

**European Association
of Establishments for Veterinary Education**

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



**FINAL REPORT on the STAGE 1 VISITATION to
the Faculty of Veterinary Medicine of the University of León, Spain**

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INTRODUCTION

The Veterinary Faculty of León (named here ‘the Establishment’) was founded in 1852 and has been part of the University of León since 1979.

In November 2001, the Establishment was visited by EAEVE and was not approved. The deficiencies were mainly linked to the clinical education, i.e. hands-on clinical training, emergency services, mobile clinic and caseload in all species, and to the general organisation of the Establishment.

Since this visitation, the Establishment has done efforts to correct the identified deficiencies. The number of departments has been reduced from 11 to 5, the curriculum was adapted to the new national and EU regulations, and new buildings and equipment were put into operation, e.g. the Veterinary Teaching Hospital (VTH) in 2013.

Despite these efforts, weaknesses are still identified by the Establishment and are listed in the SER, e.g. lack of autonomy of the Establishment, lack of a mobile clinic, not optimal organisation of the VTH, poor adaptation of some classrooms to modern teaching (tutorials, seminars), insufficient recruitment of young teaching staff during the last decade, insufficient public funding for the running costs of the Establishment.

1 OBJECTIVES & STRATEGY

1.1 Findings

The aim of the Establishment is to prepare students for professional veterinary activities in Animal Medicine and Surgery, Animal Production, Food Hygiene and Technology.

The SER describes in detail the general objectives and the day-one knowledge, skills and competences to be acquired by their graduate students, in order to be in agreement with the national legislation.

An external monitoring process for the achievement of the objectives has been carried out by the Quality Assurance Agency for the University System in Castilla and León, with a positive evaluation for the veterinary curriculum (2012).

When deficiencies are identified, the Quality Board of the Establishment, the Board for Coordination of the Primary Degree in Veterinary Science and the Teaching Board of the Establishment make proposals to the Establishment Board.

1.2 Comment

The listed objectives cover the complete education programme and demonstrate that undergraduate veterinary education is the primary task of the Establishment.

Unfortunately, the SER does neither describe the strategy nor the timeframe to achieve these objectives and to correct identified weaknesses, particularly in the management of the VTH.

In the team’s opinion, the requirements regarding Objectives & Strategy as they are laid down in Annex I of the SOP are not met, because of a lack of strategic plan for the Establishment and especially for its VTH.

1.3 Suggestions

To inform the students, the stakeholders and the public about the future development of the Establishment, the later should develop a real strategic plan describing how and when their

objectives will be achieved and when the weaknesses will be corrected. Of particular relevance is that a business plan to increase the clinical caseload should be developed.

2 ORGANISATION

2.1 Findings

The Establishment is one of the 8 faculties of the University of León, a public university which at the national level is dependent upon the Spanish Ministry of Education, and at regional level upon the Education Department of the Autonomous Government of Castilla and León.

The Establishment comprises five departments, i.e. Animal Health, Animal Production, Biomedical Sciences, Food Hygiene & Food Technology and Veterinary Medicine, Surgery and Anatomy. Besides these departments, the Establishment is also partly linked with three other departments of the University of León, i.e. Molecular Biology, Applied Chemistry and Physics, and Biodiversity.

The organisation and duties of the Establishment and the departments are described in the SER and follow those of a classical public university.

Eight committees are connected to the Establishment Board, i.e. Executive Committee, Library Committee, Teaching Committee, Clinical Services Committee, Extramural Practices Committee, Student Mobility Committee, Validation Committee and Quality Control Committee. Their duties are described in the SER.

Students are fairly represented by the 'DAV', the official veterinary students' organisation whose delegates are democratically elected. Two students' delegates are responsible for each academic year and volunteer student are welcomed as additional members to the meetings. They meet once or twice a month and more frequently if there are major issues. When individuals or a group of students have a problem, they talk to their delegate, who refers firstly to the teacher in charge. If the problem cannot be solved, the whole delegation meets the Dean who is readily available.

At the end of every semester, students from each academic year are invited to evaluate all the teachers. The Quality Commission of the Leon University publishes online a questionnaire that the students are asked to fill in, with the possibility of adding personal comments. In fact, students complete these questionnaires only when there is a real issue with a teacher or when a good point needs to be put forward. Theoretically, if several students complain about the same subject, DAV is informed and meets the relevant staff (and/or the Dean) in order to fix the problem. Current students are not aware of any such issue during the last years.

The other student associations are IVSA (International Veterinary Student's Association), AVAFES (interested in exotic and wild animals) and ACODIL (dealing with the Lidia bull breed). Two large rooms are available, one for IVSA and AVAFES and one for ACODIL and DAV. All these organisations have active members and have organised theoretical and practical activities during the last years.

The SER also describes some current weaknesses in the Establishment, i.e. non-optimal organisation of the University (e.g. lack of collaboration between faculties, departments and centres), lack of external and independent evaluation for the recruitment of academic staff, lack of structured collaboration with stakeholders and veterinary professional organisations.

2.2 Comments

The autonomy of the Establishment is limited. The Heads of Department have a similar status to the Dean in their relationships with the University authorities. This likely affects the implementation of a global strategic plan for the Establishment, the efficiency and consistency of the decision-making process and the collaboration between departments.

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

2.3 Suggestions

None.

3 FINANCES

3.1 Findings

The funding of the Establishment is based on public funding (around 6,5M€/year), tuition fees (around 1.800€/student/year), revenues from services (around 150.000€/year) and research grants (around 1,3M€/year).

The financial model is imposed by the University. In 2013, the personnel and running costs of the Establishment were around 9M€ and 2M€ respectively. The budget of the Teaching farm was around 400.000€, 50% funded by the income of the farm and 50% by the University.

There is no specific budget assigned by the University to the Establishment for research projects. Each research group gets its own funding, mainly from public grants (Regional, National and European) and private grants (mainly pharmaceutical and food sciences companies).

The overheads collected by the University vary from 10% (for research grants) to 15% (for services provided by the Establishment). Three spin-offs have been created by the Establishment but they do not contribute to its income so far.

Because of the economic crisis, public funding has been reduced by 11% since 2011. However the Team was told that public funding should increase again from 2015.

In the SER, the Establishment complained about the lack of autonomy in selecting the priorities for requested investments, about the lack of teaching staff, running costs for education and adapted equipment and buildings.

3.2 Comments

State funding for veterinary education is currently at around 10.000€/student/year, which is insufficient to ensure a high quality veterinary training in agreement with EAEVE SOP.

Furthermore the revenues generated by the VTH and other services are currently very low (<200.000€/year), although partly explained by exceptional local circumstances (i.e. the closure of the VTH for several months in 2013).

Buildings, equipment and their maintenance are in agreement with the requirements.

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

3.3 Suggestions

The profitability of the VTH and other services (e.g. expert, technical, diagnostic and contract research services) should be increased in order to provide additional funding to improve clinical training.

4 CURRICULUM

4.1 GENERAL ASPECTS

4.1.1 Findings

The current curriculum was put into place in 2010 and is regulated by an organic national law. In the future education will be devolved to the autonomous regional governments. At this time the region of Castilla y Leon is already responsible for funding universities.

The five-year course under the new curriculum is being taught for the first time. A Syllabus Committee at the University of Leon is in charge of submitting proposals for changes to the Curriculum.

It is structured in accordance with Directive 36/2005 and takes into account the suggestions written in the FVE document on the quality of veterinary training (FVE00/011).

The 2010 current Curriculum comprises 294 ECTS for Core subjects, including 24 credits for obligatory extramural field work, and 6 ECTS for elective subjects (total: 7500 h of learning per student).

Translated into hours of training, we found a total of 3227 h, divided as:

- Theoretical training: 1289 h for lectures, 202.5 h for seminars and 121 h for self-directed learning;
- Supervised practical training: 654 h for laboratory and desk-based work, 250.5 h for non-clinical work and 497.5 h for clinical work;
- Other training: 192.5 h for examination, outside field trips, unsupervised learning, ...

The 2010 curriculum fulfils all the requirements of the EU Directive and covers all topics listed.

The student obtains a University Degree in Veterinary Medicine at the end of his/her studies, after obtaining 300 ECTS.

He/she can directly work as a veterinarian.

However, as with the elective subjects of the previous curriculum, in this curriculum the Degree Dissertation and all the basic subjects like biology and physics, are covered within five years, which leads to a demand to increase the duration of the studies. This could be of one or two semesters, which would improve the assimilation of knowledge and the time spent in hands-on clinical training.

Scientific English is taught on an elective basis in the first year, and the average level is not as high as it should be in a veterinary Establishment.

4.1.2 Comments

The curriculum described in the SER conforms to the EU directive and to the EAEVE SOP.

The listed Ratios conform to the guidelines

English is elective in the first year. The level of scientific English could be improved.

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

4.1.3 Suggestions

The Establishment should consider if an increase in the duration of the studies would solve some insufficiencies.

4.2 BASIC SUBJECTS & BASIC SCIENCES

4.2.1 Findings

No specific information is provided in the SER on the knowledge of incoming students in the basic subjects though it is said that they generally 'have outstanding secondary school academic records'. This is probably not a relevant issue, because the basic subjects are taught as part of the core curriculum.

Basic subjects (chemistry, animal and plant biology, physics, bio-mathematics) are taught in Year 1.

A total of 94 h is dedicated to the basic subjects of which 16 h are dedicated to lab and desk based supervised practical training.

Grades in basic subjects do not affect progression of the student, which is why the number of students attending each module is generally higher than the number of students regularly enlisted in a given year (up to 150).

The basic sciences, i.e. Anatomy, Histology, Embryology, Physiology, Biochemistry, Genetics, Pharmacology, Pharmacy, Toxicology, Microbiology, Immunology, Epidemiology and Professional Ethics are taught in several modules during the first 4 years of the curriculum.

In addition to Microbiology and Immunology, Parasitology (general) and General Pathology are taught in year 2. Like the other two topics, it is provided as an introductory module, complemented in the clinical years by the Infectious Diseases, Parasitic Diseases and Specific Anatomic Pathology modules.

For all subjects, the relevant general (transferable) skills and specific skills are listed on the website together with specific learning outcomes. Each module has a theoretical and practical component and its own assessment methods. An example has been provided for Anatomy (as PDF file, translated to English).

Anatomy, Histology and Physiology are taught in an integrated organ-based approach, stretching over the first two semesters, with an organ-based approach.

In Physiology, the students work in groups with live animals (beagles owned by the VTH, with full ethics and legal approval). As an example, in groups of 10 students, they perform an ECG on healthy beagles. This group size is big, but the students are able to work hands-on. There are also practical sessions with laboratory rodents (mainly rats). These are in the majority animals that have been used in experiments previously, or are aged, surplus animals from the Animal House.

In Anatomy, extensive hands-on practical work is incorporated in the module. This comprises the dissection of animals (e.g. 40 dogs for 120 students. One dog is fully dissected in three consecutive sessions, by 3 groups, with each group involved in a different anatomical compartment (such as abdominal cavity, thoracic cavity...). This changes with the next dissected dog, when each group deals with another compartment. In 3-4 sessions, a full dissection has been undertaken. This dissection training is complemented by (partial) dissection of other species, such as sheep and horses. In addition, individual organs (mainly from the slaughterhouse and from the post mortem room) bones and joints/limbs and in situ demonstrations are provided. For practical teaching, so-called 'Cooperative Learning' has been implemented successfully, where a group of students

undertakes a dissection etc. under the guidance of a peer (so-called coordinator) who has been trained in advance on the subject by the professors. For each session, the coordinator changes. This system has been adapted by the professors over the years, and has been proven as effective also in other institutions, for example in the teaching of human gross anatomy.

Hands-on participation of students in Anatomy is adequate, and so is the personal protective equipment (PPE) in the form of disposable white coats and overshoes. The teaching material is in the majority fresh or frozen (organs, dogs) or permanent (bones, joints, plasticated material), with some formalin fixed specimens (<3% formalin, specimens are kept in ethanol and glycerine and/or washed prior to demonstration. Dogs, cats, pigs and sheep are brought in as whole animals, whereas for horses and cattle, only parts are provided (e.g. horse limbs, bovine stomachs, alimentary tracts). All modules use the electronic teaching platform (Agora, Moodle-based), providing the lecture files as well as all the other relevant material for the students through this medium.

All other basic science modules also have sufficient hours allocated to them. The course material is appropriate and there is an appropriate balance between theoretical and practical components. Biosafety and biosecurity are appropriately explained and adhered to, PPE is always available, and shower and eye washes are found in the corridor next to the teaching laboratories.

For each module, individual examination formats are used. However, these always consist a written exam (MCQs, SAQs etc.), an assessment of the practical skills and continuous assessment throughout the course (see examples for Anatomy in PDF file).

For all modules, the clinical relevance is emphasised, either with the practical work or with case scenarios (e.g. PBL in genetics), demonstrating that the topics that are taught are relevant to the later, i.e. clinical course. The practical work is carried out in groups of up to 20 students.

4.2.2 Comments

It should be emphasised that Anatomy, Histology and Physiology are taught in a well thought through, integrated manner, with an organ-based approach.

For the Gross Anatomy teaching, an interesting approach (so-called 'Cooperative Learning') is taken which in the experience of the professors increases motivation and learning achievements as well as the communication skills in the student groups.

Use of laboratory rodents for teaching is undertaken with ethical approval and license by appropriately trained (FELASA B and C) teachers. Considering the emphasis on the reduction of the use of laboratory animals, the Establishment should carefully consider the use and extent of laboratory animals for teaching.

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

4.2.3 Suggestions

None.

4.3 ANIMAL PRODUCTION

4.3.1 Findings

The SER describes all topics covered by the subject Animal Production.

Agronomy encompasses plant biology.

Rural economics encompasses veterinary business management and marketing.

Animal ethology and protection contain ethnology.

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Practical work also covers certification and report writing.
All EU listed subjects are covered by the Curriculum.

Students follow a private rural practitioner in his daily activities for only five days, during the total curriculum, in the tenth semester. They learn how to assess herd health and take different biological samples.

Students are required to have training periods on the Teaching Farm and externally under the guidance of an internal tutor who is a teacher, and an external tutor who is employed by the practice or company in charge of the training.

Students are taught all aspects of animal welfare and can assess their knowledge on the teaching farm, which complies with the EU requirements.

Farm management is part of the training in Animal Production and the students also study models of veterinary practice management.

The attendance at lectures counts for 10% of the final examination.

All members of academic staff in Animal Production have a PhD.

Animal behaviour and animal welfare are covered during the studies.

The Teaching Farm is a commercial farm managed by Serclivet, a private company.

The Mountain Livestock Institute has more than 200 dairy sheep reared in experimental conditions. This institute is member of the Spanish Council for Scientific Research and has 75% of veterinarians on the scientific staff and contracts with public sector and private companies. This institute collaborates with the Establishment during undergraduate studies, assists postgraduate students in Masters and PhD programmes. It gives opportunities to students to be introduced in research.

4.3.2 Comments

Very few large animals are sent to the VTH. However at the Teaching Farm, students can perform all kind of propaedeutic activities, semiology and blood sampling in cattle, sheep, pigs and poultry. Students attend practical work on this farm, which includes preventive medicine, herd health programmes, vaccination, reproduction schemes and animal production.

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

4.3.3 Suggestions

In animal production expertise, the Establishment could develop financial contracts involving research and expertise with farmers, food business operators and pharmaceutical companies. The resulting income could contribute to improving the clinical hands-on training in food-producing animals.

4.4 CLINICAL SCIENCES

4.4.1 Findings

From February to July 2013 the VTH was closed for economic reasons. Starting from September 2013 the clinical and teaching activities were continued according to the 2010 Curriculum.

Hands-on clinical activity concerns examination, diagnosis and treatment of patients (dogs, cats, exotics, horses) and participation in consultations assisting the teacher-clinician. Commonly there is an average group size of 10 students in clinical practice classes.

Intensive care facilities, a hospitalisation service and emergency service have been implemented at the VTH for small and large animals 24h daily. Undergraduate students participate in the VTH emergency service and hospitalisation activities under the supervision of veterinary residents (postgraduate) and teaching staff (on call). In addition to regular services, the VTH provides a spaying and neutering service for local shelters.

With respect to small animals, the population in the city of León is not large enough (6000 dogs and 20 vet practices) to supply the VTH with small animals to the levels suggested as satisfactory. The environment of the Establishment is mainly rural and there are a great number of stockbreeding farms (2500 for cattle and 2000 for sheep/goats), having 128.000 cows and 514.000 goats/sheep in the region. However, there are many private veterinary teams in the region that carry out the clinic care of those farms, and it is only exceptionally that cases are sent to the VTH.

The amount and type of clinical work involving sheep, pigs, cows and horses increased significantly with the introduction of participation in extramural practices and livestock farms supervised by 5 external veterinarians (contracted by the Establishment). Students accompany these veterinary surgeons from 08:30 – 17:00 on five days and participate actively in e.g. parturitions of sheep and cattle and abomasal displacement surgery. Extramural practical work has been more thoroughly organised; activities are now planned by one academic tutor and one work-placement tutor. Extramural fieldwork is obligatory for all students. All (4th and 5th year) students and external veterinarians are covered by the Establishment insurance plan during their extramural fieldwork activities. Students have a case log and report about their activities to the academic tutor.

The VTH has no separate functional mobile clinic (for Establishment staff and students while visiting outside farms) for the Reproduction and Obstetrics Unit.

4.4.2 Comments

The number of companion animals seen at the VTH is insufficient to guarantee adequate exposure of students to patients (and accordingly hands-on training).

Time spent by each student on extramural large animal medicine consultations is only 5 days. There is insufficient exposure of undergraduate students to emergency cases.

Commonly groups of 10 students examine patients, which is above the recommended 5-6 students. The majority of students do not perform supervised simple surgeries, e.g. castration and ovario-hysterectomy in companion animals, or any surgery in large animals.

In the team's opinion, the requirements regarding Clinical Sciences as they are laid down in Annex I of the SOP are not met, because of insufficient compulsory hands-on clinical training and insufficient exposure of undergraduate students to emergency cases.

4.4.3 Suggestions

It is suggested to make a strategic plan with the aim to increase the number of sick small and large animals seen by the students. An (extended) emergency service set up in cooperation with local small animal practitioners, or the introduction of by-appointment-clinics on Saturdays, may be considered.

It is also suggested to recruit qualified specialised staff (e.g. Diplomates in both small and large animals clinical disciplines) differentiating the Establishment's staff from local practitioners, thereby introducing new diagnostic and treatment options.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The Establishment is, according to the aims and learning objective stated in the SER, highly committed to preparing students for professional veterinary activities within Food Hygiene, Food Technology (FH/FT) and the related aspects of Veterinary Public Health. The objectives include knowledge about hygiene and technologies applied to the manufacture and store of food and feedstuff in general and the specific animal and human health aspects associated with these procedures. Furthermore, specific professional practical skills in relation to this area are listed as learning objectives, including performing ante- and postmortem inspections, food hygiene inspection, risk assessment and applying of food technologies in the preparation of foodstuffs for human consumption.

The teaching in Food Hygiene and Food Technology is supervised by the Department of Food Hygiene & Food Technology, which employs 4 full veterinary professors, and 9 veterinary associate / assistant professors plus 8 other academic, 4 technical and 1 administrative staff. 87% of the academic staff have hold a PhD.

Teaching takes place in Year 5 simultaneously with teaching in Preventive medicine, Health Policy and Zoonoses, Clinical and other Practicals, Placements and Degree Dissertation work. Hence, the curriculum shows a progression from the veterinary basic science disciplines (e.g. microbiology, parasitology and pathology) in Year 2 to Animal Production disciplines in Year 3 and Veterinary clinical disciplines including Parasitic Diseases in Year 4 to Food hygiene and Food Technology in Year 5.

Food Hygiene and Food Technology teaching comprises over 330 h in total, thus contributing to 10% of the total curriculum hours. 60% (around 200 h) of the teaching is dedicated to practical work. This takes place both in intra- and extra mural facilities.

The Department of Food Safety and Food Technology has a small food-processing unit, where most of the practical training in Food Technology takes place. This includes milk and meat processing and inspection of, e.g. curd, cheeses, butter, sausages, fish, canned vegetables and alcoholic beverages.

Practical slaughterhouse training (over 27 h) is primarily done at facilities of the Matadero de León, a private slaughterhouse (EU register number 10.06981/LE), in groups of 5-10 students under the instruction of the Official Veterinary Surgeon. This includes checking food chain information, ante- and post-mortem inspection, inspection of slaughterhouse hygiene and animal welfare. The main species seen are cattle and horses.

Furthermore, groups of 1-2 students accompany a Veterinarian of the Official Services of Public Health during official inspections of alimentary establishments (over 28 h).

Students, in a large group of 40, also visit a medium sized swine slaughterhouse, located 100km from León, where they are shown all duties performed by the official vet.

ICTAL, a food science and technology institute, located close to the Establishment, provides facilities as a pilot food plant. Students are involved in practicals, placements and their degree dissertation. They can also follow their studies in research programmes, for Master or PhD qualifications.

The students do not visit any poultry slaughterhouse.

4.5.2 Comments

The Establishment provides an excellent training in Food Hygiene, Food Technology and Veterinary Public Health.

However it is a pity that the available expertise in courses, analysis, the engineering of food plants and HACCP is not capitalised on financially with contract research and selling expertise to private food business operators. This could increase the income to this department.

A sterile no-hand washing facility should be in place at the pilot plant, to encourage students to apply Good Practices in Food Technology.

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

4.5.3 Suggestions

Students should visit a poultry slaughterhouse.

The department should develop more contracts with private companies in the FH/FT sector.

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

Within the Curriculum 2010 1st and 2nd year students may choose 1 elective subject each year.

In addition, agreements with outside bodies allow practical activities to be carried out in various professional sectors such as small animal and large animal veterinary clinics, research centres, food control and food industry. Students may participate in these external centres on a voluntary basis during holidays. These activities are being recognised as free chosen credits. Students working at these sites are supervised by a work-practice tutor and an academic tutor (from the Establishment); their work is assessed by means of a report presented by the student.

Undergraduate students in the core subjects may also perform clinical activity work at the VTH on a voluntary basis, even at weekends and during vacations; their work is coordinated by the VTH itself.

The Curriculum does not provide tracking. Hence, there is an overall equal competence at the end of the study.

4.6.2 Comments

The number of electives is limited and restricted to the first and second year of the Curriculum.

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

4.6.3 Suggestions

It is suggested to extend the number of electives and provide such opportunities also in later years.

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

5.1.1 Findings

The Establishment has the following pedagogic policy: "learning-oriented student-centred approaches".

The following teaching methods are used:

1) Theoretical classes: These are in the form of lectures (i.e. lectures, explanations, demonstrations) in two groups of 60-80 students, and seminars to large (max. 60) or small (min. 20) groups, which represent supervised sessions with “shared input” (students, teachers, experts...).

The reason for the split of the class into 2 for lectures is that this is a University requirement (75 students is the maximum for a lecture). Furthermore, there is a University rule that student groups should not be smaller than 20. Since this is not appropriate for animal work (necropsies, physiology, clinical work etc.), the groups are often much smaller (partly <10).

2) Self-directed learning (not face-to-face): These are either tutored work (group study/work in preparation of, for example, seminars, research projects, to collect and analyse data, or independent activity (self study). In general, this accounts for a small proportion of a module (see Table 4.4).

3) Practical classes: These are defined as:

a) Laboratory and desk-based work: Classroom practicals (without handling of animals, organs, products or other objects) in groups of 24-60 students (paperwork based; i.e. problems, clinical case studies, diagnostic analysis); Laboratory practicals (microscope practice, lab experiments in physiology, biochemistry, pharmacology, pharmacy, therapeutics...) in groups of 15-20 students (depending on size of room); Computer work (15-20 students, depending on the number of available computers);

b) Non-clinical animal work: practicals with both healthy live and dead animals (cover breeding and husbandry, ante mortem and post mortem examination, dissection, necropsy, visits to farms and food/feed processing industries), max. 20 students per group;

c) Clinical work: work with live animals and diagnostic samples (10 (clinics) - 15 students per group);

d) External practice: extramural work, also visits to companies - group size varies.

The Establishment uses e-learning (Moodle-based virtual campus ‘Agora’, intranet) throughout. This is used to provide lecture files, notes, other teaching material, for problem-based learning (case scenarios, for example in Genetics) and for tutorials. The students have access to 25 computers in one dedicated computer room (also used for computer based practical work), laptops for rent (library) and WIFI throughout all facilities.

The following written learning/teaching materials are listed:

- Textbooks (library): a basic list is provided by teachers to the students for each module. This is mainly in Spanish (often a translation of English books); some books are also in English;

- Scripts (summary of programme content), practical manuals, website links (for photocopying or on Virtual Campus).

Collaboration exists with a wide range of bodies, i.e. small animal and large animal clinics, research centres, food control bodies, all without any financial compensation for their contribution. These are attended during the obligatory extramural fieldwork (estancias) and as free chosen credits during the free time of the students. The training is supervised by a work-practice tutor and an academic tutor from the Establishment (assessed on the basis of an internship report).

The Spanish veterinary schools work according to a nation-wide “White Paper on the Veterinary Degree”, which provides learning objectives of the curriculum and marks graded to competences. It follows the EU directive for veterinary studies. Learning objectives are provided for each module, both generic and specific.

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Specific competencies are split into those that require knowledge, those that require handling skills, and those that require certain attitudes, defined as:

- 1) Disciplinary competences: theoretical knowledge;
- 2) Professional competences: ‘collection of intellectual abilities and manual dexterity’;
- 3) Academic competences: attitudes and values.

Based on these competencies, an integrated training is considered as essential, to provide the market and society with a suitable trained professional. Based on the ‘White Paper on the Veterinary Degree’, the following groups of competencies including the main competencies are listed: General, Specifics (Knowledge, Skills and Abilities, Attitudes and Values). Based on these competency lists, specific learning objectives are prepared for each subject (approval by Teaching Committee), and the assessment of each subject must ensure that it tests that these objectives are reached (see above, examples for Anatomy and Pathology).

According to the SER, evidence of learning is ensured by the fact that the candidates passed the assessment for each subject. A log-book or similar is not mentioned that would monitor clinical performance/skills.

The Establishment would appreciate an objective assessment of day-one skills (possibly through external examiners), but this is not possible under the current Spanish legislation. Also, there is no stringent assessment approach to ensure that the day-one skills are in place.

In general, as stated above for the Basic Subjects, there is no system in place that stops students who failed a module to progress into the next year. However, it is possible that students may choose to only attend a limited number of modules in a given year (for example to be able to resit failed modules from previous years). This might also be an option for students with financial limitations, since the fees vary depending on the number of modules taken.

5.1.2 Comments

None.

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

5.1.3 Suggestions

None.

5.2 EXAMINATIONS

5.2.1 Findings

Each teacher can decide how he/she will examine the students. There is a period of examination at the end of each semester, and the possibility of passing it in September for those who did not succeed.

There is a continuous assessment of knowledge during the studies, with registration of attendance at theoretical lectures, oral or written exams, performed sometimes at the computer.

Activities carried out during the year are covered in a final examination.

Practitioners involved in obligatory extramural fieldwork do not assess the students in their tutorial activities, but give their appraisal of the students in a report given to the teacher.

Students have a maximum of 20 registered semesters to successfully finalise their studies.

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With the exception of the first year when the student needs to acquire 12 credits, there is no restriction in proceeding with the studies.

Students need 150 credits to be enrolled in practical and obligatory extramural fieldwork, and 210 credits to perform the Degree Dissertation.

5.2.2 Comments

The examination scheme provides a good assessment of knowledge, however there is no general policy on examinations.

The day-one skills are not covered and registered properly in every department.

There are no external examiners.

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

5.2.3 Suggestions

It is suggested that a general organisation of the examination should be instituted, as a general framework to be followed by every department.

In particular, day-one skills should be checked and registered systematically.

5.3 STUDENT WELFARE

5.3.1 Findings

The Establishment has a risk assessment policy which covers general risks in all faculties.

Students are advised that rabies vaccination is a sensible precaution and that they are vaccinated against tetanus. A public health service is available on campus which could supply psychological support also.

The University has an ombudswoman (who is a member of the Establishment) to whom students can refer in times of need. The presence of this support does not seem to be widely appreciated by the students. The Dean is also available to assist with problems.

Student accommodation is available on campus and there are multiple sport and fitness facilities available. For those who play top-level sport, the lessons and practical schedules are adapted so they can properly train. Music, Film, theatre and the visual arts are catered for also on campus.

It is stated that support is available for students with financial difficulties. Students have a defence union which will assist with scholastic issues.

Students automatically are covered by student insurance which can be extended to cover them on placements for an extra fee of 19€ per year.

There is a Centre for employment information and guidance.

There is no specific teaching of biosecurity measures. Students are reminded of the necessary measures at the beginning of each laboratory practice and a summary book is available in the classrooms.

Students feel they have enough time for extra curricular activities such as sport or music. For those who play top-level sport, the lessons and practical schedules are adapted so they can properly train.

Students are satisfied with the restaurant, they think the ratio quality/price is good, the staff are helpful, the restaurant convivial and the opening hours appropriate. They appreciate that they can buy a card allowing 20 meals at 4,5€ each.

The classrooms are comfortable and they always can find a place to sit.

Students feel good in their meeting room; they think it is friendly and practical.

There is no career guidance given to students who are graduating.

5.3.2 Comments

None.

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

5.3.3 Suggestions

None.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

The Establishment is located on the Campus Vegazana of the University (together with 13 other centres), which is located 2 km outside the city centre and within easy reach by foot, bus and car. The Establishment, which was the third that was moved to the Campus from the city centre, has dedicated buildings that are located close to each other:

1) Main building (with administration, class rooms, library, departments with dedicated labs, necropsy and dissection room, some surgery facilities (now mainly for research) and a student associations office. The building dates from 1982 and has > 15.000 m².

The building including lecture halls, library, dissection room, post mortem room, laboratories and all other rooms, such as sanitary facilities and offices is in the original state, but fully functional, with updated equipment, i.e. adequate facilities. It also includes the part of the building that was previously the VTH (currently used for research, some teaching and routine examinations, such as hip dysplasia screening).

The post mortem room that is currently used for diagnostic purposes and the training of students is functional, but inappropriate for gross post mortem examinations of large animals. There is no hoist and large animal necropsy table in place.

2) VTH: with small and large animal consultation, examination and hospitalisation areas, a separate infectious disease (small and large animals) consultation and hospitalisation area, and a fully furnished post mortem room with a hoist for large animals and a hydraulic large animal necropsy table (not currently in use; 4.370 m²). Appropriate male and female changing facilities including showers are included. This facility is currently not used due to minor construction problems (incorrect floor slopes for appropriate drainage, non-functional waste water collection system etc.).

3) Teaching Farm (with facilities for experimental work with dogs, ruminants and aquaculture): This is the third dedicated facility which is located outside the city (1,5 km distance to the Establishment: 130.000 m²). The students are transported to the farm by minibus, but can also walk or take a bike. Like the main building, the buildings on site are from the early 1980s: they are in the original state, but fully functional.

General Campus facilities also used by students (and staff) from the Establishment are as follows:

- Office building next to the main building in which central services used by the Establishment are available. There are printing and photocopying services, stationary, student offices (incl. international relations, housing services...);
- Canteen close to the main building (full menu for 4-6€ for students and staff);
- Campus Health Service (appr. 200m): general service, not restricted to the University;
- Green Office: e.g. offer for free bike rental to move between farm and Campus.

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In addition, the Establishment shares several facilities for research and teaching with others: Animal house, Institute of Stockbreeding Development, Institute of Molecular Biology, Genomics and Proteomics, Food Science and Technology Institute, Instrumental Technology Laboratory, Central library.

The housing of normal animals for teaching purposes is provided at the Farm, in an Animal House (housing of mice, rats, guinea pigs, rabbits and fish (trout, zebra fish)) and in the VTH building (some beagles kept for practical training and research). The farm is owned by the Establishment, but managed by a private company and has space for 50 dairy cows, 3.400 sheep, 60 sows, 440 growing pigs and 5.500 broilers. Facilities are there for housing of the animals, plus examination rooms and a small laboratory. Breeding horses (6 stallion boxes) and mares (12 boxes) can also be housed there.

Apart from the Teaching Farm, the Establishment has a dedicated Animal House on the Vegazana Campus for rodents, lagomorphs and fish, and an Animal House on the Farm for dogs, ruminants and aquaculture.

Teaching facilities are located in the main building and the hospital, with small and large animals consulting rooms, 9 lecture halls (min. 64, max. 266 places; fully equipped electronically, with weekly time tables displayed on the doors), 21 rooms for group work (min. 5, max. 30 places), laboratories and other facilities for practical work (min. 3, max. 40 places).

Concerning health and safety measures, there are signs to indicate the fire exits and fire extinguishers; these are evenly distributed throughout the buildings. Appropriate health and safety equipment is present in all laboratories, i.e. eyewashes and showers in the corridor immediately adjacent to the labs. H&S instructions and equipment and warning signs are displayed in all rooms, wherever appropriate. Waste is collected and discarded as appropriate (see also below). This fulfils all the necessary requirements.

At the start of practical sessions for each subject, students receive written information on the risks associated with the material they are handling.

The following applies:

- compulsory use of the lab coat in the labs;
- compulsory use of protective glasses and gloves when appropriate;
- compulsory use of “plastic coats, hoses and masks” and walk through disinfectant pool upon entry and exit in the dissection room.

The Diagnostic labs in the main building comprise:

- post mortem room and histopathology lab (incl. immunohistopathology);
- parasitology, microbiology (incl. bacterial culture and PCR);
- serology, molecular genetics, pharmacology, toxicology, analysis of raw material (food matter)
- in hospital: clinical lab (haematology, biochemistry), reproduction lab;
- Diagnostic services: laboratory (cellular, blood, antibiogrammes, cytology...) and imaging (echography, endoscopy, radiology, MIR) diagnosis.

The Clinical support services comprise:

- Small animal unit: internal medicine, specialised services (cardiology, ophthalmology etc.), surgery, reproduction, spaying/neutering services for local shelters;
- Large animal unit: internal medicine, surgery, reproduction;
- Reproduction services;
- Other services: diagnostic imaging, infectious disease service, necropsy area (currently not in use), medication reservoir.

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The Establishment has access to a private slaughterhouse 5 km from the Establishment (currently under refurbishment), for slaughtering cattle and horses (2011: 13.591 cattle, 795 horses).

The Establishment has a pilot plant for food processing and the manufacture of cheese and sausages (in the main building), canned vegetables and alcoholic beverages. It cooperates with food processing companies and is also used for teaching the Food Science and Technology degree.

Carcases, organs and organic matter are kept refrigerated after necropsy and periodically collected by a private corpse destruction and cremation plant (minimum 1 collection/week). Fluids are collected and stored in special containers, then collected by a private company. Chemical and biological residues are collected in special containers, then collected by a private company.

Subject to financial support, part of the main building will be converted into small rooms for group teaching. This will allow the parallel teaching of the veterinary degree and food sciences and technology degrees in the Establishment. Furthermore, it will provide more space for some departments.

6.1.2 Comments

Transport from the main building to the Teaching Farm is appropriate.

The new post mortem room will be more appropriate for large animal necropsies when it becomes available, as it has a hoist. This would allow staff to undertake large animal necropsies on a suitable (hydraulic) table instead of on the floor, as it is current practice. Also, appropriate changing facilities including showers would be available.

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

6.1.3 Suggestions

The Establishment is strongly encouraged to update the post mortem room facilities, by either amending the currently used room for appropriate large animal necropsies by the installation of a hoist), or making the new post mortem room in the VTH functional (correction of the floor with appropriate drainage and access to the waste water collection system of the old post-mortem room).

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

The VTH is the centre of the clinical activities on the campus. The VTH was closed from Feb – July 2013 for economic reasons, and was re-opened in September 2013. As part of the VTH, the small animals' hospitalisation area and infectious animals' areas were reconstructed in 2014. In addition, an exercise area for hospitalised dogs has been made.

Both small and large animal facilities are in the same building, and they share the clinical laboratory (haematology, biochemistry, clinical pathology), the laboratory of the reproduction service, and the diagnostic imaging unit. The latter unit is equipped for X-rays, ultrasound, and MRI. Moreover, this unit has an endoscopy room.

In the clinical services area, the small and exotic (S&E) animals unit share consulting rooms for these species, but there is a separate room for animals from shelters. Apart from rooms for general consultation there are also specialist consultation rooms. This S&E unit also has separate hospitalisation facilities for the various species, and its own Intensive Care Unit and surgery.

The infectious disease facility has a separate consultation room, a laboratory and hospitalisation area within the VTH. The necropsy unit is also incorporated in the small animals' area, but not

functional at the moment. Infectious cases identified in advance are admitted via a separate entrance. If an infectious disease is diagnosed in the regular consultation rooms, disinfection schedules are available. Routing in and out the isolation unit is correct.

The clinical services area houses an equine, food production and wild animals unit with examination rooms, separate hospitalisation areas for equines and small ruminants, and a surgical area with an Intensive Care unit. The Reproduction service in the large animal unit has a breeding stallion facility. Last year this facility was not used due to a significantly lower numbers of horses (instead deep-frozen semen was used).

Patient records are written reports, which are centrally filed.

The VTH is open during working hours. In general, patients are seen by appointment and mainly consist of first-appointment cases; the number of referrals is limited. The VTH runs a 24-hr-emergency service for small and large animals (with a postgraduate resident, a 4th and 5th year student and one professor on call); there is no mobile clinic associated with the Obstetrics unit (see also 4.4).

6.2.2 Comments

Essentially, the VTH is adequately built and sufficiently equipped to see animal patients and is species-specifically organised.

The Diagnostic Imaging Unit has no CT-scan.

Controlled drugs are not stored according to standards of good clinical practice/good pharmacy practice.

There is no computerised clinical database.

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

6.2.3 Suggestions

Controlled drugs should be stored according to good clinical practice and good pharmacy practice regulations.

It is suggested that the Establishment engages a manager who will explore ways of marketing the VTH and increasing both the workload and revenue of the VTH.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

The Anatomy Department uses live farm animals provided by the Establishment farm and specimens provided from cadavers fixed in formalin though this to some extent is being replaced by frozen specimens. Radiographic interpretation is carried out on bones and joints with whole cadavers being used for teaching of small animal anatomy. There is no hoist in the old facility so large animals have to be examined in suitable portions.

The number of necropsies is listed in the SER. Numbers of food producing animals appear to be lower in 2014 than in previous years. Some animals, not included in the list, were obtained from other sources.

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This subject is taught in years 2 (General Pathological Anatomy), 4 (Special Pathological Anatomy) and 5 (Clinical Rotations: practical 2: clinic). For information, the learning objectives and learning outcomes as well as information on the exam format has been provided (as PDF file, translated to English). Information on teaching time allocation is provided in the SER.

General Pathological Anatomy teaching comprises 28h lectures, 2 necropsies (groups of 6 students; one mammal (2-4 students/necropsy; one bird (1 animal/student), histopathology practicals (16h) in the laboratory, gross pathology (show and tell, 8h) and 6h tutorial work.

Special Pathological Anatomy teaching comprises lectures/seminars (40h) and practical work (daily participation in necropsies for one week (on average 15-20 necropsies in a group of 10-12 students), gross pathology sessions on fresh and fixed organs), gross pathology show and tell as well as 5h tutorial work.

General and Special Pathological Anatomy together provide the students with on average 8.5 necropsies (>3/4 ruminants and pigs, 1/4 small animals, no horses). This is complemented by the cases that the students see in their clinical rotations in year 5, in groups of 8-12 students with 1 professor; this comprises necropsies of clinical cases, daily gross pathology meetings, histopathology and report writing.

The caseload and practical hands-on work in pathology is appropriate. However, there is an almost complete lack of horse/equine necropsies (1/year in 2012 and 1/year 2013).

The carcasses are handled appropriately, though the lack of a hoist in the currently used post mortem room means large bovine necropsies have to be undertaken on the floor.

The necropsy changing facilities for the students are sufficient, though not optimal (no male and female changing rooms, no showers etc.). The waste as well as waste water management (containment tank) is appropriate.

Production animals on the Establishment farm are listed in the SER. There is access to a Teaching Farm, other farms with which the Establishment has an agreement and a fish farm.

Students have access to a local slaughterhouse (bovines, ovines and equids). Pig, poultry and rabbit slaughterhouses are also visited while food technology teaching takes place in the Establishment

The VTH is closed for one week in December and three weeks in August but otherwise offers a service which includes an emergency service 24/7.

Stallions in the dedicated breeding station were not available in 2013, the result of national economic difficulties. Frozen semen had to be used. This situation will not alter in the immediate future.

The number of horses (70) is adequate and although exposure to food producing animals at the VTH is low, it is compensated by consultations seen during extra mural practice.

The number of animals received for examination are listed in the SER. The number of companion animals received for consultation and hospitalisation is increasing but still very low (699 dogs, 120 cats and 71 exotics). 13% of small animal consultations are referrals of which 70% are related to MRI scanning and orthopaedic surgery and 30% to ophthalmology. The animal shelter provides 11% of cases which includes 72 dog/cat neutering surgeries. Consequently groups of students examining patients in the consulting room may be large and actual hands-on experience is restricted. Similarly hands-on experience in surgical procedures is limited.

The VTH does not have a CT scanner. There is no parenteral chemotherapy carried out although there are protocols in place, should it occur.

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Patient records are hand written by students and overseen by a resident. All material relevant to a case is kept in a numbered envelope

7.2 Comments

The Establishment must increase the number of small animals seen at the VTH to provide an adequate amount of teaching material for the students and sufficient cases to attract either staff with Diplomate qualifications or to encourage staff members to train for European Diplomas in their subjects.

In the team's opinion, the requirements regarding Animals and Teaching Material of Animal Origin as they are laid down in Annex I of the SOP are not met, because of insufficient caseload in the VTH and insufficient number of equine necropsies.

7.3 Suggestions

None.

8 LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

The Veterinary Library is a section of the Library for Nature and Health Sciences of the University of León and has a total usable area of 728m². It is located in the main building of the Establishment, provides 200 seats, 4 computers, 11 notebooks and a collection of 6,127 books on free access, 13,000 books on deposit, 6,500 PhD theses, 2,000 journals and 8 online journals. 3,5 FTE staff with an ad hoc education are devoted to the Veterinary Library.

This library is open from 8:00 am to 08:00 pm on weekdays during the teaching period, and from 08:30 am to 07:30 pm in July. The Library does not open during weekends. On holidays (Christmas, Holy Week and 15 days in August), it is closed. The library is mainly used by the students as a study room. Many of them have their own notebooks/tablets.

In addition to the Veterinary Library, a large Central Library (located close to the Establishment) and small subsidiary libraries (located in each veterinary department) are also available for the students, these last-mentioned ones providing in total 14.480 books and 961 journals. E-books (5.000) and e-journals (2.575) from ScienceDirect, Springer and Wiley are also available.

Computerised data bases are available for Veterinary Medicine (Current contents), Animal Production (CAB Abstracts) and Food Science and Technology (FSTA). Other widely used databases are also available (Scopus, Medline, PSYCinfo, JCR, etc.). The automated catalogue of the Library works through a Telnet link.

A computer room (with 20 PCs and 1 printer) is available for the veterinary students from 7:30 am to 08:00 pm., from Monday to Friday. It is also used for teaching activities. Other computer rooms and meeting rooms are available for veterinary students in other parts of the campus (but close to the Establishment).

Training in making a bibliographic search is organised in different steps, i.e. a visit to the libraries during the welcome day, a 1h course during the first year of the veterinary curriculum, a 2h course during the second year and a (not yet compulsory) 8h course during the last year, to help the student prepare for the Degree Dissertation.

Concerning e-learning, the University uses the Moodle platform and many teachers use it to support

their theoretical and/or practical teaching.

Wifi access is available in the entire campus. VPN and WAN are available for both staff and students in order to provide remote access to the Intranet from abroad.

Students are satisfied with the library opening hours, both in the Establishment and centrally. They do appreciate that the university's library is open 24/7.

They have access to many books, and those recommended by their teachers are at least available in 2 or 3 copies. They also can read books on the Internet, even from their houses. They can consult the library stock, and if a book is not available in their Establishment, it is specified in which other library it could be found.

The borrowing system is clear and fits with the students' needs. According to the colour of the sticker on the book, it can be loaned for one day, one week (this duration can be extended if the book is not requested by others), or only consulted directly in the library. Some books are also available for students in each specific unit of the Establishment.

For the final dissertation each department publishes a list of potential topics for students. If a student is interested in a particular topic that is not proposed, (s)he can submit her/his idea to the teacher, who will approve or not the project. These dissertations can be bibliographic and experimental (75% experimental in 2014-2015 academic year).

Though all the cases of VTH are stored on paper, students don't have any computerised clinical database to refer to. Students admit it would be practical to have a central online database.

8.2 Comments

The library, educational resources and IT support meet the requirements of both staff and students, although the number of veterinary e-journals and e-books could be increased.

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

8.3 Suggestions

The team strongly suggests that the Establishment develops a computerised clinical database which must be easily available for both staff and students.

9 ADMISSION & ENROLMENT

9.1 Findings

Access to the degree course in the Establishment is direct after taking the 'Baccalaureate'. The student just needs to take the University Access Test, and then obtain an average of 60% for the average mark at the Baccalaureate and 40% for the University Access Test.

There is a minimum mark, but the number of students applying for veterinary studies is higher than the number of places fixed each year by the University, e.g. 120 places for 2013/2014, with 1970 candidates.

As veterinary studies are mostly the first choice (95%) for the students, we can consider it as a major motivation to enter the Establishment.

The veterinary course lasts five years. The average duration is 6,34 years. Only 30, of a total of 110 who graduated in 2013, completed it in five years. The maximum time permitted is 10 years.

The students can retake the same subject up to six times.

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They need a minimum of 12 credits in the first academic year to stay at the Establishment.

The dropout rate is 10%, including students for whom the veterinary course was not their first choice, and students with financial difficulties.

EU and foreign students can enter the Establishment. There are also Erasmus and Amicus programmes.

9.2 Comments

The numerus clausus and the exam asked for entering the veterinary Establishment are applicable and reflect the level of knowledge needed to follow the veterinary course. The average duration of the course is 6,5 years to fulfil the 5 years curriculum. This is acceptable considering the density of lectures, practical activities, and the final dissertation.

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

9.3 Suggestions

None

10 ACADEMIC TEACHING & SUPPORT STAFF

10.1 Findings

Teaching staff is divided in tenured and non-tenured (contracted). Each department has the right to request new teaching and support staff, but the selection process is different in each case. Funding is provided by the university. Based on the number of students, practical groups and teaching credits, the teaching capacity is calculated for each discipline. Requests for new staff or replacements are decided by these figures and availability of funding. In case of approval the post is advertised. Candidates for permanent posts are required to comply with a set of nationally standardised criteria.

On staff there are 8 European College Diplomates (Animal reproduction:2, Veterinary Parasitology:1, Veterinary Pathologists:2, Porcine Health Management:1, and Veterinary Public Health:2).

Staff, specifically dealing with e.g. cardiology, ophthalmology, neurology, dermatology, internal medicine, currently have no European College specialisation diploma. They have either AVEPA accreditation (6), a diploma in a specific area organised by the Madrid University (2), or work in their chosen discipline as they have specific affinity with the subject.

Contracted external veterinarians (5) in extramural practices are selected by the Extramural Practices Committee.

Over the years (2011 versus 2014) the number of teachers has dropped from 131 to 114. The quality of teaching is considered high, and the indicators between teaching staff and undergraduate students (R1) and support staff (R5) are in accordance with the reference values. Whereas in the departments of basic sciences up to 40% of the academic staff are veterinarians, in the degree-specific departments 90% of staff have this background. The overall percentage of veterinarians within the Establishment is 70%. The other ratios (R2, R3 and R4) are also satisfactory. Support staff for the VTH (large and small animal services together) totals only 5 persons.

During recent years, the Establishment has suffered a considerable loss of staff, especially teaching staff. The average age of the teachers is particularly high (approximately 50% between 50 and 70 years of age).

10.2 Comments

Academic staff and support staff ratios are within the recommended range.

There are no permanent staff members in the small animal VTH service with a European or American College Diploma.

Senior staff positions should be advertised internationally as suggested in the SER.

The Establishment has not yet managed to create a 'teaching career' that would guarantee university teachers equal prospects for professional promotion based on pre-established criteria.

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

10.3 Suggestions

High priority should be given to renewing the teaching staff of the Establishment by recruiting young teachers with a sound academic background who can ensure the continuity of the teaching abilities of the Establishment in all its areas of expertise.

The number of support staff should be related to the number of animal consultations and would be expected to increase with the workload.

11 CONTINUING EDUCATION

11.1 Findings

Continuing Education is mentioned in the objectives - paragraph G11 on p 31 of the SER 'Keeping their knowledge, abilities and awareness of these professional skills up to date by means of a process of life-long learning'.

The Establishment has collaborated in the organisation of 11 CPD courses during the last three years but does not offer a specific continuous programme of post-graduate courses and has little collaboration with professional associations stating that the needs of professional veterinarians are unknown. Course organisation is left to individual departments or the students association.

The Establishment has no formal policy on continuing education for staff members. Some clinical staff members have qualifications from AVEPA in their special interest subjects but there is no encouragement to study for European Diplomas as the caseload is currently too small.

11.2 Comments

It does appear (possibly due to staffing difficulties or the national financial and cultural situation) that the Establishment lacks a positive attitude to Continuing Education and does not attempt to work with local veterinarians or veterinary associations to provide CE programmes on an ongoing basis.

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

11.3 Suggestions

The Establishment should contact local Veterinary Chambers or national associations with a view to offering facilities or providing speakers and organising CPD events to be held at the University which would advertise the expertise of the staff members to local / regional veterinarians.

The Establishment (with other veterinary Establishments in Spain) should consider lobbying the appropriate body to ensure that CPD is a requirement for all Spanish Veterinarians enabling the

standards of the graduate veterinarian to be maintained. This is a normal requirement in other European countries.

The Establishment should appoint a person responsible for developing these activities and acting as liaison with external veterinarians or associations.

12 POSTGRADUATE EDUCATION

12.1 Findings

The Establishment offers two types of postgraduate research training (PGRT) for veterinarians, a Master in Research (MRes) and a PhD programme.

A 1-year MRes in Veterinary and Food Science and Technology has been in place since 2009/2010, with 20-30 students per year. The programme is organised by the Master Commission of the Establishment.

Other Masters programmes are organised and provided by Departments associated with the Establishment (e.g. Dept. of Biomedical Sciences, Pharmacology: Masters of Innovation in Biomedical & Health Sciences, Masters on Research in Medicine). Some are available to veterinary graduates, but are generally not attended by these graduates.

The Establishment organised its own official 'PhD in Medicine, Animal Health and Production and Food Science' programme in 2009. It came from the union of 5 doctorate programmes (Animal Medicine and Surgery, Ovine Production and Health, Animal Health and Reproduction, Ruminant Feeding, Strategies for the Improvement and Quality Control in Food of Animal Origin) offered by 4 Departments, leading to the qualification of 'Mención de Calidad'. Prior to that, the Establishment offered a PhD programme in 5 topics. The PhD projects in this programme are expected to last 4-5 years.

In the 2013/14 academic year, the programme is changing slightly again, to be adapted to the new Spanish legislation ('PhD Programme on Veterinary and Food Sciences').

The programme is organised by the Doctorate Commission of the Establishment, whereas admission is administered by the Doctorate Commission of the Establishment and the Doctorate Commission of the University of León.

Of the PhD students in the old programme (2007-2009), 45/85 (53 %) have graduated. Since the academic year 2011/12, 34 PhD projects have been started in full time projects and another 2 as part-time projects. No information has been provided on the number and rate of completion of PhD projects that started between 2009 and 2011, but according to new information (not in the SER), 18-20 PhD students graduate per year.

In addition to this official PhD programme of the Establishment, Departments associated with the Establishment (e.g. Dept. of Biomedical Sciences: PhD in Biomedicine & Health Sciences, PhD in Applied Research in the Health Sciences) offer their own courses. It is a multicentre programme offered by the University of León, the University of Las Palmas de Gran Canaria and the University of Trás-os-Montes e Alto Douro (Portugal)). These are available to veterinary graduates.

Admission to the Establishment's PhD programme is possible when specific requirements are fulfilled: MRes in Veterinary Science and Food Technology (University of León) or comparative Masters degree or equivalent to achieve 300 ECTS. However, in the case of the veterinary graduates from the actual curriculum, which is a 300 ECTS Degree, admission just requires attending to the 'Introduction to Research' of 12 ECTS of the above Masters degree offered by the Establishment. The other PhD programmes have similar requirements.

Completion of the PhD requires a PhD dissertation (in a scientific language, for example Spanish or English) with a minimum of 25 pages. As a compendium of publications, it requires at least 3 publications or book chapters (with a minimum of two as first author)

Funding of PhD students is through grants, for example from the University of León, the County Council, the Regional Government, and the Ministry of Education. There has been an increase in the number of available grants over the last few years.

The Establishment comments that the number of PhD students is relatively low, but also states that while a PhD degree is an essential requirement for an academic career, there is a lack of available academic positions for these candidates.

Since re-opening the VTH, the Establishment has established a 2-year 'residency' for new graduates (currently 9 posts). These residents rotate through the different areas of the VTH (administration, internal medicine, surgery, hospitalisation, night duty, weekend duty). After the first year, they obtain a Diploma of the University of León (Expert on Veterinary Clinic Hospital; 40 ECTS). During the second year, they can specialise and obtain a Masters in Small and Exotic Animals Clinic or a Masters in Equine Clinic (each 68 ECTS).

Eight members of staff are Diplomates of a European College. The Establishment is a registered residency training centre of the European College of Veterinary Pathologists (ECVP) with currently two ECVP-registered residents (one is to sit the ECVP certifying examination in 2015, the second one has just started on the programme). The residency is part of a >5 year combined PhD/residency programme.

12.2 Comments

While the Establishment has members of staff who are diplomates of 5 European Colleges (Animal Reproduction, Veterinary Pathologists, Veterinary Public Health, Porcine Health Management, Parasitology), only one residency programme has been established. In some disciplines, however, the available material would allow a residency programme to be commenced.

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

12.3 Suggestions

The Establishment should consider establishing European College recognised residency training programmes in those disciplines where it has strengths, and where members of staff are Diplomates (for example Veterinary Public Health, and Porcine Health Management).

13 RESEARCH

13.1 Findings

Specific research objectives and activities are not given in the SER. However all the requested information was provided on site.

All academic staff has a PhD and 60 of them are principal investigators of a scientific project funded by either a public (local, regional, national, EU) or private body. The research is performed in one of the veterinary departments or in one of the University research centres which are well equipped and recruit scientists from several departments or faculties. Structured collaborations do exist with National, European and extra-European universities and these involve some students.

Around 60 papers/year are published in peer reviewed international scientific journals devoted to Veterinary Medicine, Animal Production or Food Hygiene. During the last decade, three start-up

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companies have been created and 17 patents have been granted from research done in the Establishment.

A Degree Dissertation is now officially included in the curriculum, i.e. 6 ECTS in the 5th year. Each student has a tutor and most of them (75%) undertake experimental work in one of the research laboratories. For the remaining students, the dissertation is based only on a bibliographical study.

Around 80 graduate students are registered at a PhD programme linked to Veterinary Medicine, Animal Production or Food Hygiene and around 15 PhD are officially granted every year.

13.2 Comments

There is clear evidence that a research-based education and an initiation to the concept of scientific research is provided to undergraduate students. Most teachers have a PhD and are involved in a research programme. The Degree Dissertation is compulsory and includes experimental work as the major component. Stage courses in a research lab can be organised for undergraduate students on a voluntary basis.

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

13.3 Suggestions

None.

EXECUTIVE SUMMARY

The Veterinary Faculty of León (named here ‘the Establishment’) was founded in 1852 and has been part of the University of León since 1979. It was visited by EAEVE in 2001 and was not approved.

Although its length was excessive, the SER was accurate and well written. Some missing data was provided before or during the visitation.

The visitation was well prepared and organised and the Liaison Officer did a great job in adapting the schedule of the visitation, in searching for the requested information and organising the relevant meetings.

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

- research-based education;
- teaching farm;
- training in Food Hygiene, Food Technology and Animal Production;
- most staff & students are proud of their university.

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

- lack of Establishment’s strategy for solving its identified weaknesses;
- insufficient profitability of the clinical and other services (diagnostic, expert, research, ..);
- insufficient caseload in the VTH and equine necropsies;
- lack of business plan for the development and management of the VTH;
- storage of controlled drugs not compliant with Good Pharmacy/Clinical Practices;
- lack of real 24h ambulatory clinic in food-producing animals;
- insufficient compulsory hands-on clinical training in all species;
- low number of support staff in the VTH;
- lack of systematic evaluation of the day-one skills and competences;
- lack of computerised clinical database;
- lack of recruitment of young teaching staff during the last decade;
- insufficient number of European College registered residency programmes.

The potential major deficiencies suggested by the team are:

- lack of strategic plan for the Establishment and especially for its VTH;
- insufficiency of compulsory hands-on clinical training and insufficient exposure of undergraduate students to emergency cases;
- insufficient caseload in the VTH and insufficient number of equine necropsies.

Annex 1 Indicators (Ratios)

					GUIDELINES
R1:	$\frac{\text{n}^\circ \text{ undergraduate veterinary students}}{\text{n}^\circ \text{ total academic FTE in veterinary training}}$	=	$\frac{611}{107.05}$	=	5.71 <8.381
					GUIDELINES
R2:	$\frac{\text{n}^\circ \text{ undergraduate students}}{\text{n}^\circ \text{ FTE total academic staff}}$	=	$\frac{611}{167.05}$	=	3.66 <9.377
					GUIDELINES
R3:	$\frac{\text{n}^\circ \text{ undergraduate veterinary students}}{\text{n}^\circ \text{ VS FTE in veterinary training}}$	=	$\frac{611}{75}$	=	8.15 <11.057
					GUIDELINES
R4:	$\frac{\text{n}^\circ \text{ of students graduating annually}}{\text{n}^\circ \text{ VS FTE in veterinary training}}$	=	$\frac{104}{75}$	=	1.39 <2.070
					GUIDELINES
R5:	$\frac{\text{n}^\circ \text{ total FTE support staff in veterinary training}}{\text{n}^\circ \text{ total FTE academic staff in veterinary training}}$	=	$\frac{60}{107.05}$	=	0.56 0.505-1.907
					GUIDELINES
R6:	$\frac{\text{supervised practical training}}{\text{theoretical training}}$	=	$\frac{1422}{1612,5}$	=	0.881 >0.602
					GUIDELINES
R7:	$\frac{\text{laboratory \& non clinical animal work}}{\text{clinical work}}$	=	$\frac{924.5}{497.5}$	=	1.858 <1.809
					GUIDELINES
R8:	$\frac{\text{teaching load}}{\text{self directed learning}}$	=	$\frac{3227}{121}$	=	26.67 2.59-46.60
					GUIDELINES
R9:	$\frac{\text{total n}^\circ \text{ hours vet curriculum}}{\text{Total n}^\circ \text{ hours FH/VPH}}$	=	$\frac{3227}{328}$	=	9.838 8.86-31.77
					GUIDELINES
R10:	$\frac{\text{hours obligatory extramural work in veterinary inspection}}{\text{Total n}^\circ \text{ hours FH/VPH}}$	=	$\frac{55}{328}$	=	0.168 0.074-0.556

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					GUIDELINES
R11:	$\frac{\text{n}^\circ \text{ of food-producing animals seen at the Establishment}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{15}{104} = \mathbf{0.144}$				>0.758
					GUIDELINES
R12:	$\frac{\text{n}^\circ \text{ of individual food-animals consultations outside the Establishment}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{3481}{104} = \mathbf{33.47}$				>8.325
					GUIDELINES
R13:	$\frac{\text{n}^\circ \text{ of herd health visits}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{35}{104} = \mathbf{0.335}$				>0.326
					GUIDELINES
R14:	$\frac{\text{n}^\circ \text{ of equine cases}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{365}{104} = \mathbf{3.51}$				>2.700
					GUIDELINES
R15:	$\frac{\text{n}^\circ \text{ of poultry/rabbit cases}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{9.67}{104} = \mathbf{0.093}$				>0.407
					GUIDELINES
R16:	$\frac{\text{n}^\circ. \text{ of companion animals seen at Establishment}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{1310}{104} = \mathbf{12.59}$				>48.06
					GUIDELINES
R17:	$\frac{\text{poultry (flocks)/rabbits (production units) seen}}{\text{n}^\circ. \text{ of students graduating annually}} = \frac{6}{104} = \mathbf{0.057}$				>0.035
					GUIDELINES
R18:	$\frac{\text{n}^\circ \text{ necropsies of food producing animals + equines}}{\text{No. of students graduating annually}} = \frac{354}{104} = \mathbf{3.40}$				>1.036
					GUIDELINES
R19:	$\frac{\text{n}^\circ \text{ necropsies of poultry/rabbits}}{\text{No. of students graduating annually}} = \frac{196}{104} = \mathbf{1.88}$				>0.601
					GUIDELINES
R20:	$\frac{\text{n}^\circ \text{ necropsies of companion animals}}{\text{No. of students graduating annually}} = \frac{123}{104} = \mathbf{1.18}$				>1.589

Annex 2 Decision of ECOVE

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

1. Lack of strategic plan for the Establishment and especially for its VTH
2. Insufficient case load in all species and as a consequence, insufficient compulsory hands-on clinical training
3. Insufficient exposure to emergency cases

The Committee also notes from the SER that the number of equine necropsy is extremely low.

The Faculty of Veterinary Medicine, University of León is classified after Stage 1 evaluation as holding the status of: **NON APPROVAL**.