programme successfully, including consideration of their potential to meet all the ESEVT Day One Competences in all common domestic species (see Annex 2).	X		
7.6. Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.	X		
7.7. There must be clear policies and procedures on how applicants with disabilities or illnesses will be considered and, if appropriate, accommodated in the programme, taking into account the requirement that all students must be capable of meeting the ESEVT Day One Competences by the time they graduate.	X		
7.8. The basis for decisions on progression (including academic progression and professional fitness to practise) must be explicit and readily available to the students. The Establishment must provide evidence that it has mechanisms in place to identify and provide remediation and appropriate support (including termination) for students who are not performing adequately.	X		
7.9. The Establishment must have mechanisms in place to monitor attrition and progression and be able to respond and amend admission selection criteria (if permitted by national or university law) and student support if required.	X		
7.10. Mechanisms for the exclusion of students from the programme for any reason must be explicit.	X		
7.11. Establishment policies for managing appeals against decisions, including admissions, academic and progression decisions and exclusion, must be transparent and publicly available.	X		
7.12. Provisions must be made by the Establishment to support the physical, emotional and welfare needs of students. This includes, but is not limited to, learning support and counselling services, careers advice, and fair and transparent mechanisms for dealing with student illness, impairment and disability during the programme. This shall include provision of reasonable accommodations/adjustments for disabled students, consistent with all relevant equality and/or human rights legislation.	X		
7.13. There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).	X		
7.14. Mechanisms must be in place by which students can convey their needs and wants to the Establishment.	X		
7.15. The Establishment must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding compliance of the Establishment with the ESEVT standards.	X		
Standard 8: Student assessment			
8.1. The Establishment must ensure that there is a clearly identified structure within the Establishment showing lines of responsibility for the assessment strategy to ensure coherence of the overall assessment regime and to allow the demonstration of progressive development across the programme towards entry level competence.	X		
8.2. The assessment tasks and grading criteria for each unit of study in the programme must be clearly identified and available to students in a timely manner well in advance of the assessment.	X		
8.3. Requirements to pass must be explicit.	X		
8.4. Mechanisms for students to appeal against assessment outcomes must be explicit.	X		
8.5. The Establishment must have a process in place to review assessment outcomes and to change assessment strategies when required.	X		
8.6. Programme learning outcomes covering the full range of professional knowledge, skills, competences and attributes must form the basis for assessment design and underpin decisions on progression.	X		
8.7. Students must receive timely feedback on their assessments.	X		
8.8. Assessment strategies must allow the Establishment to certify student achievement of learning objectives at the level of the programme and individual units of study.	X		
8.9. Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment of clinical skills and Day One Competences (some of which may be on simulated patients), must form a significant component of the overall process of assessment. It must also include the quality control of the students logbooks in order to ensure that all clinical procedures, practical and hands-on training planned in the study programme have been fully completed by each individual student.	X		
Standard 9: Academic and support staff			
9.1. The Establishment must ensure that all staff are appropriately qualified and prepared for their roles, in agreement with the national and EU regulations. A formal training (including good teaching and evaluation practices, learning and e-learning resources, biosecurity and QA procedures) must be in place for all staff involved with teaching. Most FTE academic staff involved in veterinary training must be veterinarians. It is expected that greater than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians.	X		
9.2. The total number, qualifications and skills of all staff involved with the programme, including teaching staff, 'adjunct' staff, technical, administrative and support staff, must be sufficient and appropriate to deliver the educational programme and fulfil the Establishment's mission.	X		
9.3. Staff who participate in teaching must have received the relevant training and qualifications and must display competence and effective teaching skills in all relevant aspects of the curriculum that they teach, regardless of whether they are full or part time, residents, interns or other postgraduate students, adjuncts or off-campus contracted teachers.	X		
9.4. Academic positions must offer the security and benefits necessary to maintain stability, continuity, and competence of the academic staff. Academic staff should have a balanced workload of teaching, research and service depending on their role; and should have reasonable opportunity and resources for participation in scholarly activities.	X		
9.5. The Establishment must provide evidence that it utilises a well-defined, comprehensive and publicised programme for the professional growth and development of academic and support staff, including formal appraisal and informal	X		

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

Executive Summary

The Faculty of Veterinary Science of Zaragoza, a part of the UNIZAR (University of Zaragoza) was founded in 1847, as the second veterinary Establishment in Spain, initially with a three year syllabus. It was renamed Faculty of Veterinary Science of Zaragoza in 1943 and introduced a nationally accepted curriculum of 5 years in 1971. The actual curriculum was established in 2010-2011, based on European and national legislation.

The FVMZ was visited by EAEVE in 2006, when two category-one deficiencies were found, one connected to the low amount of intramural hands-on clinical training in the core curriculum and the second based on the need for improvement of the Faculty engagement in farm animal teaching and clinical services. The FVMZ was revisited in March 2010 and acquired full approval.

The SER was well written, complete and provided on time to the Visitation Team along with the Appendices (1 and 2). All the documents asked for during the Visitation were willingly provided.

The Visitation was very well prepared, well organised and carried out in a cordial and professional atmosphere. The Liaison Officer and her team were efficient and always helpful. The programme of the Visitation was designed ahead the Visitation, with some minor changes, easily implemented upon requested of the Visitation Team who had full access to all the information, facilities and individuals they asked for.

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

- The commitment and enthusiasm of staff and students
- Transparency and openness
- Student-focused education
- Positive interaction between students and staff, in a learning inductive atmosphere
- Emphasis on an integrated species-oriented teaching
- Willingness to further develop teaching and research
- Excellent facilities in Food Technology Pilot Plant
- Excellent cooperation with the Agro-Food Research Institute and the National Centre for Encephalopathies (OIE reference centre)
- Excellent students' life
- Effective implementation of a QA system

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

- Partial compliance with Sub-standard 5.6 was found because the medical records of equine and ruminants seen extramurally are not effectively retrievable.

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

1. Non-compliance with Substandards 4.6, 4.7 and 4.15 because of inadequate definition and implementation of biosecurity rules.
2. Non-compliance with Substandard 4.13 because isolation facilities for equine are not fully operational.

Glossary

EAEVE: European Association of Establishments for Veterinary Education
EBVS: European Board of Veterinary Specialisation
ECOVE: European Committee of Veterinary Education
EPT: External Practical Training
ESEVT: European System of Evaluation of Veterinary Training
ESG: Standards and Guidelines for Quality Assurance in the European Higher Education Area
F4SQ: Food Safety and Quality
FTE: Full-Time Equivalent
IT: Information Technology
QA: Quality Assurance
SER: Self Evaluation Report
SOP: Standard Operating Procedure
VPH: Veterinary Public Health
VTH: Veterinary Teaching Hospital

Standardised terminology

Accreditation: status of an Establishment that is considered by ECOVE as compliant with the ESEVT Standards normally for a 7 years period starting at the date of the last (full) Visitation;

Establishment: the official and legal unit that organise the veterinary degree, either a university, faculty, school, department, institute;

Ambulatory clinic: clinical training done extramurally and fully supervised by academic trained teachers;

Establishment's Head: the person who officially chairs the above described Establishment, i.e. Rector, Dean, Director, Head of Department, President, Principal, ..;

External Practical Training: clinical and practical training done extramurally and fully supervised by non-academic staff (e.g. practitioners);

Major Deficiency: a deficiency that significantly affects the quality of education and the Establishment's compliance with the ESEVT Standards;

Minor Deficiency: a deficiency that does not significantly affect the quality of education or the Establishment's compliance with the ESEVT Standards;

Visitation: a full visitation organised on-site in agreement with the ESEVT SOP in order to evaluate if the veterinary degree provided by the visited Establishment is compliant with all ESEVT Standards; any chronological reference to 'the Visitation' means the first day of the full on-site visitation;

Visitation Report: a document prepared by the Visitation Team, corrected for factual errors and finally issued by ECOVE; it contains, for each ESEVT Standard, findings, comments, suggestions and identified deficiencies.

Decision of ECOVE

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

1. Non-compliance with Substandards 4.6, 4.7 and 4.15 because of inadequate definition and implementation of biosecurity rules.
2. Non-compliance with Substandard 4.13 because isolation facilities for equine are not fully operational.

The Faculty of Veterinary Science, University of Zaragoza is therefore classified as holding the status of: **NON-ACCREDITATION**.