

SER

**SELF
EVALUATION
REPORT 2020**

UNIVERSITY OF CÓRDOBA FACULTY OF VETERINARY MEDICINE

EAEVE EVALUATION VISIT

EAEVE
EVALUATION VISIT 2020
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UNIVERSIDAD D CORDOBA



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An aerial photograph of a university campus, likely the University of Utah, showing a large complex of buildings, a prominent road interchange, and surrounding hills. The image is overlaid with a dark blue tint. The word "Introduction" is written in large, white, sans-serif font across the center of the image.

Introduction



Brief History of the Establishment and of its Previous ESVE Visitation

The Faculty of Veterinary Medicine of the University of Cordoba (FAVEUCO) began as a Subaltern School of Veterinary Medicine, by Royal Order of 19 August 1847. Later, it is elevated to the rank of Special School (1871) and Superior (1912), granting the title of Veterinarian and examining for the obtaining of the professional qualification of "Albeitar". A new legal order, of 1943, constitutes it already as Faculty, being of 1944 the first plan of studies that granted the Degree of Veterinary by the Faculty of Cordoba. Several study plans followed, of six and five years duration, with and without specialties, until, in 1996, the study plans were adapted to the requirements emanating from the EU directive on the training of the veterinary profession (Dir. 1027/78), considering also the professional regulation that included the Directive 2005/36/CE, relative to the recognition of Professional Qualifications of the Veterinarian, and the Law 44/2003 (BOE of 22/11/2003) of Regulation of Health Professions. The Veterinary Degree curriculum that is currently studied began to be taught in the 2010-2011 academic year and is regulated by European Directive 36/2005, partially modified by Directive 55/2013 and by current national legislation (Order ECI/333/2008).

Initially, the Faculty depended on the University of Seville, until 1972 when the University of Cordoba was created, in which it constituted, together with the Higher School of Agricultural Engineers (ETSIAM) and the Faculty of Medicine, the generating nucleus of a University oriented to Agrifood issues.

For many years, the FAVEUCO has been one of the four classical Faculties in Spain, together with Madrid, Zaragoza and León, the only ones existing until 1983. As new Faculties were created, until the 13 that currently are, FAVEUCO has been maintained with remarkable educational solvency, standing between the fourth (<http://www.shanghairanking.com/ShanghaiRanking-Subject-Rankings/veterinary-sciences.html>) and the second position (<https://www.u-ranking.es/en/index2.php>) of the Spanish Faculties in the different rankings published.

The FAVEUCO has been evaluated on several occasions within the framework of the ESEVT of the European Association of Veterinary Education Institutions (EAEVE). The last visit took place in 2009, in which the Committee of Experts considered that, despite some minor deficiencies, the Faculty met the established quality criteria and recommended its consideration as "Approved" to ECOVE, the European Committee on Veterinary Education.

Main features of the Establishment

FAVEUCO is the only veterinary training centre in Andalusia, an autonomous community in the south of Spain made up of eight provinces and more than eight million inhabitants, in which farming is, together with tourism, the most important productive sector.

For this reason, FAVEUCO maintains an essential position in the autonomous community, with excellent social integration and a deep and reliable connection with authorities and stakeholders, including companies, private professional associations and public entities.

It is integrated into a medium-sized university (20,000 students), with notable research output and an excellent position in international rankings in specific disciplines (Agrifood and Energy science & Engineering; <https://www.u-ranking.es/analisis.php>). At the UCO, FAVEUCO is located in an Agrifood Campus (Campus Rabanales) 7 km from the city, structured in a departmental model with multiple services and shared facilities.

To maintain the required quality standards, according to the availability of resources and according to the indications of its quality system, a limited number of places are offered annually (150), although the demand remains much higher (in the academic year 2018/2019, 832 applications). Consequently, the students who enter the degree have a high academic qualification and can be considered highly motivated for the profession.

FAVEUCO's academic staff is 174 professors distributed in 11 University Departments and integrated in 34 research groups, in general with a high level of scientific production and with a remarkable activity of services and knowledge transfer to society.

Brief summary of Main Developments since the last ESEVT Visitation

FAVEUCO has undergone significant changes since EAEVE's last visit in 2009, many of them in response to the recommendations made during this visit, which have affected the curriculum, organisation, management, buildings, and equipment. In the different chapters of the SER, reference is made to them, but the most outstanding thing is:

- The implementation of a new curriculum, with the modification of the title, going from "Licenciatura" to "Grado" in Veterinary Medicine. This has implied a new teaching plan, with a relevant variation on the previous visit. The contents have been restructured; teaching has been increased in small groups and practical activities, an external practical train-

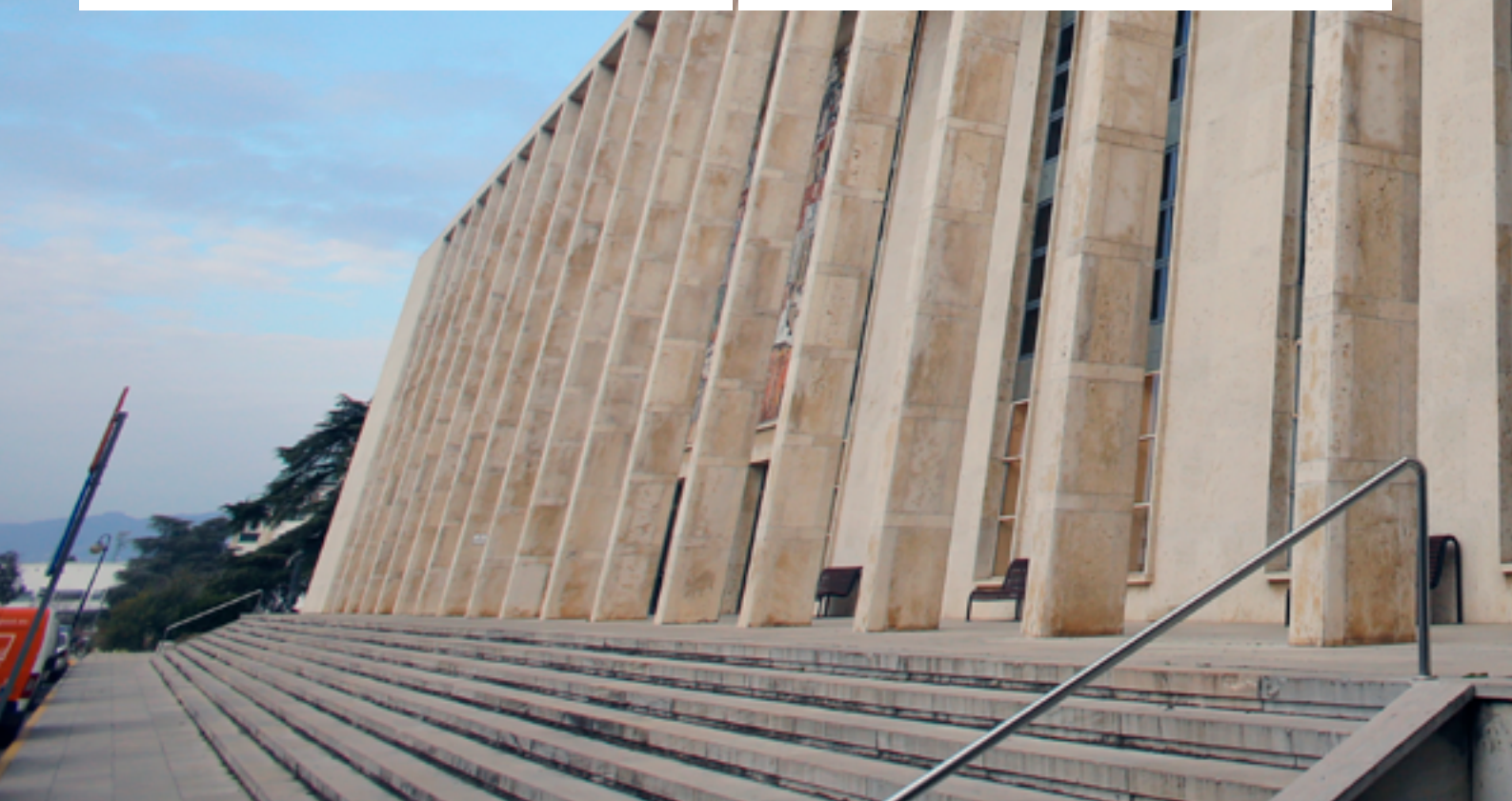
ing period has been included, and an Dissertation Thesis.

- The creation of the Teaching Guides of the subjects and their reflection in the Moodle virtual platform has allowed better monitoring and recording of the practical activities and competences acquired during the degree.
- The Quality Assurance System has been revised and consolidated, according to the indications of EAEVE and the local academic authorities' own quality agency (AAC-DEVA), in line with SGE and ENQA standards.
- In the main facilities, such as the Veterinary Teaching Hospital (VTH) and Rabanales University Teaching Farm (RUTF) the necessary reforms and modifications have been carried out: Equine Sports Medicine Centre (CEMEDE) has been created and equipped; there is a new Skills Lab in the HCV and new spaces for birds in the RUTF.
- The staff of the Centre has been extended and renewed, maintaining a high percentage of veterinarians and doctors. The number of European Diplomates remains stable.
- The Veterinary Degree, which was initially verified by the the National Quality Assessment and Accreditation Agency ANECA (ENQA member), seven years after its implementation (in 2017), has been evaluated by the Andalusian Quality Agency (ACC-DEVA) and has renewed its accreditation.

Major problems encountered by the Establishment

Some of the issues detailed below can be considered in a certain way structural, depending on the institutional organisation of the UCO. To a certain extent, they were already mentioned in the SER of the previous visit and to a large extent they remain with few variations:

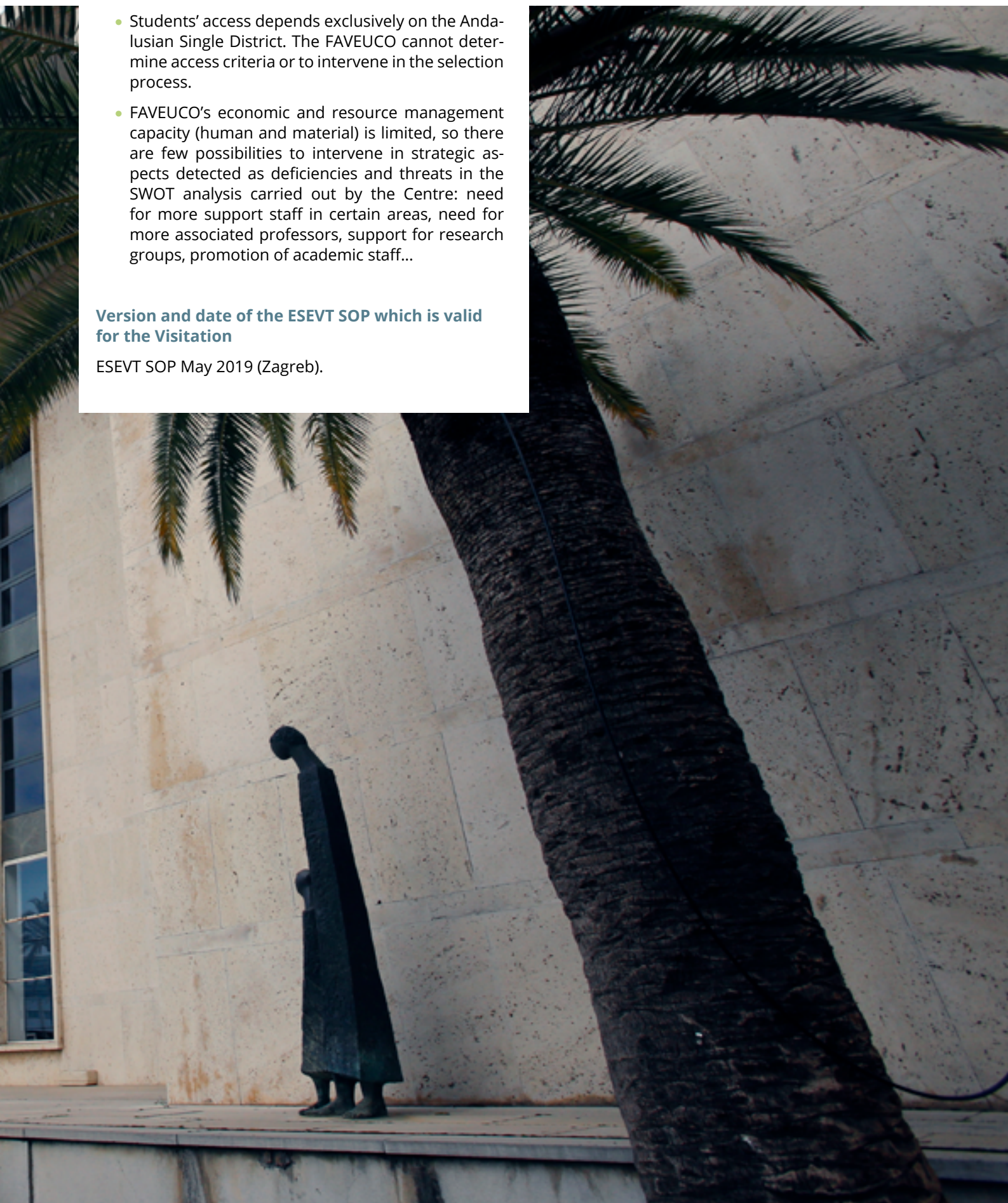
- The Campus structure provides advantages for the FAVEUCO, in terms of optimisation and availability of resources; however, it has harmed some aspects. It has blurred the corporate identity of the Faculty, both among staff and students, and has hindered cooperation and coordination between the Faculty's Departments and Research Groups.
- Since the University directly manages the resources of the Campus, many services and centres (VTF, Animal Experimentation Service SADEX) are not structurally responsible to the Faculty of Veterinary Medicine; therefore, it is more difficult to obtain funding and carry out veterinary training activities in these centres.
- The Veterinary Clinical Hospital does not depend exclusively on FAVEUCO but is integrated into the UCO Business Corporation. Representatives of the FAVEUCO participate in the management and take care of its direction, but there is no single dependency of the FAVEUCO. This situation has led to difficulties in reconciling the demands of teaching and clinical activity, as well as some tension with local veterinary clinics.



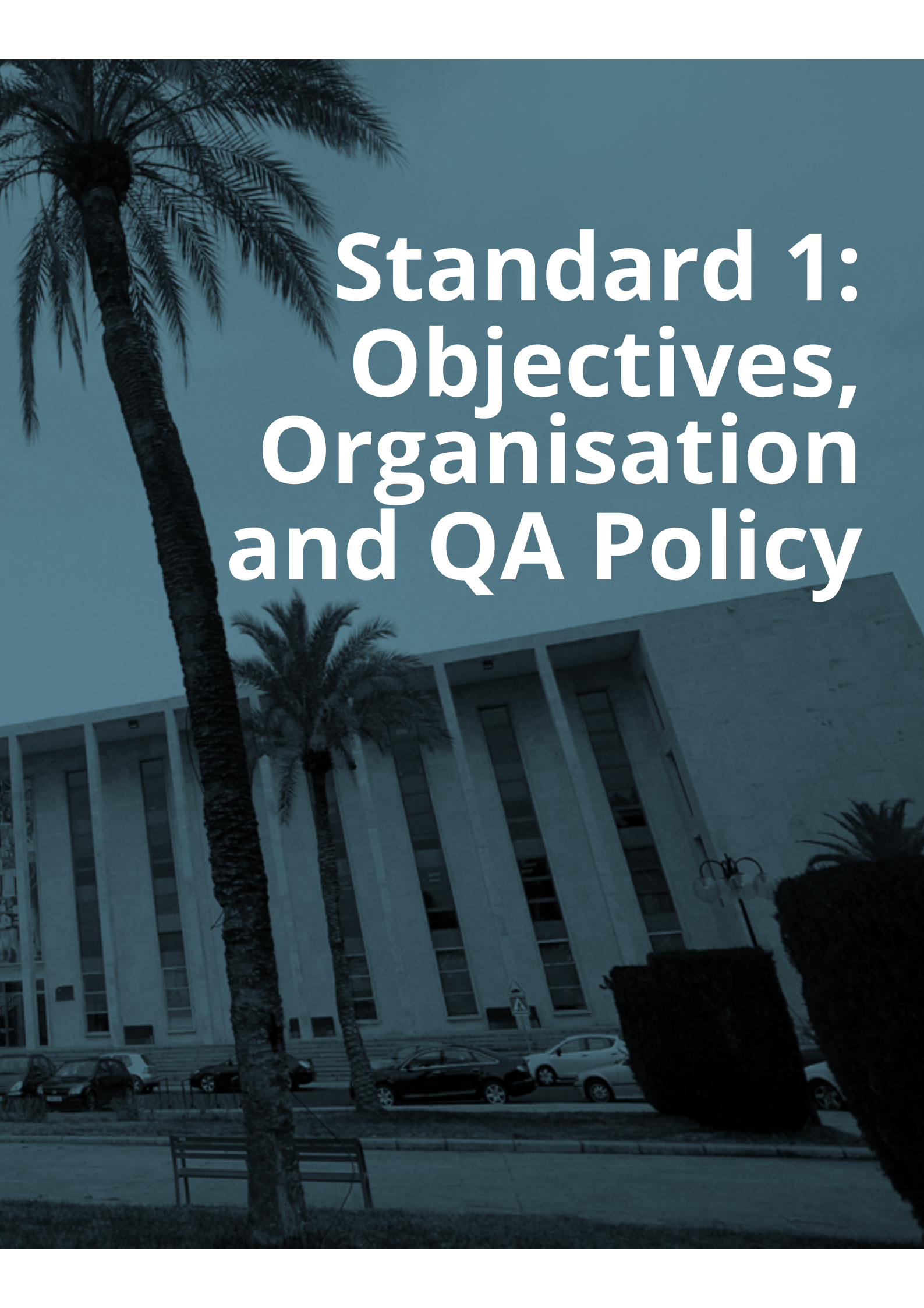
- Students' access depends exclusively on the Andalusian Single District. The FAVEUCO cannot determine access criteria or to intervene in the selection process.
- FAVEUCO's economic and resource management capacity (human and material) is limited, so there are few possibilities to intervene in strategic aspects detected as deficiencies and threats in the SWOT analysis carried out by the Centre: need for more support staff in certain areas, need for more associated professors, support for research groups, promotion of academic staff...

Version and date of the ESEVT SOP which is valid for the Visitation

ESEVT SOP May 2019 (Zagreb).





A blue-tinted photograph of a modern building with palm trees and cars. The building has a prominent facade with large windows and columns. Several cars are parked in front of the building. A palm tree is in the foreground on the left, and another is in the middle ground. The sky is clear and blue.

Standard 1: Objectives, Organisation and QA Policy



1.1 The Establishment must have as its main objective the provision, in agreement with the EU Directives and ESG recommendations, of 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. The Establishment must develop and follow its mission statement which must embrace all the ESEVT standards.

The overarching mission of the Veterinary Faculty of the University of Córdoba (FAVEUCO) is the training of highly-qualified graduates for the veterinary profession, the carrying out of high-quality research and the transfer of knowledge, with a pronounced commitment to being of service to society at large.

The faculty's training programme is geared towards providing new graduates with the skills needed to fend for themselves in the ample field of veterinary sciences, instilling critical thinking, continuous professional development and ethical commitment. It is based on European Directive 2005/36/EC (amended by Directive 2013/55/EU), the Spanish legislation in force (Order ECI/333/2008) and the recommendations of the EAEVE. New graduates will be able to obtain employment as veterinarians in the field of animal health, sanitation, welfare and production and food safety and public health, in the private, public and corporate sectors. They will also be able to continue their academic training in postgraduate programmes, both at UCO itself or at other Spanish and foreign academic institutions.

FAVEUCO also has the goal of undertaking cutting-edge research in all areas of the veterinary sciences, intimately linked to the transfer of knowledge to companies, institutions and users in general, seeking to meet the needs of society in the veterinary and agrifood fields.

FAVEUCO's third basic goal focuses on continuous training and consultative support for its graduates, as well as for civil society organisations, government bodies and specialist companies at the local, regional and international level.

FAVEUCO's mission, on the basis of these goals, is governed by the values of equality, the critical spirit and attention to diversity; quality and excellence based on innovation and responsibility towards society; and ethical commitment and respect for the welfare of animals and the environment, as well as the wellbeing and safety of all the participants involved.

1.2 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. 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.

The decision-making process of the Establishment must allow implementation of its strategic plan and of a cohesive study programme, in compliance with the ESEVT standards.

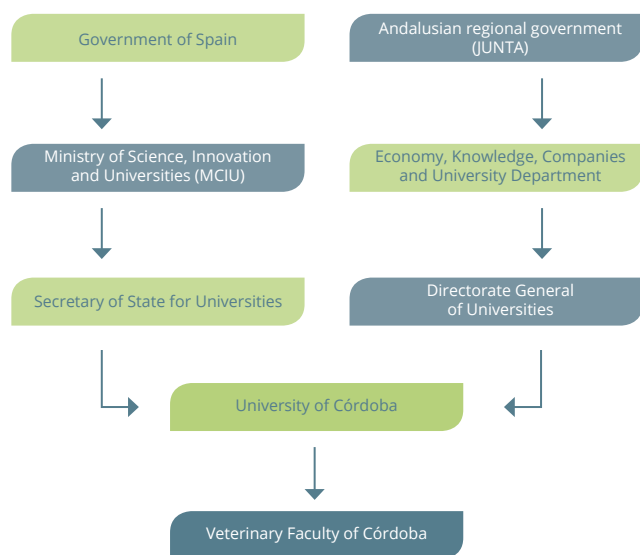
Name: Córdoba Veterinary Faculty
 University: University of Córdoba
 Address: Campus de Rabanales, Km 396, 14071, Córdoba, Spain
 Telephone number: +34 957218661
 Fax number: +34 957218666
 E-mail address: decanatovet@uco.es
 Website: www.uco.es/veterinaria/

Dean: Professor Rosario Moyano Salvago, DVM, PhD (Dean of FAVEUCO, responsible for the veterinary curriculum).

Person responsible for the professional, ethical and academic aspects of the VTH: Professor Rafael Gómez Villamandos, DVM, PhD (Head of the VTH).

Head of the Establishment: Professor José Carlos Gómez Villamandos, DVM, PhD (Rector of UCO).

Organisational chart (diagram) of the Establishment with a brief description of the decision-making process FAVEUCO (<http://www.uco.es/veterinaria/es/>) is part of the University of Córdoba (UCO, <http://www.uco.es>), which is a public university coming under the jurisdiction of the Spanish Ministry of Science, Innovation and Universities (MCIU) at the national level, and the Economy, Knowledge, Companies and University Department at the regional level (*Junta de Andalucía*, Andalusian regional government).



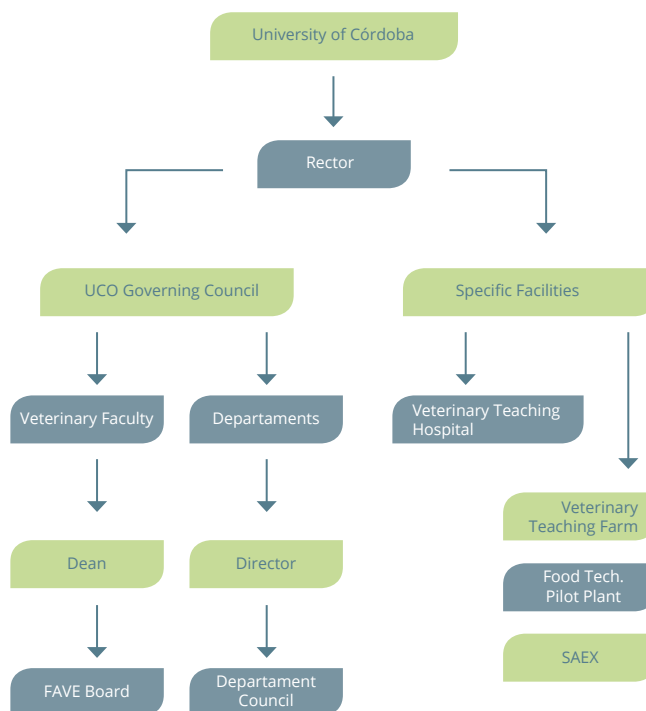
UCO has three campuses distributed across the city of Córdoba and its surrounding area: a Health Sciences campus (Menéndez Pidal campus), a Humanities, Jurisprudence and Social Sciences campus (city centre) and an Agrofood, Scientific and Technical campus (Rabanales campus, plus the University Polytechnic School in the town of Blmez). The Veterinary Faculty forms part of the Rabanales campus. UCO is made up of 10 Faculties and Schools and 53 departments, and in the 2019-2020 academic year it will offer 52 official Degree qualifications, 46 Masters' qualifications and 11 doctoral programmes. Detailed information can be found on the UCO website (<http://www.uco.es>).

Current legislation stipulates that Spanish universities are organised in terms of two distinct entities with specific functions:

- A. Faculties and University Schools:** Responsible for organising and supervising the conduct of teaching activities.
- B. Departments:** Responsible primarily for research and teaching at undergraduate and post-graduate levels.

The Veterinary Faculty is governed by the statutes of the UCO passed by the governing council in December 2017 (<https://www.uco.es/organizacion/secretariagen/normativa#estatutos>) and by the Regulations of the FAVEUCO itself (<http://www.uco.es/veterinaria/es/>

[junta-facultad-reglamento](#)), in force since 2004 and in the process of modification, pending the approval of the Faculty Board and the UCO Governing Council. These stipulate the composition and structure of the Faculty's governing bodies and the functions of the institution.



The governing bodies of the Veterinary Faculty, as defined by the University statutes, are: the Dean, the Dean's Executive Team and the Faculty Board.

The Dean is the representative of the Faculty, and exercises the role of Director and Manager, including:

- Calling and chairing the Faculty Board meetings and drawing up their agendas
- Implementing and enforcing agreements made by the Faculty Board
- Directing and coordinating all Faculty operations falling within his or her area of competence
- Implementing budgetary provisions within his or her area of competence
- Putting forward recommendations to the Rector regarding the appointment of Vice-Deans and the Faculty Registrar

- Authorising the attendance at Faculty and Committee meetings of whomsoever he or she should deem necessary to ensure the aims of the meetings are achieved.

The procedure for the election of the Dean complies with the provisions set out in the Statutes of the UCO and in the Election Regulations, which are applicable in the provisions of the Faculty Regulations (<http://www.uco.es/veterinaria/es/junta-facultad-reglamento>).

The Dean's Executive Team comprises the Vice-Deans, who wield delegated powers over specific areas of academic activity, and the Faculty Secretary, responsible for issuing and signing all official reports and certificates. Both the Vice-Deans and the Faculty Secretary are chosen by the Dean and put forward to the Rector for appointment from among the members of the Faculty's tenured and non-tenured doctorate-holding teaching staff. The Veterinary Faculty currently has three Vice-Deans: (1) the Vice-Dean for Academic Affairs and Veterinary Quality, (2) the Vice-Dean for Academic Affairs and Quality of Food Science and Technology (3) the Vice-Dean for Institutional, International and Student Relations. The number of Vice-Deans is determined by the UCO Governing Council in light of the management requirements, the degree courses offered and the budgetary constraints.

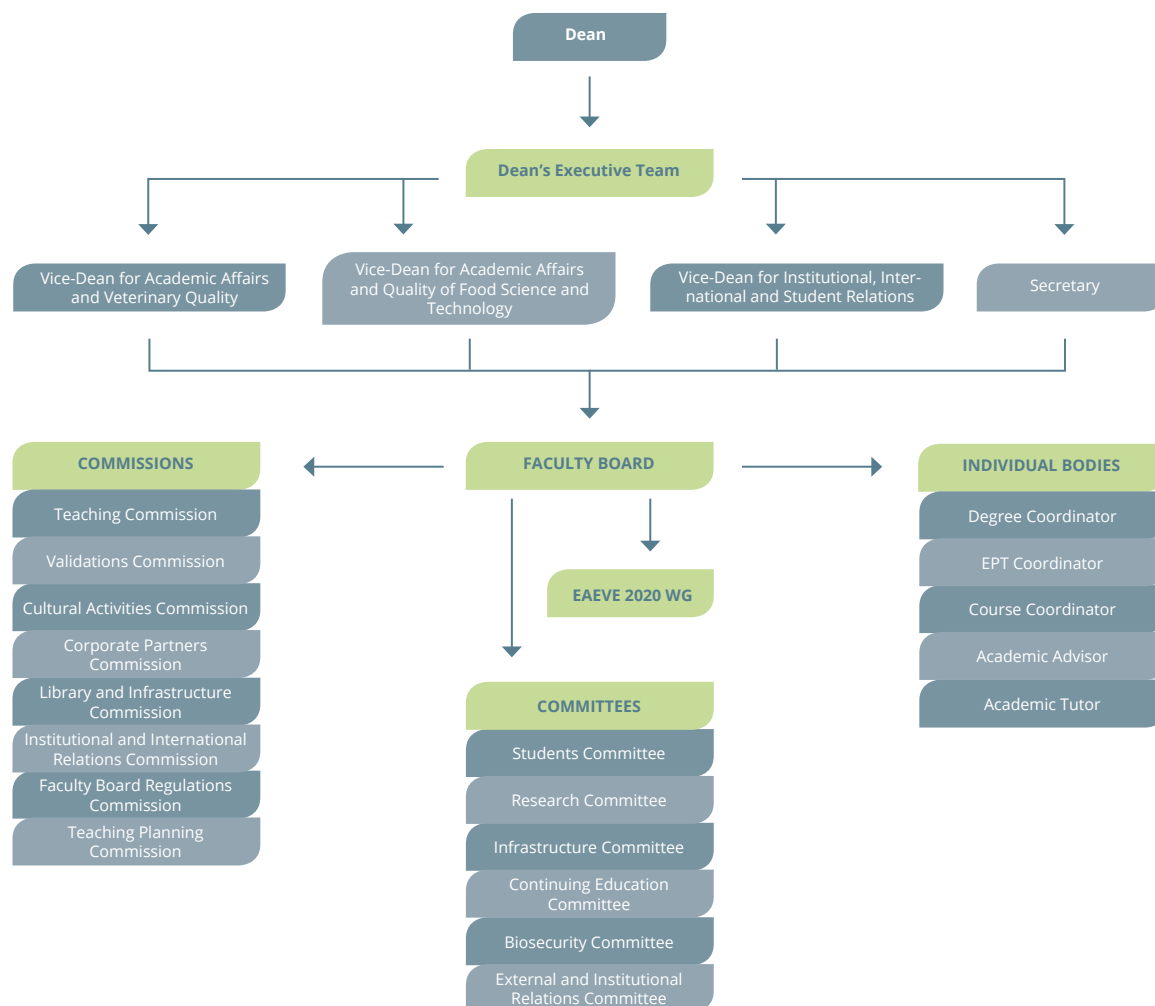
The Faculty Board is FAVEUCO's main governing body, and discharges its functions subject to the agreements of the Governing Council, the UCO Statutes, the resolutions of the Rector and the Academic Regulations. The Board is chaired by the Dean and is responsible for the governance, representation, decision-making, administration, ratification of regulations and supervision of activities of the collegiate and individual bodies of the Faculty. Its functions include

- a. Drawing up and modifying degree courses and programmes of study
- b. Organising, approving and supervising teaching activity
- c. Sponsoring and proposing collaboration agreements
- d. Proposing, modifying and managing continuous training courses and activities
- e. Approving the appointment of honorary collaborators, tutors and student collaborators
- f. Creating and modifying services, committees and such structures as may be necessary
- g. Drawing up the annual monitoring report
- h. Distributing the funds allocated to the Faculty and overseeing expenditure

The Board comprises the Dean and Faculty Secretary as ex-officio members, plus 40 other members, 70% of whom are drawn from the teaching staff (Groups A and B), 25% from the student body and 5% from the administrative and service personnel. Three categories exist within the teaching group: the first comprises members appointed by the Dean, the second represents tenured teaching staff (Group A) and the third group is made up of representatives of other teaching and research staff (Grupo B). In specific situations of interest, the Board may invite other members of the FAVEUCO, as well as representatives of companies and public or private bodies, as non-voting speakers.

Commissions, Committees and Working Groups

The Faculty Board can create the Commissions, Committees and Working Groups it deems necessary for the appropriate discharge of its functions, the appointment of their members being the responsibility of the Board itself.



All the Commissions, apart from the Teaching Commission, are made up of the members of the Faculty Board and are subject to the same rights and duties. The following commissions, the composition and detailed functions of which may be consulted at <http://www.uco.es/veterinaria/es/informacion-institucional>, currently exist:

1. **Teaching Commission:** oversees the general organisation of the Faculty's teaching and ensures the proper discharge of the academic staff's teaching duties.
2. **Institutional and International Relations Commission:** manages the Faculty's partici-

pation in student and teacher mobility and exchange programmes.

3. **Faculty Board Regulations Commission:** drafts proposals for Veterinary Faculty regulations and studies possible amendments.
4. **Validation and Transfer Commission:** issues rulings on applications for validation and forwards them to the Governing Council for its endorsement.
5. **Library and Infrastructure Commission:** deals with all issues relating to the library, infrastructure and equipment.

6. **Cultural Activities Commission:** deals with all issues related to the programming and coordination of cultural activities and university outreach (complementary activities, courses and seminars).
7. **Teaching Planning Commission:** deals with all issues related to the organisation of current teaching offered by FAVEUCO.
8. **Corporate Partners Commission:** manages issues related to the University of Córdoba's corporate partners.

The Committees and Working Groups are set up to deal with specific issues, and their members need not necessarily be members of the Faculty Board. The following are currently in operation:

1. **Students Committee:** responsible for gathering information about the reality faced by Faculty students, analysing their needs and requirements and putting forward action plans for improving the service they receive.
2. **Research Committee:** responsible for coordinating activities, identifying synergies and raising the profile of the research activities of the various groups within the Faculty.
3. **Infrastructure Committee:** collaborates with the Executive Team to monitor the performance of the Faculty's infrastructure, evaluating its status and putting forward improvement plans.
4. **Continuing Education Committee:** analyses ongoing training requirements, whether for the teaching staff, alumni or the administrative and service personnel, and puts forward possible courses of action in response.
5. **Biosecurity Committee:** participates in drawing up the FAVEUCO Biosecurity Plan (**APPENDIX 6**) and undertakes monitoring of its implementation, in collaboration and liaison with the UCO Prevention and Protection Service and with the departments.
6. **External and Institutional Relations Committee:** collaborates in setting up and maintaining relations with stakeholders.

Since 2016 the **EAEVE 2020 Working Group** has also been in operation, charged with drawing up the self-evaluation report for this organisation as well as coordinating all the activities related to the experts' visit and the remedying of any possible shortcomings. It comprises the Dean's Executive Team, the Internal Liaison Officer and a representative of each of the teaching modules.

Individual Figures appointed by the Faculty Board:

The Faculty has other roles undertaken by the teaching staff that are fundamental to its smooth operation. Their appointment is subject to the judgement of the Faculty Board and they are as follows:

- **Degree Programme Coordinator:** Member of the academic staff charged with coordinating and overseeing the monitoring of subjects and their content in accordance with the curriculum.
- **Course Coordinators:** made up of five members of the academic staff, one per academic year. Their role is to coordinate the content, teaching activities and evaluation activities of the subjects included in each academic year.
- **Extramural Practical Coordinator:** responsible for programming, coordinating and improving the range of extramural practical (TPT, EPT, EEPT) available in public and private entities, as well as coordinating academic and occupational tutors.
- **Coordinator of Students and the Annual Student Recruitment Plan (PACE):** liaises with the Vice-Dean for Students to manage issues related to the entry, monitoring, welfare and continuity of students.
- **Academic Tutors:** responsible for supervising students' activities for the duration of their internships to ensure that they are used to their maximum potential.
- **Academic Advisors:** members of the teaching staff especially designated by UCO to tutor, advise and help students with any academic issues they may have from the time of joining the Faculty to the completion of their studies.

Faculty Departments

The departments are university bodies with their own autonomy charged with teaching one or more branches of knowledge in accordance with the university's teaching programme. They are responsible for teaching various subjects and specify the subjects' content, presentation and examinations. The departments are also responsible for coordinating the subjects that they offer and supporting the teaching and research activities and initiatives of their academic staff.

11 departments provide teaching at the FAVEUCO. More information on each department is included in **ANNEX 1.A**, the basic data are listed in this table:

DEPARTMENT	SUBJECTS TAUGHT	HEAD OF DEPARTMENT
ANATOMY AND COMPARATIVE PATHOLOGICAL ANATOMY	Cytology and Histology	Jose Luis López Rivero
	Embryology	
	Systematic Anatomy	
	Neuroanatomy and Topographical Anatomy	
	General Pathological Anatomy	
ANIMAL HEALTH	Systematic Pathological Anatomy	Pedro Gutiérrez Palomino
	Microbiology and Immunology	
	Parasitology	
	Epidemiology	
	Parasitic Diseases	
ANIMAL MEDICINE AND SURGERY	Infectious Diseases	Ana Isabel Raya Bermúdez
	Preventative Veterinary Medicine and Health Policy	
	General Pathology	
	Image-based Diagnosis	
	Clinical Propedeutics	
	Surgical Pathology	
	Internal Medicine	
ANIMAL PRODUCTION	Reproduction and Obstetrics	Francisco Peña Blanco
	Anaesthesiology and Intensive Care	
	Data Analysis and Veterinary Management	
	Handling animals of veterinary interest	
	Agriculture	
	Ethnology, Ethology and Animal Welfare	
	Animal Production and Veterinary Hygiene	
BIOCHEMISTRY AND MOLECULAR BIOLOGY	Animal Nutrition and Food	Conrado Moreno Viván
	Economics of Livestock Production	
	Molecular, Animal and Plant Biology	
CELL BIOLOGY, PHYSIOLOGY AND IMMUNOLOGY	Physics-Chemistry	José Manuel Villalba Montoro
	Biochemistry	
	Animal Physiology	
FOOD SCIENCES AND FOOD TECHNOLOGY	Food Technology and Biochemistry	Rafael Gómez Díaz
	Food Hygiene	
	Food Inspection and Control	
	Management of Food Safety	
GENETICS	Genetics	Rafael Rodríguez Ariza
	Genetic Enhancement for Animal Rearing and Health	
	Molecular, Animal and Plant Biology	
PHARMACOLOGY, TOXICOLOGY AND LEGAL AND FORENSIC MEDICINE	Pharmacology and Pharmacy	Carlos Javier Ponferrada Abrisqueta
	Pharmacotherapy	
	Ethics, Legal Medicine and Veterinary Legislation	
PHYSICS	Toxicology	M. ^a Carmen Quintero Ortega
ZOOLOGY	Physics-Chemistry	
	Molecular, Animal and Plant Biology	Francisco Padilla Álvarez

Veterinary Teaching Hospital (VTH):

The Veterinary Teaching Hospital (<http://www.uco.es/empresa/hcv/>), created in 1998, forms part of the UCO Enterprise Corporation and is governed by its Board of Administration. This Board has a VTH Teaching Activity Coordination Committee, on which the Dean of FAVEUCO sits. The VTH is headed by a Clinical Director, who is a professor of the UCO Animal Medicine and Surgery Department, and is structured in two modules, one for large and one for small animals, each with various areas of speciality. Each of these modules is coordinated by professors from the same department. The staff assigned to the Hospital include academic staff from

various departments, contracted veterinary clinicians, scholarship-holders and administrative and service personnel. The VTH constitutes a basic element in students' education, contributing to their clinical training in terms of both professional and management aspects. The VTH has three overriding goals: to underpin veterinary students' clinical training; to provide high-quality, specialised animal healthcare; and to undertake research projects in coordination with the various UCO departments.

A detailed description of the VTH is provided in **STANDARD 4** and **STANDARD 5**.

Equine Sports Medicine Centre (CEMEDE)

The goal of CEMEDE (<http://www.uco.es/cemedede/>), which comes under the umbrella of the VTH, is to promote, foster and facilitate teaching and research into horses used in sport and its application to the breeding industry, offering the scientific and technical advice required by interested parties in various aspects of exercise physiology and equine sports medicine, as well as organising and participating in courses and seminars for the training of researchers and technical staff, whether in the university itself or beyond. Headed by a teaching member of the Animal Medicine and Surgery Department, there are academic staff in charge of the various services and a head of Teaching Coordination. A detailed description of CEMEDE is provided in **STANDARD 4** and **STANDARD 5**.

Rabanales University Teaching Farm (RUTF)

Teaching and research activities coexist at the RUTF. The operations of the Farm are governed by a Regulation passed by the Governing Council of the University of Córdoba (BOUCO 27/07/2016). It is managed by an Executive Council comprising the Director of the RUTF, the Vice-Rector of Institutional Coordination and Infrastructure, or the person appointed by them, and a representative of the Advisory Council. The Advisory Council of the RUTF comprises the Dean of the Veterinary Faculty, or the person appointed by them, the Coordinator of the University Campus, a member of the University of Córdoba Bioethics and Biosecurity Committee, two representatives of the teaching staff and/or researchers who use the Farm and a representative of the administrative and service personnel attached to the Farm Service. The use of the spaces and resources is arranged between the teaching staff in charge of each subject and the Director of the Farm.

A detailed description of the RUTF is provided in **STANDARD 4** and **STANDARD 5**.

Food Technology Pilot Plant (PPTA)

This is another facility that comes directly under the remit of UCO, reporting to the Food Sciences and Food Technology Department. The head of the PPTA is a member of the teaching staff of the said department, and is responsible for the management and coordination of teaching. All the activities focus on the practical teaching of the subjects of food Hygiene, Technology and Safety and supervised practical work. The unit is equipped with facilities for sensorial analysis, the processing of meat products, the processing of dairy products, a vacuum-cooking system, a canning line and other similar equipment, as well as laboratories equipped with the instrumentation and materials required for analysing food quality and safety.

A detailed description of the PPTA is provided in **STANDARD 4** and **STANDARD 5**.

Animal Experimentation Service (SAEX)

This is a Central Research Support Service of the University of Córdoba attached to the Research Vice-Rector's Office (<http://www.uco.es/sae/v2/>). Its facilities comply with the prevailing legislation (EU Directive 2010/63/EU; recommendation of the European Commission 2007/526/EC; and Royal Decree 53/2013). It is registered as a user centre with registration nº CO/2/U and CO/3/U and as a breeding and supply centre with registration nº CO/1/CS; it offers support to the research and teaching activities of FAVEUCO.

Other UCO enterprises providing services to the Veterinary Faculty

UCOIDIOMAS (<http://www.uco.es/empresa/ucoidiommas/>): This is a UCO service for the instrumental teaching of a range of languages. It offers courses in English, French, German, Italian, Arabic and Spanish for non-native speakers.

UCODEPORTES: Sports Unit of the UCO (<http://www.uco.es/empresa/ucodeporte/>) is responsible for the management of sports facilities and provides a significant service to members of the university community. It enables them to engage in various sporting activities including swimming, rugby, basketball, beach volleyball, athletics, tennis, paddle, tai chi, aerobics, keep-fit gymnastics, sauna and back exercises).

1.3 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 a timeframe and indicators for its implementation.

Work on drawing up FAVEUCO's own strategic plan began in 2016. Until that time, FAVEUCO had undertaken its activities within the framework of the University's 2006-2015 Strategic Plan, the annual milestones of which can be viewed at <http://www.uco.es/veterinaria/es/cumplimiento-del-plan-estrategico>.

It is based on achieving the highest quality standards in teaching, research and welfare activities, bearing in mind all the stakeholder groups involved in running the operations. It is designed from a twofold perspective: the short-medium term, enabling immediate issues to be addressed, and the long term, laying the foundations for the future from 2020 onwards. It was approved by the Faculty Board in 2018 and is available in full at (http://www.uco.es/veterinaria/images/documentos/calidad/PE_FAVE_2019-01-28.pdf).

In brief, the following aspects are addressed by the Plan:

(1) The FAVEUCO MISSION

To be a faculty that ensures exemplary training of veterinarians and food scientists and technologists, also participating in postgraduate training; on the basis of activities involving teaching, research and knowledge transfer to the wider society.

To this end the following basic goals are adopted:

- the protection and promotion of animal and human health,
- research and innovation applied to the agrofood industry,
- contribution to the improvement and transformation of society by means of the economic, cultural and social development of the region where the faculty is located,
- a vocation for internationalisation,
- a commitment to transparency in management,
- the ongoing improvement of quality, innovation, cooperation, equality, sustainability and respect for the environment.

(2) The FAVEUCO VISION

The pillars that sustain FAVEUCO's activities and enable it to fulfil its mission in an effective and efficacious way, with service to society as a starting point, are:

- The ongoing improvement of academic training, based on:
 - Providing a teaching offer that is of high quality, open and pluralistic, dynamic and up-to-date.
 - Having educational cooperation agreements with agrofood businesses for training purposes.
 - Fostering the entrepreneurial culture that facilitates the transfer of knowledge from the academic realm to the private sector.
- Excellence in research and knowledge transfer:
 - Setting up research groups that provide solutions to social, economic, cultural and environmental needs in the agrofood realm.
 - Fostering synergies and alliances with other faculties, institutions and groups of interest.
- The availability of high-quality material and human resources:
 - The upgrading of infrastructure, venues and resources to maximise efficiency.
 - The recruitment of highly-qualified, motivated and enthusiastic human resources.

- The fostering of personal, individual and collective development, beyond academic, technical and/or professional learning.
- Maintaining a spirit of integrating distinct generations, tendencies and visions of the world around us.
- Fostering equality, a critical attitude and attention to diversity
 - Creation and dissemination of critical thought.
 - Creation and dissemination of participative, egalitarian and mutually-supportive cultural habits and practices.
- Attention to animal and human welfare and respect for the environment
 - Fulfilling the legal requirements for animal and human welfare, as well as safeguarding health.
 - Maintaining a commitment to environmental conservation.
- Institutional recognition
 - Developing quality control systems that ensure its efficacy, efficiency, excellence, competence and commitment to the environment.

(3) FAVEUCO VALUES

The values that should guide the activities and conduct of FAVEUCO may be summarised as follows:

- Quality and excellence based on innovation and responsibility towards society.
- Ethical commitment and respect for animal welfare and the environment.
- Equality and solidarity, with transparency and ethical conduct based on principles of democratic participation, gender equality, merit and competitiveness.

Conducting a SWOT analysis proved essential to drawing up the Strategic Plan; this involved the participation of various elements of the FAVEUCO community, ranging from the Executive Team to students and external contributors. The complete SWOT analysis is included in the Strategic Plan (http://www.uco.es/veterinaria/images/documentos/calidad/PE_FAVE_2019-01-28.pdf) and may be summarised as follows:

STRENGTHS

- The singularity, renown and prestige of the Faculty in Andalusia.

- General installations and facilities available at the Rabanales university campus.
- Singular network of support facilities and services at the disposal of FAVEUCO: the VTH, RUTF, FTTP, CEMEDE, SAEX...
- Notable healthcare services provided by FAVEUCO departments (veterinary genetic diagnosis, infectious-parasitic diseases laboratory, anatomical-pathological diagnosis service...).
- The quantity and quality of teaching staff (student/academic staff ratio, percentage of staff with doctorates, skillset of associate teaching staff...).
- Excellent institutional relations with public and private entities and enterprises, with numerous educational collaboration agreements.
- Quality Assurance System introduced and fully operational.
- Active development of domestic and international exchange programmes (SICUE, Erasmus, Global, etc.).
- Facilities for virtual teaching and the use of IT via the MOODLE platform (<http://moodle.uco.es>).
- Channels for the continuous training of the teaching staff and for teaching innovation and best practice.
- Highly significant research output, with excellent research groups working in a wide range of fields.

OPPORTUNITIES

- Importance of the food and farming industry to the gross domestic product of Andalusia.
- Growing social awareness of animal health and welfare.
- Considerable social concern about public health and food safety.
- Emergence of new fields for professional development (aquaculture, organic production and alternative farming methods)
- UCO's progress in terms of facilities, resources and services.
- Consolidation at UCO of excellence and quality processes in teaching, research, knowledge-transfer and management.
- UCO's deployment of talent-recruitment policies.
- Internationalisation of degrees and encouraging the mobility of the teaching and research staff, students and administrative and service personnel.

- Activities and projects run by the ceiA3 Campus of International Excellence and the Rabanales 21 technology park for the creation of technology-based enterprises in the agrofood sector.

WEAKNESSES

Weaknesses in teaching

- Limited possibilities of intervening in specific aspects of teaching, compared to departments and UCO.
- Scant control and influence over facilities such as the VTH, RUTF and FTTP.
- Insufficient provision of administrative and service personnel.
- Limited funding and availability of personnel for specific teaching activities (dissertations, internships)
- Limited promotion possibilities for the teaching staff.
- Poor awareness of biosecurity and the prevention of occupational health hazards.

Weaknesses in research

- Lack of connection between distinct research groups.
- Lack of centres and venues for multidisciplinary and specific integration.
- Teaching and management overload and scant research possibilities.
- Lack of funding in specific areas.

Social-structural weaknesses

- Budgetary allocations that do not meet requirements, especially in terms of single-purpose facilities.
- Scant managerial capability on the part of FAVEUCO over areas and facilities that are critical to its operations.

THREATS

- UCO's departmental system.
- Organisational structure of single-purpose services and facilities, under the direct management of departments or UCO governing bodies.
- Policy of evaluating teaching needs and the selection of teaching staff with little input from the Faculty.
- Existence of academic incompatibilities approved in the curriculum ("key" subjects) that prolong students' studies.

The FAVEUCO Operating Plan, which encompasses the Faculty's Strategic Plan, unfolds along three strategic pathways, summarised below.

STRATEGIC PATHWAY 1: TEACHING

Objective 1.1.- Review of the teaching offer.		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Review of the curriculum	Quality Assurance Unit-VET	Short-mid term
Drive the improvement of learning processes	Executive team FAVEUCO Board	Mid-term
Drive the horizontal and vertical coordination of the subject content	Degree Coordinator Year Coordinator Teaching Commission	Mid-term
Development of practical teaching	Quality Assurance Units Teaching Commission	Mid-term
Objective 1.2.- Drive the internationalisation of studies.		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Foster joint degrees with Latin American universities	Vice-Dean for Students	Long term
Foster mobility initiatives for students, teaching, administrative and service staff	Executive team	Long-term
Fostering the profile of degrees at an international level	Executive team	Immediate
Fostering the teaching of subjects in English	Vice-Dean for Students Teaching Commission	Immediate
Objective 1.3.- Adapting the educational offer to the requirements of society		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Bringing professional reality closer to the Faculty	Quality Assurance Units Teaching Commission Executive team	Immediate
Objective 1.4.- Improving the human and material resources devoted to teaching.		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Supporting requests from departments in need of reinforcing their teaching, administrative and support staff	Executive team	Immediate
Increasing the body of associate teaching staff linked to practical teaching, particularly in "Tutored Practical Training", and that this should come under the remit of the Faculty.	Internship Committee Executive team	Immediate
Fostering recognition of the work teaching staff do in healthcare tasks	Executive team	Long-term
Driving the training of teaching staff in skills-based assessment	Executive team	Immediate Mid-term Long-term
Fostering the teaching staff's admission into specialised international forums and associations.	Executive team	Immediate
Improving the infrastructure of teaching venues	Executive team	Immediate Mid-term
Improving the material resources of teaching venues	Executive team	Immediate
OBJECTIVE 1.5.- Preparing the domestic accreditation of degrees and the Faculty-wide preparation for European evaluation.		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Preparation of the paperwork	Faculty Board EAEVE 2020 working group	Immediate Mid-term
Institutional support for visits	Executive team	Immediate

STRATEGIC PATHWAY 2.- RESEARCH

Objective 2.1.- Fostering research activities at the Faculty		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Fostering the development of research-focused final dissertations.	Executive team	Immediate
Objective 2.2.- Infrastructure for research.		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Facilitating information about the infrastructure and equipment available to the various groups to make it common knowledge	Executive team	Long-term
Objective 2.3.- Cross-cutting research		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Incentivising cross-cutting research and collaboration between research groups in submitting project proposals	Executive team	Immediate Mid-term
Objective 2.4.- Stimulating the various research groups' participation in competitive tender processes		
<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Notifying, coordinating and incentivising the participation of the various research groups in competitive tender processes.	Academic registrar Executive team	Long-term

STRATEGIC PATHWAY 3.- MANAGEMENT AND SERVICES

Objective 3.1.- Increasing and optimising the Faculty's economic resources.

<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Setting up agreements and accords involving funding contributions for undertaking the Faculty's activities	Executive team	Immediate

Objective 3.2.- Fostering the overall improvement of the Faculty's management and services.

<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Increasing commitment to the quality of management	Quality Assurance Units Academic Registrar	Mid-term Immediate

Objective 3.3.- Fostering the welfare and safety of staff and students

<i>Strategy</i>	<i>Responsible body</i>	<i>Timeframe</i>
Creating programmes to enhance the welfare and safety of staff and students	Executive team	Immediate Mid-term

1.4 The Establishment must have a policy and associated written procedures for the assurance of the quality and standards of its programmes and awards. It must also commit itself explicitly to the development of a culture which recognises the importance of quality, and quality assurance, within their Establishment. To achieve this, the Establishment must develop and implement a strategy for the continuous enhancement of quality. The development and implementation of the Establishment's strategy must include a role for students and other stakeholders, both internal and external, and the strategy must have a formal status and be publicly available.

FAVEUCO Quality Assurance System is fully available at the website (<https://www.uco.es/veterinaria/es/calidad-fave>). A written assessment procedure is included as APPENDIX 4.

The quality assurance culture began with the approval of the new curriculum in 2010 (<https://www.uco.es/organiza/centros/veterinaria/images/documentos/gveterinaria/2017011-memoria-verificada-vet.pdf>), including a specific section devoted to QA in the final document submitted for validation, based on the recommendations of the Evaluation and Accreditation Directorate of the Andalusian Knowledge Agency (DEVA-ACC). This agency belongs to the European Association for Quality Assurance in Higher Education (ENQA, <http://deva.aac.es/?id=enqa>), to the International Network for Quality Assurance Agencies in Higher Education (INQAAHE, <http://deva.aac.es/?id=inqaah>) and is registered with the European Quality Assurance Register for Higher Education (EQAR, <http://deva.aac.es/?id=eqarce>), all of which enable it to certify that the initiatives and procedures contained in the Quality Assurance System (QAS) are in accordance with the criteria and guidelines for quality assurance in the European Higher Education Area (EHEA).

FAVEUCO has a fully-implemented quality control system, based on a hierarchical system of decision-making

at four levels, which ensures outcome assessment and transparency, the application of quality improvement mechanisms and that the QA cycle is completed:

-The **Quality Assurance Unit** (QAU) for the degree constitutes the first level, and is responsible for ensuring the correct implementation of the Faculty's quality assurance policy. The QAU is responsible for gathering information and evidence regarding the way studies are carried out, admission systems, planning of teaching work, teaching staff, mobility and the procedure for the possible annulment of the degree (<https://www.uco.es/organiza/centros/veterinaria/images/documentos/manual-sistema-garantia-calidad-gveterinaria.pdf>). In addition, the QAU gathers data about the outcomes and performance indicators of the degree, and receives suggestions and indications of satisfaction from all stakeholders, which are used to make improvement proposals. With these data, the members of the QAU draw up an annual self-evaluation report, and put forward improvement plans.

-Occupying the level above this is the **Faculty Board**, the faculty's collegiate governing body, which discharges its functions subject to the agreements with the Governing Council and the resolutions of the Rector, in accordance with the provisions of the Statutes of the University of **Córdoba** and its own operational regulations (<https://www.uco.es/organiza/centros/veterinaria/es/junta-facultad-reglamento>). It is chaired by the Dean and Faculty Registrar and made up of representatives of the teaching and research staff attached to the Faculty, administrative and service personnel and students enrolled at the Faculty. The Faculty Board appoints the members of the QAU, reviews its activities and approves, if appropriate, the proposals made by the Unit. Moreover, it assesses and approves the annual improvement plans, as well as the self-monitoring and accreditation reports drawn up by the QAU

-The third level comprises the **Quality and Planning Service** (<https://www.uco.es/organizacion/calidad/>) of

the Rector's Office of the University of **Córdoba**, which discharges its functions under the leadership of a representative of the Rector (with the rank of Vice-Rector) for Quality and Competitiveness Systems, and meets with representatives of all the faculties in the Quality of Official Degrees Monitoring Commission, where the various procedures are subjected to analysis and measures in support of the faculties' improvement plans are approved. The Service is divided into three sections: management of data and statistics (responsible for obtaining, analysing and validating the data,); organisation and rationalisation (responsible for implementing the initiatives of the UCO strategic plan); and Quality Management (responsible for implementing the quality policies in the teaching domain and providing support for the ongoing improvement of the institution).

The fourth level comprises an external agency, the **Evaluation and Accreditation Directorate of the Andalusian Knowledge Agency** (DEVA-ACC) (<http://deva.aac.es/?id=universidades>), which analyses the annual self-monitoring reports submitted by all the universities in Andalusia and is responsible for renewing the certification of degrees, with the aim of ensuring that the results match the commitments entered into at the time of creating the qualification, checking that monitoring and improvement initiatives are being carried out and ensuring that the information is public, valid, reliable and relevant. The parameters evaluated by the agency include:

- Publicly-available information
- Quality assurance system
- Design, organisation and development of the training programme
- Teaching staff
- Infrastructure, services and provision of resources
- Satisfaction and performance indicators

As well as evaluating degrees, DEVA-AAC, or if applicable ANECA (the National Quality Assessment and Accreditation Agency), is responsible for accrediting teaching staff so that they can apply for the posts offered by the various universities. As regards UCO services (the VTH, the SADEX, the University Library, the Central Research Support Service), they have a quality assurance policy overseen by external agencies, which may be viewed on their respective websites.

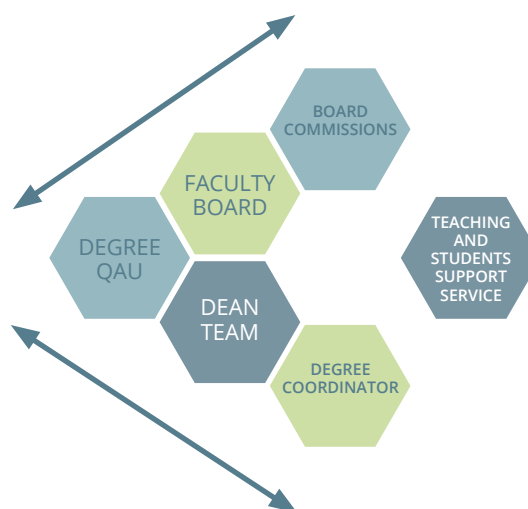


Figure 1. Organisational Chart of the Faculty's Quality Assurance System (QAS)

The QAS has a Quality Manual, which comprises a route map for collecting the data from all the specified sources, generating information and formulating proposals for ongoing improvement in the quality of the degree. To this end it relies on a set of procedures, where the methodologies to be implemented are set out (<http://www.uco.es/veterinaria/images/documentos/manual-sistema-garantia-calidad-gveterinaria.pdf>), evidence is collected enabling the evaluation of the proper operation of the training programme, the teaching staff, internships, mobility programmes, dissemination, graduate employment rates and satisfaction with the education received, as well as the criteria and procedure for the annulment of the degree in the event that it does not meet initial expectations. By way of computer support for fulfilment of the quality manual, there is a shared, centralised platform (<http://www.uco.es/sgc/>) enabling the procedures of the QAS manual to be managed and the degree outcomes to be accessed (indicators, surveys and complementary information).

The set of evaluation procedures and tools can be consulted on the Faculty's website (<http://www.uco.es/veterinaria/es/calidad-fave>). The reports drawn up by the QAU on the basis of the data available on all the items assessed are submitted to the Faculty Board and sent to the Quality and Planning Service and, subsequently, to DEVA-AAC. These reports and the assessment carried out by the external agency are published on the Faculty's website and sent to the teaching and research staff, the administrative and service personnel and the Student Council. Improvement plans, drawn up after the internal evaluation and the recommendations made by DEVA-AAC, are also published (<https://www.uco.es/organiza/centros/veterinaria/es/calidad>).

Thus the QAS ensures that **all the internal** (the teaching and research staff, the administrative and service personnel and the Student Council) **and external stakeholders** (public authorities, companies, other veterinary faculties, professional associations, other quality assurance agencies) **are informed about the implementation and development of the Degree in Veterinary Medicine, as well as the improvements carried out.** The students actively participate in the formative process by participating in the Department Councils, the Teaching Commission, the QAU and other bodies that are created for specific issues, which are geared towards ensuring that the evaluation systems and criteria enable skills and competences to be acquired, and that the media used as well as the teaching staff, the UCO administrative and service personnel, relations with companies for establishing internships and exchange programmes enable such goals to be met.

The introduction of the QAS enables an assessment to be made of the appropriateness of the course for training qualified professionals with a high degree of commitment to serving society. Self-monitoring reports are issued every year evaluating the way in which these objectives are achieved, proposing improvements in those areas where the desired results are not obtained and proposing new objectives, based on the recommendations of the stakeholders and the evaluation agencies. Each proposal is put forward setting out objectives, follow-up indicators, the service responsible for monitoring and the procedure for carrying out the monitoring. These reports and the improvement proposals for the degree that need to be applied in subsequent years are drawn up by the Quality Assurance Unit, are submitted to the Faculty Board and the UCO Rector's Office for their final approval, in a cyclical improvement process.

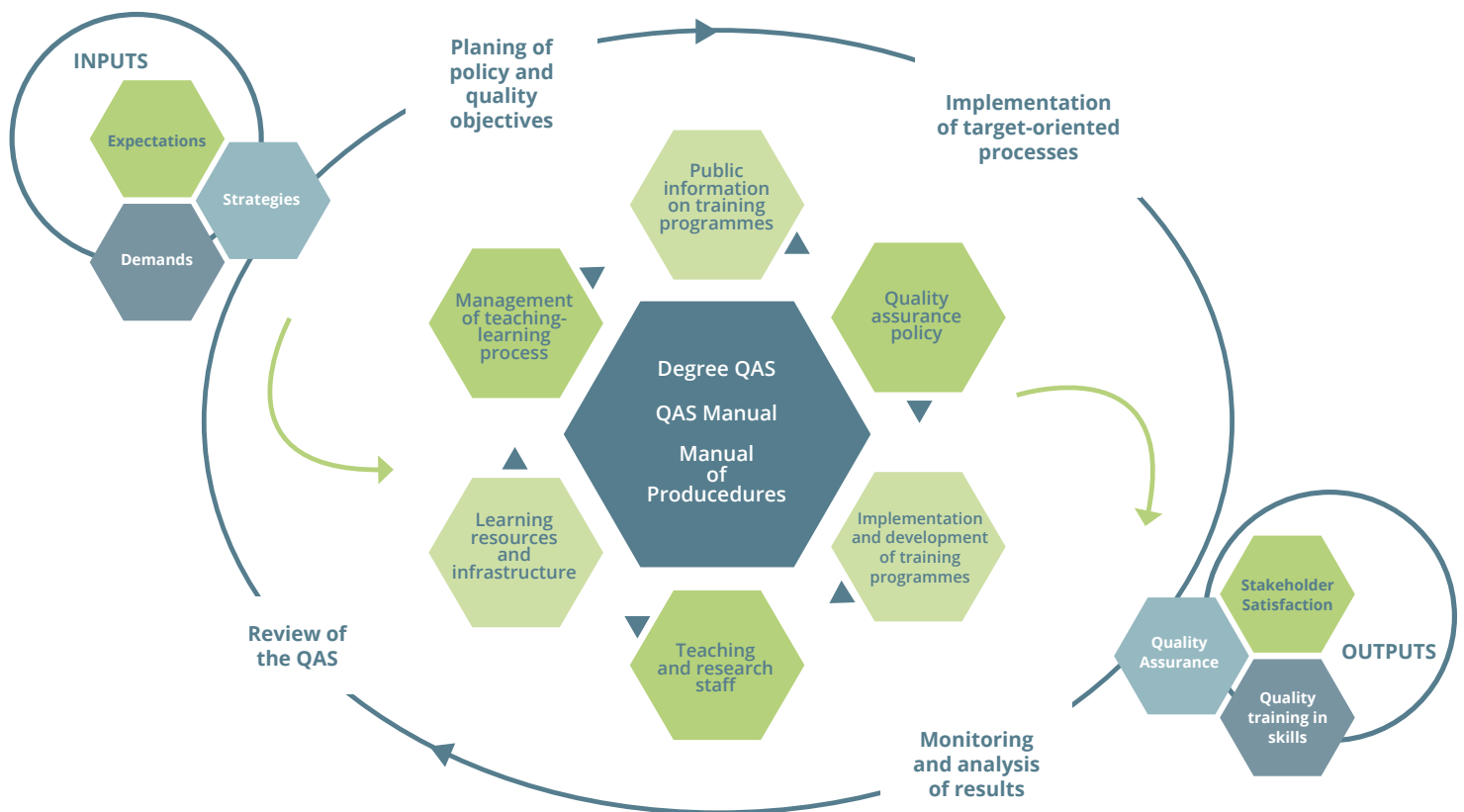


Figure 2. Chart showing the continuous improvement cycle in the Faculty's QAS

The FAVEUCO quality assurance system complies with ESG standards, given that it is based on the criteria of DEVA-ACC, which is accredited by the European Association for Quality Assurance in Higher Education (ENQA, <http://deva.aac.es/?id=enqa>), a member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE, <http://deva.aac.es/?id=inqaahe>) and registered with the European Quality Assurance Register for Higher Education (EQAR, <http://deva.aac.es/?id=eqarce>).

1.5 The Establishment must provide evidence that it interacts with its stakeholders and the wider society. Such public information must be clear, objective and readily accessible; the information must include up-to-date information about the study programme, views and employment destinations of past students as well as the profile of the current student population. 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.

FAVEUCO enjoys excellent relations with external stakeholders and with society at large, to a large extent underpinned by its long history and by the unique nature of the Faculty in Andalusia (the only veterinary faculty for a population of 8.5 million inhabitants). In specific terms, interaction with external stakeholders and members of the public is fostered and channelled through the Faculty's External and Institutional Relations Committee and through the Executive Team and frequently takes the form of collaboration agreements: there are currently 250 such agreements with 225 institutions, companies, associations and groups.

Communication with stakeholders and the wider society is carried out, first, on a private basis with the people involved, through periodic contact, whether in-person or virtually. Secondly, there is open and public communication through the internet and social media. The most notable of these is the Faculty website (<http://www.uco.es/organiza/centros/veterinaria/es/>), where ample information is openly and permanently available regarding FAVEUCO's goals, structure, teaching plan, activities and day-to-day events. Much of this information is also published on social media, via FAVEUCO's accounts on Facebook (<https://www.facebook.com/FacultadVeterinariaCordoba/>), Twitter ([@VeterinariaUCO](https://twitter.com/VeterinariaUCO); <https://twitter.com/VeterinariaUCO>) and Instagram (<https://www.instagram.com/fac.vet.uco/>). As well as its own website, the UCO Media Office (<http://www.uco.es/servicios/actualidad/>) ensures that other news stories reach the general media, whether related to the admission of new students ([\[vicios/actualidad/component/k2/item/134790-jornadas-para-el-alumnado-de-nuevo-ingreso-de-la-universidad-de-cordoba\]\(http://www.uco.es/servicios/actualidad/vida-academica/item/134790-jornadas-para-el-alumnado-de-nuevo-ingreso-de-la-universidad-de-cordoba\)\), to teaching and research activities \(<http://www.uco.es/servicios/actualidad/vida-academica/item/134519-jornada-horsepower-2019/>\), or to institutional events involving the participation of FAVEUCO \(<http://www.uco.es/servicios/actualidad/vida-academica/item/133991-la-conferencia-de-decanos-y-decanas-de-las-facultades-de-veterinaria-de-espana-cde-se-reune-en-el-rectorado/>\).](http://www.uco.es/ser-</p>
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There is also a specific section on the Faculty's website for information related to EAEVE: regarding its ESEVT status, regarding the previous and current Self-Evaluation Report and the visitation reports, as well as other information related to EAEVE (<http://www.uco.es/organiza/centros/veterinaria/es/evaluacion-europea>).

1.6 The Establishment must monitor and periodically review its activities, both quantitative and qualitative, to ensure that they achieve the objectives set for them and respond to the needs of students and society. The Establishment must make public how this analysis of information has been utilised in the further development of its activities and provide evidence as to the involvement of both students and staff in the provision, analysis and implementation of such data.

Any action planned or taken as a result of this data analysis must be communicated to all those concerned.

FAVEUCO's operating framework is determined both by national and regional legislation and by the UCO statutes. To a large extent these establish the procedures and structures involved in drawing up the Strategic Plan, in its follow-up and evaluation. Similarly, they determine the organisation and the teaching activities (as set out in section 1.2). Both the Strategic Plan and the structures involved and the way it is monitored are clearly and publicly included in the Faculty website (<http://www.uco.es/veterinaria/es/informacion-institucional>).

The processes involved and the entities responsible for them are summarised in the following table:

ACTIVITY	RESPONSIBILITY
Evaluation and identification of priorities	Executive team Students Committee Institutional Relations Commission
Creation of strategic themes	Executive team Faculty Board committees
Definition, communication and approval of strategic themes	Executive team Faculty Board
Connection with other improvement plans	Executive team
Designation of committees to evaluate the improvements	Executive team Faculty Board
Evaluation of the improvements	Quality Assurance Unit
Implementation and adaptation of the plan: communication of outcomes	Quality Assurance Unit Executive team
Reports to/from external QA agencies	Quality Assurance Unit Executive team
Implementation and adaptation of the plan: re-evaluation and redefinition of the objectives	Executive team Faculty Board Faculty Board committees
Permanent communication (throughout the entire process)	Executive team

In specific terms, the FAVEUCO quality control strategy is determined by the Faculty's QAU, within the framework of UCO's QAS, and taking into account the Faculty's strategic plan. This strategy is reviewed every year based on the self-evaluation reports, the gathering of data from the stakeholders (internal and external) and the recommendations of the external quality control agencies (DEVA-AAC). The Quality Assurance Unit is made up of a representative of the academic staff, of the administrative and service personnel, of the students and of external stakeholders; the opinions and suggestions of the latter provide a source of information about training requirements, in accordance with the demands of society. All the information relating to our Quality Assurance System is available on the website. The platform created to assist UCO faculties sets out the procedure and deadlines for submitting the annual monitoring and accreditation reports (<http://www.uco.es/sgc/>).

1.7 The Establishment must undergo external review through the ESEVT on a cyclical basis. Evidence must be provided of such external evaluation with the assurance that the progress made since the last ESEVT evaluation was linked to a continuous quality assurance process.

The last time the ESEVT committee paid a visit to FAVEUCO was in October 2009. No major shortcomings were reported, but a series of recommendations was made, particularly related to the structure of the

curriculum, the coordination between certain subjects and the monitoring of clinical activities; reference was also made to a lesser extent to the teaching staff and funding.

These suggestions were addressed very clearly with the implementation of a new curriculum for the Veterinary Medicine Degree, which was implemented following Royal Decree 1393/2007, dated 29 October (Spanish State Gazette, 30 October 2007), where the new regulations governing Official Qualifications in Spanish Higher Education are set out, and Order ECI/333/2008 (13 February; Spanish State Gazette, 15 February 2008), setting out the general requirements for obtaining official university qualifications giving the right to practise the profession of veterinarian. The current curriculum is therefore an adaptation of this regulatory framework and has been gradually introduced since 2010/2011, replacing the previous degree.

The new curriculum takes a different approach to the structuring of the contents of the five training modules (Basic Training, 102 credits; Clinical Sciences and Animal Health, 108 credits; Animal Production, 30 credits; Hygiene, Food Safety and Food Technology, 24 credits) and introduces a sixth module of Tutored Practical Training and an Dissertation Thesis, with the fundamental goal of enabling the students to acquire the so-called "Day One Skills", which represent the minimum level of ability with which FAVEUCO equips its graduates to comply with their training commitment to soci-

ety. Specifically, steps have been taken to ensure that there is greater integration between disciplines, that the students can work with animals from their first year and that the number of practical hours are increased.

The introduction of the new curriculum represented a major change not only in the teaching approach of FAVEUCO but also in other facets of its organisational and operational mechanisms, which were further underpinned by the verification and monitoring system of the new qualifications and by UCO's quality assurance policy. As set out in section 1.4, FAVEUCO runs a quality assurance programme that includes internal and external stakeholders and requires the drafting of annual self-monitoring reports that are examined by DEVA-ACC and ensure fulfilment of the undertakings made on introducing the qualification and contained in the ongoing improvement plans.

Comments on Standard 1

FAVEUCO continues to be characterised by its traditional hallmarks: it forms part of a medium-sized university, it is integrated into a university campus with general shared services, it is structured around a departmental model and continues to be the only veterinary faculty in the Andalusia region, retaining a privileged situation in its social context.

FAVEUCO has undergone significant renewal over the last decade, in both regulatory and organisational terms. The most significant change has been the implementation of the new Degree title (*Grado*), replacing the former *Licenciatura*, with a major change in the curriculum. This has also entailed a new focus to the Faculty's training approach and a new way of organising the content, giving impetus to teaching renewal within the framework of the Bologna Plan, with greater attention paid to the process of skills-based student learning.



The new Plan also entailed the development of the Faculty's own Strategic Plan, distinct from, although interdependent with, the UCO plan, and the consolidation of the Quality Assurance System, in line with the UCO Quality Assurance System and subject to the accreditation of external quality control agencies (DEVA-AAC). Both the Strategic Plan, with its SWOT analysis, and the Faculty's QAS have proved to be highly important tools for improving the Faculty. Indeed, in 2017, the Universities Council, in light of the positive report from the evaluating agency (AAC), renewed the accreditation for the Degree in Veterinary Medicine awarded by FAVEUCO.

Suggestions for improvement on Standard 1

- The efficacious implementation of the Strategic Plan, with greater participation from all the agents involved (staff, students, stakeholders) and with special attention to the sections related to Biosecurity (Strategic Pathway 3) and coordination between the various FAVEUCO teaching and research groups (Strategic Pathway 1).
- Continuing to raise awareness and improve the "quality culture" in all facets of FAVEUCO life. Fostering the development of procedures and initiatives between the Quality Assurance Unit and the other structures involved.
- Fostering the presence and involvement of stakeholders in the activities of designing, organising, reviewing and modifying FAVEUCO's teaching and research approaches.
- Creating an effective system of monitoring former graduates that would enable greater and better contact with them to be maintained and thereby greater involvement in the management of FAVEUCO.







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. The description must include both expenditures (separated into personnel costs, operating costs, maintenance costs and equipment) and revenues (separated into public funding, tuition fees, services, research grants and other sources).

Public universities in Spain are bound by strict rules governing their finances. The legal framework of their overall financial position is determined by the Organic University Laws 6/2001 and 4/2007, which state that “Public universities shall have economic and financial autonomy under the terms established in this law. For this purpose, it shall be ensured that universities have the necessary resources for a basic quality operation”. To achieve this goal the various legal bodies “...shall draw up a reference model of costs that will enable the public authorities to establish adequate funding for public universities ...to promote their full participation in the European Higher Education Area”. Autonomy is granted to each university for the drawing up, approval and management of their budgets and the administration of their assets (article 3h of the UCO statutes); <https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2018/00013>).

UCO's budget is approved by the Social Council, at the behest of the Governing Council, and is public (<https://www.uco.es/gestion/gestioneconomica/presupuestos>),

unique and annual, running for a calendar year (from 1 January to 31 December). UCO's sources of income, as stated in the budget, are:

- Taxes, public fees and other income (the taxes and public fees are decided by the Autonomous Community (i.e. regional government) of Andalusia): 15.46%.
- Capital transfers (to fund capital spending and investments): 8.55%.
- Ordinary transfers (to fund ordinary spending): 74.55%.
- Others (patrimonial income, financial liabilities): 1.44%.

In our system there is no such thing as “full-fee students”. The Spanish model of university funding is devolved to the Autonomous Communities, i.e. regions, in which university education is essentially public and meets the greater part of the total real cost. The remainder comprises the tuition fees (*tasa de matricula*) of the so-called “standard student”. The cost of each credit is fixed annually by the Autonomous Community (Decree 139/2018, dated 3 July), and depends on the experimental component and the number of times a student has previously enrolled in a subject. The Degree in Veterinary Medicine has the maximum experimental rating (level 1) and therefore the public fees are:

Public fees in euros per ECTS and number of enrolments.

ENROLMENT

	1 st	2 nd	3 rd	4 th & subsequent enrolments
Price (€/ECTS)	12.62	25.25	54.71	75.75

The income received from all the faculties' tuition fees, including FAVEUCO's, is directly managed by UCO's central services.

The annual direct cost of training a student is calculated by the total cost of the academic staff (A.1) and the support personnel (A.2), the operating costs of teaching (B.2) and the teaching equipment (D.1), as set out in Table 2.1.1, divided by the number of students enrolled in the Veterinary Medicine degree each year.

Table 2.1.1. Annual expenditures for the last three academic years (in euros)

	2018	2017	2016	MEAN
A Personnel ¹	10.571.780,9	11.497.177,7	11.827.125,9	11.298.694,8
A.1 Academic staff	9.735.937,7	10.504.149,8	10.501.486,3	10.247.191,3
• A.1.1 FAVEUCO	9.494.553,7	10.276.446,6	10.297.525,5	10.022.842,0
• A.1.2 VTH (Specialists, internship)	241.384,0	227.703,2	203.960,8	224.349,3
A.2 Support staff	385.795,7	373.545,3	372.459,4	377.266,8
• A.2.1 FAVEUCO	221.027,5	221.027,5	221.027,5	221.027,5
• A.2.2 VTH	148.494,4	136.244,0	135.158,1	139.965,5
• A.2.3 RUTF	16.273,8	16.273,8	16.273,8	16.273,8
A.3 Researchers	380.940,0	554.940,0	906.660,0	614.180,0
A.4 VTH internships	69.107,5	64.542,5	46.520,2	60.056,8
A.5 Maintenance staff	--	--	--	--
B Operating costs	2.000.640,9	2.002.357,1	1.970.539,4	1.991.179,1
B.1 Utilities	911.302,8	921.961,8	866.624,0	899.962,9
• B.1.1 FAVEUCO (Incl. Departments)	171.109,6	203.587,2	173.512,3	182.736,4
• B.1.1 FAVECO (Paid by the Rectorate)	718.184,4	689.709,2	663.049,2	676.379,2
• B.1.2 VTH ¹	--	--	--	--
• B.1.3. RUTF	22.008,8	28.665,4	30.062,5	26.912,2
B.2 Teaching	90.107,1	143.362,7	148.164,2	127.211,3
• B.2.1. FAVEUCO (Incl. Departments)	90.107,1	143.362,7	148.164,2	127.211,3
• B.2.2. VTH	--	--	--	--
• B.2.3. RUTF	--	--	--	--
B.3 Research	999.231,0	937.032,6	955.751,2	964.004,9
C Maintenance costs ¹	526.473,5	922.215,7	124.831,3	524.506,8
C.1 Air conditioning, elevators, fire extinguishers, gardening	131.790,2	309.685,8	101.845,0	181.107,0
• C.1.1 FAVEUCO (Incl. Departments)	60.834,8	255.107,8	54.358,2	123.433,6
• C.1.2 VTH	67.197,7	52.382,6	40.894,8	53.491,7
• C.1.3. RUTF	3.757,7	2.195,5	6.592,0	4.181,7
C.2 Building (renovations, installations...)	394.683,3	612.529,9	22.986,4	343.399,8
• C.2.1 FAVEUCO (Incl. Departments)	8.188,8	9.024,2	22.986,4	13.399,8
• C.2.2. VTH	386.146,8	598.344,4	--	492.245,6
• C.2.3. RUTF	347,7	5.161,3	--	2.754,5
D Equipment	78.757,8	40.031,3	94.263,6	71.017,5
D.1 Teaching	10.301,2	7.779,3	9.384,8	9.155,1
• D.1.1 FAVEUCO (Incl. Departments)	10.301,2	7.779,3	9.384,8	9.155,1
• D.1.2 VTH	--	--	--	--
• D.1.2.RUTF	--	--	--	--
D.2 General equipment	68.456,6	32.252,0	84.878,8	61.862,5
• D.2.1 FAVEUCO (including Departments)	3.501,9	3.960,8	7.939,1	5.133,9
• D.2.2 VTH	64.384,3	28.279,4	76.850,4	56.504,7
• D.2.3. RUTF	570,4	11,8	89,3	223,9
Total expenditure	13.177.653,0	14.461.781,8	14.016.760,2	13.885.398,3

¹ Covered directly by the Central Services of UCO; 2 Not applicable at the UCO (see section 2.1.4 for details).
2019 data run until 30 June

FAVEUCO, the VTH and the RUTF, like other UCO entities (faculties, departments, university research institutes, services and activities), operate within a general funding system in which the UCO management centrally covers payment of all the main expenditure related to staff salaries and maintenance costs (electricity and water supply, cleaning, security and gardening, repairs, etc.), including services and work contracted out to external companies.

Therefore, a distinction is drawn between two types of expenditure at FAVEUCO, VTH and RUTF:

- Direct FAVEUCO, VTH and RUTF expenditure, defrayed with the income included in sections B, H and J of Table 2.1.2 for FAVEUCO and sections D and E for the VTH and RUTF respectively.
- Direct expenditure by UCO Central Services, defrayed with the income included in sections B, H and J of Table 2.1.2.

Table 2.1.2. Annual revenues for the last three academic years (in euros)

	2018	2017	2016	MEAN
A Public authority (UCO budget)	12.624.438,6	14.279.090,9	13.085.419,5	13.329.649,7
A.1 Academic staff	9.735.937,7	10.504.149,8	10.501.486,3	10.247.191,3
A.2 Support staff	385.795,7	373.545,3	372.459,4	377.266,8
• A.2.1 FAVEUCO (incl. Departments)	221.027,5	221.027,5	221.027,5	221.027,5
• A.2.2 VTH	148.494,4	136.244,0	135.158,1	139.965,5
• A.2.3 RUTF	16.273,8	16.273,8	16.273,8	16.273,8
A.3 Researchers	380.940,0	554.940,0	906.660,0	614.180,0
A.4 Utilities (FAVEUCO + VTH + RUTF)	911.302,8	921.961,8	866.624,0	899.962,9
A.5 Maintenance costs ¹	1.052.946,9	1.844.431,4	249.662,7	1.049.013,7
A.6 General equipment	157.515,5	80.062,5	188.527,1	142.035,1
B Tuition fee (standard students)	575.118,3	553.215,0	734.928,5	621.087,3
C Tuition fee (full-fee students) ²	--	--	--	--
D Clinical services VTH	699.106,2	778.054,9	779.367,9	752.176,3
E Diagnostic services VTH ³				
F Other VTH services (UCO and other Public Institutions' endowment)	585.000,0	459.000,0	550.300,0	522.000,0
G Research grants	999.231,0	937.032,6	955.751,2	964.004,9
H Continuing and Postgraduate Education	NA	NA	NA	NA
I Donations	20.000,0	20.000,0	None	20.000,0
J Other sources (renting facilities)	None	None	None	None
Total Revenues	15.502.894,2	17.026.393,4	16.105.767,0	16.211.684,9

NA= non-available.

¹ Covered directly by UCO Central Services; ² Not applicable at UCO (see section 2., 1.4 for details); ³ Revenues included in clinical services.

2019 data run until 30 June

Table 2.1.3. Annual balance between expenditures and revenues (in euros)

YEAR	TOTAL EXPENDITURE	TOTAL REVENUES	BALANCE
2016	26.124.589,0	15.927.926,4	10.196.662,6
2017	27.367.048,5	17.462.938,8	9.904.109,7
2018	24.906.027,5	15.853.989,9	9.052.037,5
Mean	26.132.555,0	16.414.951,7	9.717.603,3

The annual balance of expenditure and income is positive, due mainly to the tuition fees, which are collected and administered in their entirety by the Rector's Office and not by FAVEUCO. All expenditure is covered in any event, with UCO absorbing any balance, whether positive or negative.

UCO's faculties receive annual funds from the Rector's Office, in accordance with the provisions set out in the Funding Model of the Andalusian regional government

for Public Universities 2017-2021, to cover part of the so-called Ordinary Expenditure on goods and services (those not covered by UCO Central Services). This contribution is established by agreement of the Governing Council, at the behest of the Economic Affairs Commission, in light of the distribution criteria set out in the UCO budget (maintenance, library, management and contractual programme; **ANNEX 2.A**). Funding instruments are also established through the Andalusian R&D&I Plan (**PAIDI**) in the university domain. Receipt

of these funds is dependent on the attainment of the targets set out in the contractual programmes, the competitive tendering processes and the availability of funding from the Andalusian regional government.

FAVEUCO, like the other faculties located at the Rabanales Campus, does not receive funding for library and maintenance expenditure, such expenditure being met

by UCO Central Services (ANNEX 2.A). Of the remaining budget (60% of the total), it receives a fixed allocation of 9.9% for management expenditure, the remaining 90.1% being variable, in accordance with the number of students enrolled and the results of the contractual programme. The annual total allocated to FAVEUCO in the last three years is shown in Table 2.1.4.

Table 2.1.4. Annual funds for the direct management of the Veterinary Faculty (FAVEUCO) and provision for the last three calendar years.

	2016	2017	2018	MEAN
FAVEUCO (excluding Departments)	€54.860,4	€57.891,5	€45.553,5	€52.768,5

Additionally, since 2017 FAVEUCO has received an annual payment of €20,000 from the Córdoba provincial government for organising and developing tutored Practical Training, the expenditure being accounted for in Current spending, goods and services (non-inventoried items).

The Governing Council, at the behest of the Economic Affairs Commission, also establishes the annual payment to each of the UCO Departments, in light of the distribution criteria set out in the UCO budget: fixed allocation, teaching staff, ECTS charge, contractual programme). This distribution can be found at **ANNEX 2.B**.

Each department receives a fixed allocation (10% of the total) and a variable allocation (up to 90%) in accordance with its teaching and research staff (at full-time equivalent), the number of credits taught at Degree's and Master's level, the number of enrolments, the total number of faculties at which teaching is provided plus the number of areas and the results of the contractual programme (ANNEX 2.B), and in accordance with teaching indicators (participation in Academic Counselling sessions; management of Projects, Dissertations Thesis and Master's Dissertations, online teaching material (UCODIGITAL), etc.), research and transfer (income from competitive projects, LRU 83 research and development contracts, tenured and non-tenured teaching and research staff's six-year terms, etc.), and management (meeting deadlines for submitting official paperwork, participation in the management of the university, etc.).

UCO also provides another type of support with specific funds to complement departments' and faculties' budgets in terms of their teaching expenditure; for example, they can make applications to the Best Teaching Practice and Innovation Plan, which consists of six

different types of help for UCO's teaching and research staff as well as for staff in training, and the Support for Improvement Plans, among others.

Of the total extra revenues, derived from the numbered sources, UCO withdraws the percentage set out below:

1. Clinical services: The revenues of the VTH are entirely managed by UCO via the Enterprise Corporation. The profits of the VTH are reinvested in the VTH itself. It should be noted that all clinical services are subject to 21% VAT (Value Added Tax).
2. Livestock facilities: income from the RUTF is reinvested in UCO's facilities.
3. External and diagnostic services (Art. 83, Organic Universities Law): 15% excluding VAT of the income from this service.
4. Research grants/projects: 21% of the income to pay for the indirect management costs
5. Other revenues (Continuous and Extended Education, Diplomas, etc.): 15% of the enrolment fees.

2.2 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.

The main goal of the VTH and the RUTF is to train students. Despite the fact that the VTH charges market prices for its clinical and field services, so as to avoid unfair competition, its services are offered free to non-profit-making organisations, such as animal shelters, in order to ensure enough clinical cases for training purposes. In addition, the transport required for fieldwork is ensured by using rental cars, the cost of which is borne by the Dean's Office, which receives

funds for extramural activities from the Rector's Office and the Córdoba provincial government.

The VTH forms part of the UCO Enterprise Corporation and receives an annual endowment from UCO, based on the estimated operating costs of the year before. UCO pays the costs related to public utilities (electricity, water consumption, heating and cleaning services). In addition, the VTH is self-financing in terms of clinical,

diagnostic and other services, increasing its annual budget. This budget covers the costs of:

- Staff (wages, salaries and the like):
- Supplies (consumption of merchandise, raw materials and other consumable products, work undertaken by other companies, etc.)
- Other operating costs (external services and fees).
- Amortisation of fixed assets.

Table 2.2.1. Annual funds for the direct management of the Veterinary Teaching Hospital (VTH) and provision for the last three calendar years.

	2016	2017	2018	MEAN
Annual allocation	550.300,0	459.000,0	585.000,0	531.433,3
Self-financing	779.367,9	778.054,6	699.106,2	752.176,2
Total	1.329.667,9	1.237.054,6	1.557.106,2	1.374.609,6

The RUTF receives an annual budget from the Institutional Coordination and Infrastructure Vice-Rector's Office to meet costs related to current expenditure on goods and services (feed, medicine, non-inventoried

items, etc.) incurred by the pig, small ruminants and large animal facilities. Since this quantity does not normally cover the ordinary expenditure, the Rector's Office usually supplements the final amount (Table 2.2.2).

Table 2.2.2.- Annual funds for the direct management of the Veterinary Teaching Farm (RUTF) and provision for the last three calendar years.

	2016	2017	2018	MEAN
Annual allocation	10.000,0	15.000,0	15.000,00	13.333,3
Supplementary contribution	23.273,0	9.690,0	10,261.00	14.408,0
Total	33.273,0	24.690,0	25,261.00	27.741,3

FAVEUCO's degree of autonomy in the financial process is limited, owing to the fact that most income and expenditure is administered directly by the Rector's Office. FAVEUCO only receives the annual budget distributed in the terms set out in 2.1, and cannot obtain income by renting out facilities (conference rooms, laboratories or operating theatres for events), these being centralised in the university campus and other UCO services. That said, there is certain room for manoeuvre in other activities such as research (grants and projects), university outreach courses and organising conferences and symposia, where any member of academic staff can instigate the desired activity and manage, under the terms of UCO regulations, the additional income.

The entity with the most flexibility is the VTH. It manages the direct clinical and diagnostic services like a business. Moreover, it can establish a business plan that involves renting the space to professionals and companies for research and any other type of activity of which

the administration approves, based on the VTH goals of educational excellence.

The RUTF is managed by the Institutional Coordination and Infrastructure Vice-Rector's Office and is able to obtain additional income, applying the rates set by UCO, for the use of its facilities and animals in order to undertake trials, academic activities and/or research projects.

2.3 Resources allocation must be regularly reviewed to ensure that available resources meet the requirements.

The repair, maintenance and purchase of infrastructure are coordinated and administered at a campus rather than a faculty level. FAVEUCO is represented on the Campus Committee and therefore participates in decision-making regarding the improvement and refurbishment requirements of facilities and buildings. The university carries out an annual review of the requests

submitted by the faculties. In 2017, 2018 and 2019, UCO prioritised FAVEUCO, the VTH and the RUTF to update some infrastructure and equipment, as set out below:

**COMMON TO THE FAVEUCO
AUDITORIUM, DEPARTMENTS,
THE VTH AND RUTF**

	AUDITORIUM	VTH	RUTF
Biosecurity plan.	New FAVEUCO multiple-use room.	Refurbishment and updating of facilities (equine clinic floors, isolation zones for small and large animals, pre-anaesthetic room).	Refurbishment and updating of facilities: Multi-purpose unit (updating of changing rooms and creation of a practical teaching room).
Refurbishment of the VTH and Department of Animal Medicine and Surgery building.	Renovation of specific infrastructure (Laboratories for practicals and seminars).	New waiting room, clinic and cat hospitalisation facilities.	Refurbishment and updating of facilities: Small ruminants unit (updating of both indoor and outdoor facilities).
Air-conditioning of freezer room.	New spaces for the faculty secretaries.	Updating of equipment: Computerised axial tomography, X-rays, flexible and rigid endoscopy, sonography, anaesthetic machine, electro-surgery and laser surgery.	Refurbishment and updating of facilities: Pig unit (complete redesign of the facility).
Experimental regenerative therapy unit for osteoarticular pathologies in non-rodent mammals.	Improvement in the indoor signage (classrooms and secretarial offices).	Purchase of mannequins.	Refurbishment and updating of facilities: Construction of new stable for large animals.
Integrated unit for the invitro production and micro-handling of domesticated animal embryos.	Updating of indoor courtyards and outdoor areas.	IN PROJECT STAGE Small animal clinic: refurbishment of floors and corridors	Improvement of the farm layout.
Updating of the tasting room, experimental kitchen attached and the Bromatology and Food Technology Department's rooms C1S1 and C1S2.	Air-conditioning upgrade.	IN PROJECT STAGE Upgrade of small animal hospitalisation and ICU.	
Refurbishment and updating of the Biochemical and Molecular Biology Department's computer room.	Canteen service upgrade.	IN PROJECT STAGE Upgrade of outdoor parks.	
Updating of horizontal and vertical signage on campus.	Upgrades in the photocopying service.	IN PROJECT STAGE On-campus signage.	
Replacement of Wi-Fi routers.	Provision of new spaces with microwave ovens for self-service food.		
Assembly points for emergency plans. Two new bus stops (Aulario Averroes and Apeadero ADIF).			

The cost of these works and investments (already made, underway or planned) will come to more than €1,000,000 and will be financed by the Rector's Office, via what is known as a RAM request for works or as specific items in the UCO budget.

As has already been mentioned, the UCO budget has increased over the last three years, and it is therefore to be hoped that this increase will have a similar impact on FAVEUCO. Moreover, funding and resource management constitute one of the greatest priorities of the 2nd UCO Strategic Plan (<https://www.uco.es/transparencia/plan-estrategico>), with some guidelines for the next three years based on improving resource recruitment

and control and accountability in the responsible management of public resources.

The FAVEUCO Infrastructure and Finance Committee (chaired by the Dean and with the Registrar and Dean's Executive Team) scrutinises funding requirements with the heads of department. This committee is responsible for proposing the distribution of the ordinary budget and evaluating any other source of income, expenditure or investment put forward by the departments. The Faculty Board subsequently approves the budget. The departments and the Faculty Board are responsible for notifying staff and students, as well as implementing and overseeing the budget, which is administered by the FAVEUCO administrative Secretary.

In this context, the following work and investments were financed by the Rector's Office and carried out at the VTH in 2017 and 2018:

- External work (foundations and facades) €598,344.41
- Internal work (refurbishment): €386,146.75

The RUTF's expenditure, investments and income are calculated by its Director and submitted to the Farm Administrative Council for comments and approval. The Faculty Board is also periodically notified. The same pattern applies in the case of the VTH, with the Administrative Council of this body being responsible for scrutinising and approving the investments, in accordance with requirements.

Applications for any expenditure that exceeds the ordinary budget need to be submitted yearly, as extraordinary spending, to the Campus Committee for approval. The Rector's Office decides the infrastructure projects to be carried out, after evaluating all the faculties' applications, in accordance with budgetary availability.

Comments on Standard 2

FAVEUCO's overall process of financing is legally determined and has positive aspects such as the centralised payment of salaries, general maintenance and operating costs. Moreover, the VTH, RUTF and departments administer their own budgets, which means that the Faculty controls a very limited budget that restricts its room for manoeuvre in many instances.

UCO is sensitive to FAVEUCO's exceptional needs stemming from the Faculty's large and unique infrastructure. However, it is not always fully appreciated that the cost of a Veterinary Medicine degree student is much higher than that of other degrees and the distribution of the budget rarely takes this consideration into account.

The Faculty does not have financial autonomy in the area of equipment; there is no provision for an equipment budget *per se*, and the departments have very little autonomy. Investment in large and medium-sized equipment requires specific funding from the university or external funding in the form of a competitive tender for a national or regional government grant for scientific infrastructure and/or research projects.

Investments in infrastructure (buildings, facilities, refurbishment) are dealt with at the campus level. FAVEUCO is involved in decision-making, submitting annual applications for building maintenance work, via the faculty's Infrastructure and Finance Committee, and channelled

through the Vice-Rector of Institutional Coordination and Infrastructure.

Suggestions for improvement on Standard 2

Given that UCO depends to a large extent on public funding and therefore is subject to the Contractual Programme signed with the Andalusia regional government, the possibilities for major changes are limited. However, our main suggestions are:

- A budgetary model that, within UCO, places greater emphasis on the differentiating and special nature of the Veterinary Medicine degree.
- Any improvement in the budget that, in accordance with the general UCO budget, takes into account the funding of activities that are necessary for veterinary training (such as mobile clinics) and the maintenance of buildings with specific characteristics (the VTH, RUTF, etc.).
- There is a need for the urgent renovation of equipment and the acquisition of more up-to-date equipment to remain and become more competitive as a leading VTH in the practical education and training of students.
- Additionally, investment in mannequins for acquiring clinical skills is highly important. UCO and the General Council of Veterinary Colleges of Spain have funded the cost of some large and small animal mannequins. A plan to acquire this equipment through co-funding between FAVEUCO and the clinical departments is being studied.
- In terms of external sources of funding, one possible source consists of donations and some have already been received by the VTH and RUTF. Efforts are currently being made to explore this source of funding with companies and organisations in the public and private sector.



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. The curriculum must include the subjects (input) and must allow the acquisition of the Day One Competences (output) listed in Annex 2. This concerns Basic Sciences, Clinical Sciences in companion animals (including equine and exotic pets), Clinical Sciences in food-producing animals (including Animal Production and Herd Health Management), Food Safety and Quality, and Professional Knowledge.

The foremost goal of the curriculum is to ensure that students acquire an appropriate level of knowledge and ability in all fields of the veterinary profession through a learning process based on competences and skills (<https://www.uco.es/organiza/centros/veterinaria/es/objetivos-y-competencias>). It is structured around a list of 90 competences divided into four categories: basic competences (5), general UCO competences (3), transversal competences (8) and specific competences (74); these are completed with the FAVEUCO Day One Abilities (41, **ANNEX 3.A**). The FAVEUCO set of competences and abilities corresponds to the list of Day One Competences and the knowledge and understanding requirements specified by EAEVE. A detailed list of correspondences between both is included in **ANNEX 3.B**.

The FAVEUCO curriculum is fully compliant with European Directive 2005/36/EC and Directive 2013/55/EU, as transferred into Spanish legislation by RD 1837/2008 (<https://www.boe.es/eli/es/rd/2008/11/08/1837>), which regulate veterinary studies in the European Union, and Order ECI/333/2008 (<https://www.boe.es/eli/es/o/2008/02/13/eci333>), which establishes the objectives, competences and modules that must be included in the studies of all Spanish veterinary teaching establishments. This legislation requires the curriculum to be delivered over a minimum of five years, including compulsory subjects for the three professional profiles, namely Medicine and Health, Animal Production and Economics and Food Hygiene and Food Technology.

A teaching plan of 300 ECTS credits has been devised, divided into modules as set out in the following table (http://www.uco.es/docencia/grados/images/documentos/grados_centro_f_veterinaria/grado_veterinaria/ordenacion_veterinaria.pdf):

NAME	ECTS
Common Basic Training (Basic Veterinary Sciences)	102
Clinical Sciences and Animal Health	108
Animal Production	30
Food Hygiene, Technology and Safety	24
Tutored Practical Training (including VTH rotation and External Practical Training)	24
Elective subjects	6
Graduation Thesis	6
Total ECTS	300

Each module is made up of different **subjects** (<https://www.uco.es/organiza/centros/veterinaria/es/planificacion-de-la-ensenanza>), taught over the course of a semester (a four-month subject) or over the course of an academic year (annual subject). The Tutored Practical Trainings (TPT) which include external practical training, and the Dissertation Thesis are offered in the final semester (semester 10). The comprehensive relationship of all subjects and units of study is included in **APPENDIX 2**.

The curriculum offered by FAVEUCO contains enrolment incompatibilities between subjects (key subjects) that are deemed to be linked, and these require that the credits pertaining to a previous subject have already been acquired for students to be able to satisfactorily enrol in and take them. The students are notified of these requirements in the induction days, in the teaching guides and on the website (http://www.uco.es/veterinaria/images/documentos/gveterinaria/9_asignatura-llave-vet.pdf). These requirements are periodically reviewed by the faculty's Quality Assurance Unit (QAU) and Teaching Commission, based on the prospective results and the indicators that have been proposed (performance, success, graduation and drop-out rates).

The learning strategy incorporates various training activities, which include theoretical classes, seminars, learning based on problem-solving, evidence-based medicine, laboratory and desk-based work, non-clinical work with animals and clinical work with animals (**Table 3.1.1**)

Table 3.1.1. Curriculum hours in each academic year taken by each student

ACADEMIC YEAR	A	B	C	D	E	F	G	H
1st	297,5	33,5	320	129	88	0	34	902
2nd	286	24	287,5	145	34	58	32	866,5
3rd	280	50	350	24	24	160	23	911
4th	295	60	300,5	31	0	181,5	26,5	894,5
5th	138	18,5	216	66	102	297	13,5	851
	1296,5	186	1465	398	248	696,5	129	4419

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (tutorials, field visits, reports, expositions and evaluations); H: total

The various training activities take place in groups of varying sizes. The group size is governed by the UCO academic regulations (<http://www.uco.es/docencia/grados/normativa>) and by the curriculum's "Verifica" document approved by the Spanish Ministry of Education. Each subject, depending on the area of knowledge to which it belongs, is assigned an experimental coefficient according to which the various types of group and the credits taught in them can be organised.

- Large groups, of 65 students per group, where theoretical classes (lectures) are delivered.
- Medium-sized groups, of 25 students, where class-based practical training, seminars and supervised self-learning take place.
- Small groups, of 12 students, for clinical and non-clinical practical activities.
- Very small groups of six students, for hospital practicals that entail highly-restricted groups of students and for TPT.

The number of each type of group is decided by the faculty each year (known as the Annual Programming of Teaching Organisation, PAOE), depending on the number of students enrolled in each subject, and is approved by the Faculty Board with the agreement of the departmental heads of teaching, who need to allocate the teaching staff (Department Teaching Plans). The number of hours assigned to each activity is proposed by the professors of each subject and published in the Teaching Guides (<https://www.uco.es/veterinaria/es/planificacion-de-la-ensenanza>), approved by the Department Council, reviewed by the QAU and the Faculty Board (all with student representation). Coordination meetings are held in May and June, with the participation of professors and students, to determine the theoretical and practical hours of each subject, as well as the timetable for final exams. Having been approved by the Faculty Board, they are published prior to the enrolment

period for the following academic year (<https://www.uco.es/veterinaria/es/horarios-aulas-y-examenes>).

To carry out the activities in small and medium-sized groups in the first year, each student is allocated to the groups by the course coordinator; from the second year onwards they can choose the practical groups via an application available on the Moodle platform for each subject. Students in the semester 10 take the TPT and Graduation Thesis as subjects, which are governed by the regulations passed by the Faculty Board and the UCO Governing Council.

Since the 2016/2017 academic year, FAVEUCO has offered bilingual modules to students who can demonstrate at least a B1 level (as defined by the Common European Framework of Reference for Languages, CEFR), offering various subjects in English, something that is registered in the students' academic record. This offer is regulated by UCO (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2017/00565>) and fulfils one of the objectives of the Faculty's strategic plan (Plurilingual Plan). The offer of subjects in English, which is published every year on the website, currently comprises a module of 60.8 ECTS credits with 17 subjects (<http://www.uco.es/veterinaria/vet-food/studies/degree-veterinary-medicine-english-itinerary.html>). Students wishing to register for the plan do so online (<http://www.uco.es/veterinaria/vet-food/enrollment-form/index.php/inscripcion/mensaje>). In order to provide the training and support needed for all the teaching staff and students involved in the Plurilingual Plan, language training courses and the support of language assistants is offered, to aid preparation and use of the material for the classes, to aid understanding and to help resolve problems of a linguistic nature.

Current Spanish legislation treats the veterinary profession as a regulated profession that requires practitioners to hold the corresponding official degree. Thus

Royal Decree 1393/2007, amended by Royal Decree 861/2010, stipulates that the Ministry of Education and Science must specify the contents that have to be included in the curriculums of official degrees enabling holders to practise regulated professions. The characteristics of the curriculum are regulated by the resolution of 17 December 2007 (Spanish State Gazette 21 December 2007), and order ECI/333/2008, dated 13 February (Spanish State Gazette 15 February 2008), which stipulate the conditions leading to the qualification needed to exercise the veterinary profession.

The curriculum proposed by FAVEUCO was formally verified by the Spanish quality standards agency ANECA (an ENQA member) on 26 June 2010, and approved by the Spanish Ministry of Education on 11 November 2010 (published in the Spanish State Gazette on 11 February 2011), and its accreditation was renewed by the Andalusian quality standards agency DEVA (an ENQA member, <http://deva.aac.es/?id=enqa>) on 19 July 2017. The Degree in Veterinary Medicine awarded by the UCO was recognised by the Spanish Ministry of Education as a MECES 3 qualification (QF-EHEA Second Cycle, i.e. Master's level) on 25 April 2015 (<http://www.uco.es/veterinaria/images/documentos/gveterinaria/grado-vet-meces-master.pdf>).

All aspects relating to the qualification and its legal status are included in the Ministry of Education's Register of Universities, Faculties and Qualifications (RUCT) under the code 2501787 <https://www.educacion.gob.es/ruct/estudiocentro.action?codigoCiclo=SC&codigoEstudio=2501787&actual=estudios>

Royal Decree 1393/2007 stipulates that modifications can be proposed to the curriculum on the part of universities once a year and that these need to be approved by the regional quality standards agency (in this case, DEVA-AAC). The university, and in particular the faculty, need to identify such modifications and if they are substantial report them to the Council of Universities (Ministry of Education). "Substantial modifications" are classed as those that affect the administrative definition of the degree or its essential academic characteristics; they entail initiating an evaluation process of the degree, and the modification request needs to be submitted to the Council of Universities. "Non-substantial modifications" involve lesser changes that improve the curriculum and that the university can implement as an outcome of the annual monitoring process, and need to be accepted by DEVA. There is a procedure established by UCO, based on the recommendations of DEVA-AAC, whereby the QAU for the degree puts forward the modification based on the monitoring reports, which need to be approved by the Faculty Board and the Governing

Council of the University (http://deva.aac.es/include/files/universidades/modificacion/Procedimiento_Solicitud_Modificaciones.pdf?v=20181229111132).

Since the Degree in Veterinary Medicine was introduced (in the 2010/2011 academic year), modifications of a non-substantial nature have been put forward and approved, (<https://www.educacion.gob.es/ruct/estudiocentro.action?codigoCiclo=SC&codigoEstudio=2501787&actual=estudios>), the implementation of which has been overseen by the degree's QAU.

The design of the current curriculum required lengthy and complex work to achieve the greatest degree of coherence and integration, avoiding overlaps, redundancies and omissions. The work was carried out by a Curriculum Committee, appointed by the Faculty Board (<https://www.uco.es/veterinaria/es/sesion-de-12-06-08>), with the participation of members of the faculty management team (Dean and Coordinator of the QAU), representatives of all the departments, the VTH, the RUTF, the FTTP, professors, students and the administrative and service personnel. Additionally, an external Advisory Committee was set up with a representation of professionals and alumni in all areas of veterinary practice. It was carried out in accordance with the new legislation, the recommendations of EAEVE and the Veterinary Degree White Paper drawn up by the Spanish Conference of Veterinary Faculty Deans (http://www.aneca.es/var/media/150400/libroblanco_jun05_veterinaria.pdf). Having discussed and scrutinised the various amendments/objections that had been submitted, the Faculty Board (<https://www.uco.es/veterinaria/es/sesion-de-13-10-09>) approved the "Verifica" evaluation document, with all the aspects related to the curriculum (students, planning of teaching, academic staff, resources, anticipated outcomes, quality assurance system and implementation timetable), which was published on the website (<http://www.uco.es/docencia/grados/grado-en-veterinaria>) having been definitively approved by the Spanish academic authorities.

Once the new plan had been established, various mechanisms and entities for identifying and remedying possible inconsistencies, overlaps, redundancies and omissions were put into operation:

- The QAU: this is made up of representatives of the teaching staff, the administrative and service personnel, students and external stakeholders, who review the teaching guides on a yearly basis and gather information and evidence regarding the way studies are developing. It also gathers data on the degree's outcomes and performance indicators, and receives suggestions and satisfaction

reports from all stakeholders. On the basis of this data, the QAU draws up an annual self-evaluation report and drafts improvement plans.

- **Teaching Commission:** made up of an equal number of teaching staff and students, this oversees the general organisation of teaching at the faculty, receives the QAU's suggestions and forwards the improvement proposals to the Faculty Board.
- **External Advisory Committee:** made up of professionals drawn from distinct branches of veterinary medicine, employers, representatives of institutions and alumni. They advise the committees in charge of organising teaching and participate in the Faculty's and degree's evaluation and accreditation processes (AAC-DEVA).
- **Academic Coordination Meetings:** made up of the Vice-Dean for Academic Affairs and Veterinary Quality, the Degree Coordinator, whose functions are regulated by UCO, the Year Coordinators, the Student Council and representatives of the stu-

dents in each year. An evaluation is carried out of each academic year, to identify any possible overlaps or omissions, and improvements are proposed (which are submitted to the QAU). In addition, the professors of the various subjects hold meetings to coordinate the content of the subjects.

- **Faculty Board:** ultimately, this is the body responsible for scrutinising, evaluating and approving any change to the curriculum.

This **action framework** includes all the stakeholders (professors, students, administrative and service personnel and external stakeholders), and enables **reviews and decisions to be taken regarding all aspects of the curriculum**, while at the same time **notifying all those involved** via the channels that are normally used to disseminate information (the website, email, faculty notice boards and coordination meetings).

Table 3.1.2. Curriculum hours taken by each student

SUBJECTS	A	B	C	D	E	F	G	H
Basic subjects								
Medical physics	15	0	25	5	0	0	3	48
Chemistry (inorganic and organic sections)	15	10	25	0	0	0	3	53
Animal biology, zoology and cell biology	27	0	20	15	0	0	3	65
Feed plant biology and toxic plants	19	0	20	5	0	2	5	51
Biomedical statistics	12	5	35	7	4	0	2	65
Specific veterinary subjects								
Basic Sciences								
Anatomy, histology and embryology	104	17	65	0	81	0	8	275
Physiology	60	0	10	27	0	27	6	130
Biochemistry	36	0	30	42	0	0	3	111
General and molecular genetics	63	0	90	54	0	0	3	210
Pharmacology, pharmacy and pharmacotherapy	31	10	35	12	0	0	3	91
Pathology	41	0	36,5	0	10	31	8	127
Toxicology	38	5	30	0	0	27	4	104
Parasitology	30	0	30	27	0	0	3	90
Microbiology	42	0	40	28	0	0	3	113
Immunology	18	0	20	10	0	0	2	50
Epidemiology	14	0	17	14	0	0	2	47
Information literacy and data management	10	5	30	8	5	0	2	60
Professional ethics and communication	9	3	82	2	0	0	3	99
Animal health economics and practice management	8	0	10	3	0	0	0	21
Animal ethology	7	0	5	4	2	0	1	19
Animal nutrition	30	0	30	27	12	0	3	102
Animal welfare	8	0	5	5	2	0	1	21

Clinical sciences								
Obstetrics, reproduction and reproductive disorders	53	0	51,5	0	0	52	0	157
Diagnostic pathology	40	5	55	0	0	25	0	125
Medicine	71	20	50	0	0	54	5	200
Surgery	60	0	75	0	0	50	5	190
Anesthesiology	23	3	27	0	0	18	1	72
Clinical practical training in common animal species	0	0	0	0	0	180	0	180
Preventive medicine	15	4	15		0	10	1	45
Diagnostic imaging	15	0	45	0	0	14	1	75
Therapy in common animal species	14	1	20	1	0	7,5	2,5	46
Propaedeutics of common animal species	12	2	40	0	0	42	4	100

Animal Production								
Animal Production, including breeding, husbandry and economics	99,5	33,5	150	17	28	70	9	366
Herd health management	91	5	99	0	14	61	6	276

Food Safety and Quality, Veterinary Public Health and One Health Concept								
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification	20	9,5	23	11	0	0	5,5	69
Control of food, feed and animal by-products	30	15	30	12	90	0	3	180
Zoonoses	36	3	44	3	0	26	4	116
Food hygiene and food microbiology	30	16	30	11	0	0	3	90
Food technology	50	14	20	18	0	0	8	110

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others; H: total

NB: Subjects linked to Professional Knowledge are incorporated within the subcategories and include inter alia Information literacy and data management, Professional ethics and communication, Animal health economics and practice management, Clinical practical training in common animal species, Herd health management and Veterinary legislation.

Table 3.1.3. Practical rotations under academic staff supervision (excluding EPT)

TYPES	LIST OF PRACTICAL ROTATIONS (Disciplines/Species)	DURATION (WEEKS)	YEAR OF PROGRAMME
Intramural clinics (VTH)*			
Small animal medicine	Internal medicine, dermatology, ophthalmology, reproduction, animal ethology, rehabilitation-physiotherapy and image-based diagnosis	1	5
Animal Surgery, Anaesthesia and Reproduction	Surgery (soft tissue surgery, orthopaedics, odontology, neurosurgery and endoscopy) and anaesthesia (for diagnostic procedures and for surgical procedures).	1	5
Large animal medicine	Internal medicine, dermatology, ophthalmology, reproduction, neonatology, rehabilitation-physiotherapy and image-based diagnosis	1	5
Hospitalisation of small and large animals.	Includes emergencies and intensive care	1	5

Ambulatory clinics			
Large Animal Ambulatory Clinics	Ambulatory clinic for horses (2 days)	2	5
	Ambulatory clinic for ruminants (3 or 4 days)		
	Ambulatory clinic for reproduction (4 days)		
Herd Health Management			
Visits to production facilities	Small ruminant farm (especially for milk but also meat production)	1	5
	Dairy cattle farm		
	Beef cattle farm		
	Egg production farm		
	Chicken meat production farm		
	Porcine production farm (sow farm and finishing farm)		
FSQ & VPH			
Visits to slaughterhouses and food industries	Slaughterhouses (ungulates)	1	5
	Slaughterhouses (chicken)	1	
	Fish/meat/fruit/central markets	1	
Rotation in Food Hygiene and Technology, HACPP	Work in the FPU, HACPP design, implementation and validation	1	5

Table 3.1.4. Curriculum hours taken as electives for each student

ELECTIVES	A	B	C	D	E	F	G	H
Basic subjects								
English applied to Veterinary Medicine	0	10	30	20	0	0	0	60
History of Veterinary Medicine	6	2	45	4	12	0	6	75
Psychological Attitudes of the Veterinarian	16	6	13.5	0	5	0	3	43.5
Basic Sciences								
Applied veterinary anatomy	14	3	10	0	12	0	1	40
Biotechnology applied to molecular pathology	10	4	45	15	0	0	1	75
Application of Biochemical Methodologies in Veterinary Medicine	4	0	30	21	0	0	5	60
Clinical Sciences								
Veterinary ophthalmology	12	1	25	5	0	10	2	55
Veterinary oncology	14	2	15	13	0	0	1	45
Equine sports medicine	12	2	40	4	0	11	1	70
Equine medicine	0	8	30	20	0	0	2	60
Equine reproductive technologies	17	5	20	6	0	0	1	49
Equine ultrasonography	0	8	30	0	20	0	2	60
Exotic animal clinical training	10	0	20	5	0	12	3	50
Animal Production								
Organic animal production	10	10	35	1	8	0	1	65
Nutritional support of orphan, senile and sick animals	16.5	4	24	9.5	0	0	0	54
Apiculture	14	0	15	12	0	0	4	45
Care, feeding and training of dogs	16.5	0	24	13.5	0	0	0	54
Care and preparation of animals for use in the wellbeing of humans	6	3.5	37	7	12.5	0	4	70
The fighting bull	14	2	25	5	6	0	3	55
Food Safety and Quality, Veterinary Public Health and One Health Concept								
Medication residues in food of animal origin	14	4	15	10	0	0	2	45
Use of NIRS technology for feed and food characterization and safety	16	0	24	13	0	0	1	54
Microbiology of foodstuffs	11.5	12.5	15	0	3	0	3	45
Food industries	17	5	14	0	6	0	2	44

Ecopathology of wild fauna	10	5	20	2	9	0	4	50
The laboratory animal	12	5	15	1	1	10	1	45

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others; H: hours to be taken by each student per subject group

Other courses, sessions and activities aimed at the students are offered by the Faculty every year. These relate to topical and cutting-edge issues in the various branches of knowledge – scientific, humanistic and artistic – and are organised through the Student Council in the cultural week. This is promoted through the various “Aulas” of the Student Council (<https://www.uco.es/veterinaria/es/informacion-institucional#demo19>), under the supervision of the Vice-Dean for Students and International Relations, the Student Coordinator and the Annual Student Recruitment Plan (PACE).

The Dean’s Office also organises a range of activities aimed at students, notably the Career Opportunity Days (annually), and the Veterinary and Science and Technology of Foods Conference (biannually), fundamentally aimed at students in their final years, and where information is provided about possible career opportunities in the fields of medicine, animal production, bromatology and food technology, research and teaching; these are publicised on the website (<https://www.uco.es/veterinaria/es/cursos-y-otras-actividades>) and on social media.

In the Common Basic Training module, some subjects include teaching activities (whether involving work with animals or not) that provide clinical insight (pre-clinical activities).

In the FIRST YEAR, semester 1 (S1) and semester 2 (S2):

- In **Systematic Anatomy (S1, 6 ECTS)**, main anatomical points used for diagnosis and therapy are studied, using practical material and live animals.
- In **Neuroanatomy and Topographical Anatomy (S2, 6 ECTS)** explorations and explanations are made regarding the anatomical points needed for interventions and the application of treatments via various routes (IV/oral, subcutaneous, rectal, etc), using practical material and live animals.
- In **Embryology (S1, 3 ECTS)**, the students handle placentas, embryonic sacs and foetuses in various stages of development, both normal and otherwise, from various species.
- In the SECOND YEAR (S3 and S4):
- In **Microbiology and Immunology (S3 and S4, 12 ECTS)**, students work on bacterial growth and isolation techniques, bacterial identification and

counting, antibiograms and techniques for growing and isolating fungi and viruses.

- In **Parasitology (S3, 6 ECTS)**, biological samples are handled in order to study and identify the various types of parasite.
- In **Animal Physiology (S3 and S4, 12 ECTS)**, students carry out electrocardiograms, exercise tests on horses, haematological staining, pulse, temperature and auscultation recordings, and analysis of normal cardiac sounds in dogs and horses.
- In **General Pathological Anatomy (S4, 4.5 ECTS)**, the main post-mortem changes in the various organs and systems are described and lesions are studied under the microscope.
- **General Pathology (S4, 4.5 ECTS)** addresses the interpretation of biochemical profiles and the presentation of cases classified by the various corporal systems.
- In **Pharmacology (S4, 6 ECTS)**, practical sessions are carried out on pharmacodynamic and pharmacokinetic simulations, technical datasheets of medications, dosage, posology and the pharmacological evaluations of pharmacological products are analysed, as well as case studies.

The following **clinical activities** are undertaken in the Clinical Sciences and Animal Health module.

In the THIRD YEAR (S5 and S6):

- In **Propedeutics (S5 and S6, 6 ECTS), in groups of 12 students per professor (small groups)**, practical sessions are conducted lasting a total of 44 hours on the handling and restraint of animals and protection measures, the various organs’ areas of projection and methods for their physical exploration, complementary diagnostic techniques, collection of samples and procedures and techniques for their analysis and interpretation.
- In **Parasitic Diseases (S5 and S6, 9 ECTS), with a total of 45 hours in small groups** the practical learning is oriented to the diagnosis and control of parasitic diseases, with clinical training on diagnostic methods in the Diagnostic Service.
- In **Infectious Diseases (S5 and S6, 12 ECTS), in groups of 24 students (medium-sized groups)**,

for a total of 25 hours, and small groups for a total of 35 hours, attention focuses on epidemiology, pathogenesis, diagnosis and control of infectious and contagious illnesses produced by bacteria, fungi, viruses and prions. Practical lab sessions are carried out in the Diagnostic Service, which are complemented by clinical sessions and the students also do **extramural practical training (groups of four students)**, with associate professors, at various livestock facilities.

- **Systematic Pathological Anatomy (S5 and S6, 9 ECTS), in medium-sized groups (20 hours)** addresses the study of morphological alterations, grouped by apparatus and systems, to reach a diagnosis of diseases and in **small groups (25 hours) necropsy** practicals are carried out, with a Diagnostic Service and clinical sessions.
- In **Image-based Diagnosis (S5, 3 ECTS), 10 hours of clinical practice** are carried out in **small groups** covering radiology, CT scanning, abdominal ultrasound and echocardiography **and three hours of seminars**. The students have ultrasound scanners at their disposal and they themselves carry out the ultrasound on dogs, supervised by a professor. Students also give a presentation and defence of the teamwork they have done on aspects of the subject.

The core of clinical practice takes place in the FOURTH YEAR (S7 and S8).

- In **Surgical Pathology (S7 and S8, 12 ECTS)**, supervised practicals are carried out on suture techniques, dressings, surgical material and sterilisation methods, preparation of the operating area, and clinical healthcare practice in the VTH's Small and Large Animals Surgery Service in **small groups (31 hours)** and **medium-sized groups (9 hours)**; there are an additional **10 hours in very small groups** (fewer than five students).
- In **Internal Medicine (S7 and S8, 15 ECTS)** healthcare practicals are carried out in internal medicine clinics at the VTH in **small groups (30 hours)**, under the supervision of a teaching clinician. Students are responsible for the clinical history and exploration of the animals, take and dispatch samples with their respective reports, carry out basic analytical techniques and interpret the results, diagnosing the most common illnesses. They also engage in clinical seminars on small and large animals where various clinical cases of particular interest are reviewed in **medium-sized groups (45 hours)**.
- The practicals in **Reproduction and Obstetrics (S7 and S8, 10.5 ECTS)** are of two kinds: supervised practicals, aimed at acquiring skills in lab

techniques (semen analysis, cervical smears, etc.) and clinically-oriented practicals (for example, diagnosis of gestation and hormonal control methods of the oestrus cycle) in small ruminants on the farm with exploration methods (rectal palpation, ultrasound, etc.) in **medium-sized groups (30 hours)** and healthcare practicals in **small groups (22 hours)**, in which the students attend the VTH's Reproduction Service clinics, assisting the healthcare work of the professors attached to the VTH.

- In the **Anaesthesiology and Intensive Care** subject (**S7, 4.5 ECTS**) seminars are programmed on monitoring and equipment, clinical cases and the application of protocols for ambulatory anaesthesia, partial intravenous anaesthesia (PIVA), in **medium-sized groups (6 hours)**. In **small groups (8 hours)** practicals are conducted dealing with cardiorespiratory complications and reanimation, intubation and catheterisation, with the anaesthesia machine, clinical cases and pain monitoring. Lastly, in **very small groups of six students (5 hours)**, clinical anaesthesia practicals are programmed.
- The **Pharmacotherapy** subject (**S7, 3 ECTS**), in **medium-sized groups (13 hours)**, focuses on information regarding the use of drugs and sessions on the websites of medication agencies, legislation applied to medication, prescriptions and evaluations of medication, drug surveillance, drawing up reports, the dosage of medication, and clinical pharmacotherapy sessions are conducted.

The FIFTH YEAR (S9 and S10) is devoted to studying regulatory and management aspects of animal production and health.

- In the subject of **Toxicology (S9, 9 ECTS)**, students are taught in **small groups (18 hours)** about analytical techniques with diagnostic toxicological purposes; they study clinical cases and draw up a toxicological report in **medium-sized groups (13 hours)**, which includes an extramural activity to detect and identify toxic plants in the environment.
- **Veterinary Preventative Medicine and Health Policy (S9, 6 ECTS)** deals with the sanitary programmes in communities and regulations related to plans to combat, control and eradicate animal illnesses. This subject includes seminars in **medium-sized groups (12 hours)** on zoonosis and public health, sanitary programmes, regulations about the movement of companion animals and health policy regarding obligatorily-notifiable diseases in aquaculture, and practicals in **small groups (12 hours)** regarding biosecurity on farms, official diagnostic test and Spanish regulations related to the veterinary profession.

Core clinical rotations and emergency services (both intramural VTH and ambulatory clinics) take place within the TPT (Rotations) subject. The goal of these pre-professional practicals is for students to attain the specific competence of *Knowledge and practical application of the principles and methodologies of veterinary medicine, as well as the acquisition of the skills and competences described in the general objectives of the degree and the Day one skills and abilities*. To this end, during the TPT, in groups of five the students take part in a rotation in five shared itineraries and one individual free itinerary (EPT), with a presence rate of 80 %, until completing 24 credits and 480 hours. This rotation includes clinics activities in the VTH (4 weeks, 6 ECTS) and ambulatory clinic itineraries (2 weeks, 3 ECTS).

In any event, the students incorporate themselves into the working protocols of intra- and extramural clinical scenarios, and are supervised fundamentally by academic personnel, although on specific occasions some activities are tutored by professional practitioners, **honorary collaborators** with the FAVEUCO in the ambulatory clinic.

In the **VTH**, the students are divided, in groups of five, between the distinct clinical services of Large and Small Animals (120 hours), in shifts of direct clinical work with animals lasting six hours.

- Small animal medicine (1 week): internal medicine service (general medicine, endocrinology, gastroenterology, oncology, cardiology, neurology, hepatic diseases), dermatology, ophthalmology, reproduction, animal ethology, rehabilitation-physiotherapy and image-based diagnosis (radiology, ultrasound and CT and magnetic resonance).
- Large animal medicine (1 week): internal medicine service (general medicine, endocrinology, gastroenterology, oncology, cardiology, neurology, hepatic diseases), dermatology, ophthalmology, reproduction, neonatology, rehabilitation-physiotherapy and image-based diagnosis (radiology, ultrasound and CT).
- Surgery and anaesthesia (1 week): surgery of soft tissues, orthopaedic surgery, odontology, neurosurgery and endoscopy and diagnostic and surgical procedures.
- Hospitalisation of small and large animals (1 week): includes emergencies and intensive care.

During this period, the students actively participate in the clinical cases received by the VTH, both in the physical examination and in the handling of the animals and in the medical and/or surgical treatments of the diag-

nosed pathologies, under the supervision of the VTH veterinarians. In the hospitalisation, they take part in the treatment and care of animals that have been hospitalised for surgery and intensive care. In the Equine Reproduction Service, the students actively participate in the **Spanish Armed Forces Equine Stud Farm**; specifically in collecting semen and in assessing and preparing the sperm dose. As a complement to their training and evaluation, all students take part in the **weekly clinical sessions** with the teaching personnel and veterinarians of the VTH, where cases of hospitalised patients are presented and discussed, and articles are reviewed (Journal Club).

During the two weeks of the (extramural) **Ambulatory Clinic**, students take part in the diagnosis, treatment and control of animal diseases at livestock farms for a total of 60 hours of activity (two weeks), under the supervision of professors and tutors (EPT). The students are responsible for helping in the clinical practice and also recording the clinical cases.

A summary of the practical activities, responsibilities and writing of reports undertaken by students during the clinical rotations is included in **STANDARD 5 (5.3)**.

Transversally, over the course of the third, fourth and fifth years (S5, S6, S7, S8, S9 and S10) material related to the manufacture and control of food for human consumption is taught, grouped within the **module of Food Hygiene, Technology and Safety** (<https://www.uco.es/veterinaria/es/planificacion-de-la-ensenanza>).

- The practical element of **Food Technology and Biochemistry (S5 and S6, 9 ECTS)** is taught in **medium-sized groups (34 hours)** at the Food Technology Pilot Plant and in the Food Sciences and Food Technology Department labs, and includes analysis of the chemical composition of foodstuffs, the technology and control of food manufacturing processes and the sensorial evaluation of food.
- **Food Hygiene (S7, 6 ECTS)**, includes activities on the dangers in food manufacturing, the principles of hygiene and food legislation. Working in **small groups (11 hours)** in the laboratory, attention is paid to rapid methods (PCR and ELISA) in the microbiology and authenticity of foodstuffs, as well as general hygiene plans (GHP) and Hazard Analysis and Critical Control Points (HACCP) and hygiene-based evaluation of food processes in **medium-sized groups (16 hours)**.
- The practical training element of the **Food Inspection and Control** subject (**S8, 6 ECTS**) deals with issues involving food regulations and legislation, the health criteria and legal basis of ante- and

post-mortem inspection, and the inspection of premises, food safety and public health **in small groups (12 hours) and medium-sized groups (15 hours)**.

- In the **Food Safety Management** subject (**S9, 3 ECTS**), students work in **medium-sized groups (13.5 hours)** on the management procedures of food safety in the agrofood sector, focusing on the application of the evaluation and management of food risks, the General Health Register of Food Companies and Foods, the design of self-control systems for managing safety in the food supply chain and procedures for supervising and verifying self-control systems.

Moreover, the TPT subject includes the specific itinerary in **Slaughterhouses** (3 ECTS), and **Food safety and Food Technology Pilot Plant** (3 ECTS). In this itinerary the students are tutored by teaching staff belonging to the Official Inspection Services whose main activity is the inspection of food establishments and slaughterhouses. The main objective is knowledge of the system that ensures food safety in all sectors. During these practicals, the students practise the skills acquired in earlier years in the field of hygiene, inspection and control, food safety, food technology and management of food safety. The goal is a professional focus on the main hygiene and technology aspects involved in the processes of manufacturing foodstuffs, and also the application of various analytical techniques used by the operators of food businesses and official laboratories to control food (safety and quality). The practicals are supervised by official veterinary inspectors who are associate professors at the Faculty or teaching tutors attached to the "Plan of Collaboration with the Andalusian Public Health System" (SSPA), signed annually by the pertinent health authorities (**ANNEX 3.C**). The tutors are mainly associate professors (11), although tutors belonging to the local authority of Málaga (3) and the Córdoba Sur district (1) also take part.

To this end the students engage in training activities at the following establishments:

1. Slaughterhouses: students acquire first-hand *in situ* knowledge of the day-to-day activity in slaughterhouses and attend the slaughter and inspection procedures, including the reception of animals, the ante-mortem inspection, the stunning, the slaughter process, the post-mortem inspection, the storage and dispatch of the meat, and also the hygiene standards of the personnel, processes, equipment and facilities. In addition, the students receive information about traceability, health marking, specified risk material (SRM), hygiene and sanitary control of the facilities, personnel and

activities (HACCP), ISO, IFS, BRC and veterinary activity standards (documentation, seizure of products and laboratory tests). The students carry out practicals at ungulate and poultry slaughterhouses. These facilities, exhibiting high hygiene and technology standards, are mainly located in the province of Córdoba, and depend on the number of students in each academic year and the availability of professors/tutors, who are official veterinary service inspectors. The slaughterhouses that received students between the 2014/15 and 2018/19 academic years were as follows:

COMPANY	SPECIES	YEAR 16/17	YEAR 17/18	YEAR 18/19
COVAP	Pigs, ruminants	X	X	X
Hnos. ARIZA	Poultry	X	X	X
Celedonio Montilla	Cattle	X	X	
CARNICAZA	Game animals	X	X	X
FACSA	Pigs	X	X	
FAMADESA	Pigs	X		
PIZARRA	Pigs, ruminants		X	
UVESA	Poultry	X	X	
INASUR	Poultry			X

2. Other food establishments: the students become acquainted with the work that the official veterinary inspectors do in identifying and differentiating species of fish, the freshness of fish/meat/fruit, controlling the minimum size of fish, labelling, analytical measurement of additives, microbiological control, etc. They also receive training on hygiene and sanitary control (plant, fish/meat/fruit, personnel, refrigeration, freezing, etc.), inspection and control of the restaurant trade and hospital kitchens, and on the hygiene and quality control throughout the process, monitoring the appropriateness of school menus and in other professional activities (documentation, seizure or retention of products and laboratory testing). It is carried out at services related to the field of health protection: the Córdoba-Guadalquivir Health District, the Córdoba SUR Health District and the public health service of Málaga city council.

3. Food Technology Pilot Plant: The tasks that are carried out in the food industry are addressed, particularly those related to designing sampling for the quality control of foodstuffs, the basic handling of laboratory instrumentation and the preparation of solutions. They are complemented with the manufacture and quality control of foods in the pilot plant and laboratory. The students attend a seminar on the theory of sampling plans, carrying out practical cases, consulting quality standards for the detection of possible fraud and determining the quality and technological parameters of



meat. In addition, they create a raw-cured meat product and a dairy product, and conduct a sensory assessment of foodstuffs in a normalised tasting room, as well as a critical discussion of the results obtained at the end of each activity. Each student dedicates **five consecutive days (6 hours/day)** to this activity, with a **ratio of one teacher to five students**.

Training in **Animal Production** (<https://www.uco.es/veterinaria/es/planificacion-de-la-ensenanza>) takes place during the first, third and fifth years (S1, S2, S5, S6, S9) and deals with issues related to the handling, identification and improvement of breeds, production in the strict sense, nutrition, animal feeding and the manufacture of animal feeds, and the fundamentals of the economics of livestock, with animal welfare being a central principle running through the entire training process.

- In the **Animal Handling** subject (**S1, 3 ECTS**), in **small groups (14 hours)**, students work on the main systems and techniques for handling, immobilising and moving animals of veterinary interest in the SAEX and at the RUTF, the ethological principles of animal communication and their relationship with the environment, recognising the main external signs of stress.
- In the **Ethnology, Ethology and Animal Welfare** subject (**S2, 6 ECTS**), in **small groups (21 hours)**, with **4 hours** at the RUTF, students are introduced to the basic principles for the identification and evaluation of breeds and the behaviour of do-

mestic animals in relation to their proper handling and welfare. Activities are also conducted in **medium-sized groups (6 hours)**, which include visits to the municipal zoo, farms and livestock competitions, all grouped into three thematic blocks, one devoted to “outdoors”, another to animal ethology and welfare and a third to a study of the various breeds of species of veterinary interest,

- In the **Animal Production and Veterinary Hygiene** subject (**S5, S6, 12 ECTS**) the core area of animal production is addressed in **small groups (6 hours)** in the dairy laboratory and in **medium-sized groups (48 hours)**, where students apply their physiological and animal husbandry knowledge to the practical exploitation of animals, learn the technical bases of the main animal production types and their livestock facilities and apply integrated farming principles including bio-sanitary and environmental hygiene aspects. Each student carries out an individual feasibility study on a livestock farm, chosen by the student, which is presented and defended in public.
- The animal nutrition component starts in the first year with **Agriculture (S2, 3 ECTS)**, in **small groups (2 hours)** and **medium-sized groups (11 hours)**, focusing on the production, exploitation and preservation of pasture and fodder, as well as the residues and by-products of the agricultural industry used in animal feed. The students need to be able

to recognise the sources of livestock feed, and how to detect and prevent livestock harming the environment. Climographs are constructed, fertilisation and irrigation problems are considered, local plant species are studied (grasses, legumes, ligneous plants), an evaluation of plant production and preservation of pasture, fodder and agricultural by-products is conducted including a practical activity that consists of creating a herbarium.

- In the fifth year, **Animal Nutrition and Feeding (S9, 6 ECTS)** covers the nutritional requirements of animals of veterinary interest, as well as the design and evaluation of diets and the manufacture of feeds (processes and regulations). The practical components in **medium-sized groups (5 hours) and small groups (22 hours)** include recognising feeds, the design of diets and rationing at minimal cost, the use of a feed formulation programme, the evaluation of diets, methods for analysing feeds, labelling of animal feeds and the creation of labels based on feed formulas.
- The commercial perspective on animal production commences with **Data Analysis and Veterinary Management (S1, 6 ECTS)**, in **medium-sized groups (6 hours) and small groups (24 hours)**, which covers issues related to biometrics and statistics applied to veterinary medicine; students are also taught about the fundamentals of marketing and business management, fostering habits of actively looking for employment and entrepreneurial capabilities and the use of IT through data analysis and designing experiments in livestock and veterinary businesses, carrying out visits to external livestock facilities in groups of eight students, under the supervision of a teacher.
- This training is complemented with **Livestock Production Economy (S9, 3 ECTS)**, with **medium-sized groups (3 hours) and small groups (11 hours)**, which covers the economic criteria of decision-making in the livestock industry, in order to organise and optimise the livestock facility in technical and economic terms, with extramural trips in groups of eight students, under the supervision of a teacher, where data are collected for conducting a field project.

Training in animal production is completed with the Livestock enterprises itinerary (extramural) in the TPT, lasting two weeks (30 hours/week, 3 ECTS); during the first week, visits are made to production facilities (pig production, bovine dairy and meat production, equine, goat, sheep and poultry production units), attended by FAVEUCO professors **with a ratio of five students**

per teacher. During the second week, the students (in groups of five) stay for **one complete week on a production facility (EPT)**, in which they collaborate with the veterinary personnel on all the tasks within their remit. The facilities that host the students are party to the corresponding educational collaboration agreements in accordance with the provisions of Spanish regulations (Royal Decree 592/2014): ANCOS (Asociación Nacional de Criadores de Ovino Segureño, Huéscar, Granada, <http://www.ancos.org/>); EXPASA, Agricultura y Ganadería (Yeguada del Bocado, Jerez Cádiz, <https://yeguadacartuja.com/expasa/>); and IFAPA (Centro de Hinojosa del Duque, Córdoba, <https://www.juntadeandalucia.es/agriculturaypesca/ifapa/web/personas-estructuras-y-servicios/centros-ifapa/centro-ifapa-de-hinojosa-del-duque>).

FAVEUCO offers 25 elective subjects each of three ECTS, with eight subjects offered in the first year and 17 in the fifth year, within the **Recognition/Elective** module (http://www.uco.es/grados/images/documentos/grados_centro_f_veterinaria/grado_veterinaria/ordenacion_veterinaria.pdf).

The activation of the elective subjects is carried out every year in accordance with the prevailing UCO regulations (Elective subject regulations; <https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2018/00169>). When the number of applications for an elective subject exceeds the number of places available, the order of enrolment is rigorously respected. Since the introduction of the degree there has been a ratio of 3:1, which ensures there is a sufficiently wide offer every academic year. It is expected that students take six elective ECTS of the 75 on offer, taking one subject in the first year and another in the fifth year. The maximum number of students admitted per subject is 25-50. The number of students enrolled in each subject for the last three academic years is shown in the **ANNEX 3.D**.

Alternatively, rather than taking elective subjects, the students can obtain the recognition of six ECTS in the Degree studies for university activities in the fields of culture, sport, cooperation and solidarity, equality and student representation, which are officially approved by UCO (Article 60 of the UCO Academic Regime Regulations governing Degree studies; <https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2019/00582>).

The basic element for ascertaining the achievement of learning objectives is the system for evaluating and grading the subjects. The Teaching Guides for each subject set out the competences, systems and evaluation criteria required to pass them. The final grade includes the results of evaluating such competences, and hence passing a subject entails their acquisition. UCO

has academic management software (SIGMA) that enables students to consult their academic progress.

At the VTH, each student has a document certifying their attendance at hospital practicals, which records the number and type of cases attended, and which are used as an evaluation system to pass each subject. The students have a logbook of the skills that are covered in each of the itineraries that make up the subject of Tutored Practical Trainings, which ensures that they are aware of the progress they are making in their learning. The EPT sessions are deemed to be the same as the other itineraries, with their list of competences, skills and learning outcomes and their system of evaluation by the professional and academic tutors.

3.2 Each study programme provided by the Establishment must be competency-based and designed so that it meets the objectives set for it, including the intended learning outcomes. The qualification resulting from a programme must be clearly specified and communicated and must 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.

The Establishment must provide proof of a QA system that promotes and monitors the presence of an academic environment highly conducive to learning including self-learning. Details of the type, provision and updating of appropriate learning opportunities for the students must be clearly described, as well as the involvement of students.

The Establishment must also describe how it encourages and prepares students for selflearning and lifelong learning.

As set out in point 3.1, **the FAVEUCO curriculum is based on the acquisition of competences, abilities and skills** (http://www.uco.es/grados/images/documentos/grados_centro_f_veterinaria/grado_veterinaria/3_competencias_veterinaria_UCO_050514.pdf) and is designed in such a way that all the competences (and abilities and skills) to be acquired are distributed throughout the various modules and subjects that make up the curriculum, so as to ensure that all of them are covered in at least one subject (<https://www.uco.es/organiza/centros/veterinaria/images/documentos/gveterinaria/2017011-memoria-verificada-vet.pdf>).

The acquisition of competences and abilities in the various subjects of the curriculum is made manifest in **the learning outcomes**, which are also identified for each subject and in overall terms ensure the achievement of the **programme objectives**, which are those **stipulated by European** (Dir 2005/36/EC and 2006/100/EC) **and national regulations** (RD 1837/2008) governing veterinary training, complying with the training

requirements for practicing sanitary professions (Law 44/2003), in accordance with Order ECI/333/2008.

Therefore, the qualification resulting from the FAVEUCO programme is clearly specified and refers 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.

The relationship between the competences, learning outcomes and objectives for each subject are set out in the respective subject Teaching Guides (<http://www.uco.es/veterinaria/es/planificacion-de-la-ensenanza>). There is a procedure for drawing up, reviewing and publishing the teaching guides, in accordance with UCO guidelines, using a computer application that has been developed for that purpose (*Sistema de Gestión de Guías Docentes de Grado y Máster*, "E-guiado"). The professors responsible draw up the guide and it is approved by the Department Council, reviewed by the QAU for the degree, and improvement proposals are put forward if necessary to avoid omissions, duplication and inconsistencies, and they are ultimately approved by the Faculty Board. In all these processes the teaching and research staff, the administrative and service personnel and the students are represented (Department Council, QAU and Faculty Board), as has already been pointed out.

The Teaching Guides also set out the competence-based **learning strategy**, specifying the **training activities** that are going to be pursued, as well as the systems and criteria for evaluating each competence. The programmed activities are oriented towards learning not only specific content, but also the transversal competences of **self-learning, continuous and lifelong learning and an insistence on the quality of training**. To this end, both individual work and teamwork is promoted, especially in practical activities, and involvement in both in-person and distance learning activities. In this context, all FAVEUCO subjects use the Moodle platform (<https://moodle.uco.es/m1819/>), which enables personalised learning environments to be created, with multiple training tools available to students, fostering the autonomous development of their learning processes.

The Tutored Practical Trainings (S10, 24 ECTS) enable the students to confront the world of employment and orient them towards their professional futures. For its part the Dissertation Thesis (S10, 6 ECTS) requires students to conduct an exhaustive bibliographical review, explore and search for solutions to problems affecting the veterinary profession, thereby fulfilling the training-to-learn objective. **STANDARD 5** sets out the characteristics, procedures and regulations of these activities.

3.3 Programme learning outcomes must:

- ensure the effective alignment of all content, teaching, learning and assessment activities of the degree programme to form a cohesive framework
- include a description of Day One Competences
- form the basis for explicit statements of the objectives and learning outcomes of individual units of study
- be communicated to staff and students
- be regularly reviewed, managed and updated to ensure they remain relevant, adequate and are effectively achieved.

As indicated in the previous section, the degree programme was designed and developed to provide a coherent training proposal appropriate to the objectives of the degree. The learning outcomes that are pursued may be summarised in terms of the programme's basic objectives:

- Command of the hygiene, inspection and technological aspects of the production and manufacture of foodstuffs for human consumption from the primary producer to the consumer.
- Individual and collective prevention, diagnosis and treatment as well as the fight against animal diseases, whether these are considered individually or collectively, particularly zoonoses.
- Command of the breeding, handling, welfare, reproduction, protection and feeding of animals, as well as improving their productive output.
- The obtaining of products of animal origin in optimal and economically profitable conditions and the evaluation of their environmental impact.
- Knowledge and application of the legal, regulatory and administrative provisions in all areas of the veterinary profession and public health, encompassing the ethical implications of health in a worldwide context undergoing transformation.
- Development of professional practice with respect to other health professionals, acquiring abilities related to working in teams, with an efficient use of resources and quality management.
- Identification of emerging risks in all areas of the veterinary profession.

These objectives, resulting from learning over the course of the entire degree programme, rest on the set of competences and abilities the students need to acquire. The majority of the competences are specific and refer to the acquisition of knowledge and the development of abilities related to the veterinary profession, but it is also recognised that the students need to acquire more general knowledge and abilities (general and transversal competences).

As was explained in previous point 3.1, the competences and learning outcomes are established in subjects (**APPENDIX 2**), worth a minimum of three ECTS and a maximum of 24 ECTS, and the subjects are grouped into modules. Thus, the degree is structured in six modules (http://www.uco.es/grados/images/documentos/grados_centro_f_veterinaria/grado_veterinaria/ordenacion_veterinaria.pdf), over the course of five academic years, each year divided into two semesters; the subjects last either for one semester or a year (<https://www.uco.es/organiza/centros/veterinaria/images/documentos/BOE-A-2011-2700-Grado-VET.pdf>).

The curriculum includes 24 core and obligatory fields, with 40 subjects, of which 10 are annual. The annual nature of the latter is due to the fact that they are fields/subjects of great importance in the degree programme and for didactic reasons should not be separated into different subjects; for example, those involving health-care practicals. Here it should be emphasised that the distribution of these annual fields/subjects' credits respects the UCO directives, which stipulate that an academic year should not exceed 60 ECTS, divided approximately into 30 ECTS per semester, thereby enabling the students to move to other teaching centres.

The first two years (semesters 1, 2, 3 & 4) encompass the module of **basic sciences**, which brings together the basic material stipulated by Royal Decree 1393/2007 and that of Order ECI/333/2008 and European Directive 36/2005/EC. The third year (semesters 5 & 6) seeks to integrate the main subjects related to Animal Healthcare and Production, the contents of the Clinical Sciences and Animal Health module and the Animal Production module (**Clinical sciences in food-producing animals**). The fourth year (semesters 7 & 8) brings together material concerning the sick animal as an individual, once certain competences have been acquired relating to the fundamentals of diagnosis and therapy, belonging to the Clinical Sciences and Animal Health module (**Clinical sciences in companion animals**). Transversally, over the course of the third and fourth years (semesters 5, 6, 7 & 8), material related to the manufacture and control of foodstuffs for human consumption is covered, grouped within the Food Hygiene, Technology and Safety module (**Food safety and quality**). In the last year of the Degree in Veterinary Medicine, semester 9 is dedicated to the study of the regulatory and management aspects of Animal Production and Health, and of Food Safety, as well as material of an integrating nature, and in the semester 10 the TPT and the Dissertation Thesis take place (**Professional knowledge**).

In accordance with the provisions of the guidelines for creating new Degrees approved by the Governing

Council of the University of Córdoba, a European credit corresponds to 25 hours of student work, of which, the percentage of presence learning is 40% for all basic, obligatory and elective subjects (10 presence hours/credit), with the exception of the Tutored Practical Trainings subject (80%) and the Dissertation Thesis (20%).

From the time of designing the new degree programme it was taken into account that the competences, abilities and skills that are covered at FAVEUCO to achieve the degree's objectives, which are basically determined by the Spanish regulations (Order ECI/333/2008), would be organised in a manner consistent with the ESEVT Day One Competences. A table of equivalences between the competences and the objectives of each subject and the ESEVT Day One Competences, has been drawn up, such that the correspondence between the two can be clearly seen (**ANNEX 3.B**). The distribution of those ESEVT Day One Competences between the different subjects of the degree is also described in **APPENDIX 2**.

Just as with other aspects of the degree programme, this table of equivalence between the competences is subject to the degree's review and evaluation procedure.

The design, communication, evaluation and review of learning outcomes is undertaken jointly and consistently with other aspects of the degree programme (core curriculum, objectives, assessment criteria).

The basic procedure is the one set out in section 3.1, with the participation of the QAU, the Teaching Commission, the External Advisory Committee and the Co-ordination of Academic Activity meetings. The following bodies, as specific instruments of evaluation and review of end-of-degree matters (TPT, EPT and Dissertation Thesis), also take part:

- Tutored Practical Trainings Committee: the coordinators of each itinerary, the general coordinator of Tutored Practical Trainings, the Faculty Registrar and the Vice-Dean for Academic Affairs and Veterinary Quality all participate. This committee meets at least twice a year to plan and evaluate the development of curricular practical sessions, in accordance with the specific regulations (<https://www.uco.es/veterinaria/es/practicas-tuteladas>).
- Extracurricular External Placements Committee: made up of the coordinator of External Placements, the Faculty Registrar and the Vice-Dean for Academic Affairs and Veterinary Quality, this committee is in charge of the planning, development and evaluation of external placements not included in the degree programme. There are also specific regulations (<https://www.uco.es/veterinaria/>

[es/practicas-extracurriculares](https://www.uco.es/veterinaria/es/practicas-extracurriculares)), based on national regulations, RD 592/2014, governing undergraduates' external placements.

- Coordination of the Dissertation Thesis: the coordination of this matter is undertaken by the QAU and governed by specific regulations (<https://www.uco.es/veterinaria/es/trabajo-fin-de-grado>).

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
- perform on going and periodic review of the curriculum at least every seven years by involving staff, students and stakeholders; these reviews must lead to continuous improvement. Any action taken or planned as a result of such a review must be communicated to all those concerned
- identify and meet training needs for all types of staff, maintaining and enhancing their competence for the ongoing curriculum development.

As indicated in the previous section, the process of designing, communicating, evaluating and revising the core curriculum is undertaken in a joint and coordinated fashion with the other aspects of the degree programme (learning outcomes, structure, objectives, assessment criteria, etc).

The drawing up of the core curriculum was a fundamental part of the design of the new degree programme on the part of the Degree Programme Committee, as was also pointed out in section 3.1.

The procedure and the committees involved are those that have already been set out in section 3.1 and in the preceding section.

3.5 External Practical Training (EPT) is compulsory 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, herd health management, practical training in FSQ and VPH). Since the veterinary degree is a professional qualification with Day One Competences, EPT must complement and

strengthen the academic education *inter alia* by enhancing student's professional knowledge.

The main core of the **External Practical Training (EPT)** forms part of the Tutored Practical Trainings subject, as a "free-choice itinerary" (see section 3.1.5), and consists of pre-professional practical training lasting four weeks (120 hours, 6 ECTS), enabling practical specialisation voluntarily chosen by the student in any of the activities pertaining to the veterinary profession (Clinical Sciences and Animal Health, Animal Production, Food Hygiene and Inspection, Food Technology), including initiation in research (<http://www.uco.es/veterinaria/images/documentos/gveterinaria/practicas/reglamento-p-tuteladas-grado-vet.pdf>).

In the EPT the student has an academic tutor and a professional tutor (non-academic person) directly responsible for the student's training. The training involves students' direct participation in professional undertakings, in a non-academic environment, and enables them to complete and to put into immediate practice the competences and abilities acquired during their regular studies.

The procedure for selecting and awarding the practical training is regulated by FAVEUCO, and there is a Coordinator for such training, who is a faculty professor and a member of the Tutored Practical Trainings Committee, appointed by the Faculty Board. There is a procedure published on the website (<http://www.uco.es/veterinaria/es/practicas-tuteladas>) stipulating the deadlines, annual offer, adjudication criteria, period of completion and evaluation. There is a list of professors who voluntarily put themselves forward to act as academic tutors for each company, which is approved by the Faculty Board, thereby ensuring that it abides by the Spanish regulations (RD 592/2014).

The method used to allocate companies is the free choice of the students. In the event of their choices coinciding, the student with the highest number of credits in the degree at the time of the application is prioritised, and in the event of an academic centre being requested by more than one student, priority is assigned to those students who request curricular practical training rather than extracurricular training, on the basis of academic record, and to disabled students so that they can choose companies where all adaptations ensuring universal accessibility are in place, including those related to transport and access to the premises.

The **evaluation of the practical training** is carried out using a log specifically designed for such training (<http://www.uco.es/veterinaria/images/documentos/>

[itinerario-libre/veterinaria-cuaderno-evaluacion-practicas-externas.pdf](http://www.uco.es/veterinaria/images/documentos/itinerario-libre/veterinaria-cuaderno-evaluacion-practicas-externas.pdf)), and an evaluation by competences is undertaken with the input of the tutor from the collaborating entity (60% of the grade) and the academic tutor (40% of the grade), the latter being the person who determines the final grade.

As well as the EPT, FAVEUCO offers students the chance to do **Extracurricular External Practical Training (EEPT)**, which is not included in the curriculum and is therefore completely voluntary. This is undertaken outside university hours, and is offered as additional training in order to apply and complement, just as with the EPT, the knowledge acquired in their academic training, fostering the acquisition of competences, students' employability and the entrepreneurial capability. There are specific regulations governing such training (<https://www.uco.es/organiza/centros/veterinaria/es/practicas-extracurriculares>), but it follows the same application, adjudication and evaluation procedures as EPT. EEPT can be included in the degree's European Diploma Supplement.

3.6 The EPT providers must have an agreement with the Establishment and the student (in order to state 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. There must be a member of the academic staff responsible for the overall supervision of the EPT, including liaison with EPT providers.

Places are offered every year in companies that have an educational cooperation agreement with FAVEUCO, and students select various options depending on their interests. EPT can only be undertaken at companies with which the University has signed **educational collaboration agreements** ([https://www.uco.es/organizacion/secretariageneral/images/doc/docs/convenios/modelos/Convenio_Propio%20con%20marca_RD_592_2014_\(CG%2027-05.2015-2\)_FORMULARIO%20PDF%20-%20copia.pdf](https://www.uco.es/organizacion/secretariageneral/images/doc/docs/convenios/modelos/Convenio_Propio%20con%20marca_RD_592_2014_(CG%2027-05.2015-2)_FORMULARIO%20PDF%20-%20copia.pdf)), in a VTH service or within a department in the case of embarking upon research. An example of one educational collaboration agreement is included as **ANNEX 3.E**.

The educational collaboration agreements are arranged by the Faculty, and there is a UCO service for managing them, namely the University of Córdoba In-Company Practical Training and Employability Office (UCOPREM2). To date, FAVEUCO has arranged a large number of agreements with numerous Spanish and international entities and companies related to the veterinary profession, including veterinary hospitals, zoolog-

ical institutions, wildlife rehabilitation centres, research centres, food manufacturers, livestock enterprises, animal feed producers, etc. (<https://www.uco.es/veterinaria/es/convenios>; see **ANNEX 3.F** for a summary of available institutions).

Such agreements must remain in force and include as a specific annex (https://www.uco.es/organizacion/secretariageneral/images/doc/docs/convenios/modelos/Anexo_Convenio_practicas%20RD_592_2014%20JUL2018%20FORMULARIO.pdf) their educational objectives, the contents of the practical training and the generic competences to be acquired by the students during the training. In addition, a tutor from the collaborating entity and an academic tutor are assigned. Once the training has been awarded, the student must complete the acceptance document specifying the period and the timetable, which is signed by all the interested parties (tutors, faculty and student) (https://www.uco.es/organizacion/secretariageneral/images/doc/docs/convenios/modelos/Aceptacion_Convenio_Propio_RD_592_2014_CG270515%20PARA_IMPRIMIR.pdf). Students who undertake external practical training need to arrange training insurance (complementary insurance), which will cover students until the end of the academic course (<https://www.uco.es/veterinaria/es/practicas-tuteladas/2-uncategorised/122-seguro-escolar-y-seguro-cum-laude>) for any problems that might arise while the activity is being undertaken.

Name of the academic person(s) responsible for the supervision of the EPT activities

Prof. Rafael Zafra Leva, Dept Animal Health (Parasitology Unit)

Prof. Alfonso Martínez Galisteo (Vice-Dean)

3.7 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 and/or anonymously about issues occurring during EPT. The Establishment must have a system of QA to monitor the implementation, progress and then feedback within the EPT activities.

The students freely choose the companies and institutions in which they do their EPT, depending on their inclinations and interests for their professional careers. In principle, they make their choice from a list of companies that have an agreement with UCO and a specific collaboration annex for the degree in Veterinary Medicine (**ANNEX 3.F**; <https://www.uco.es/veterinaria/es/convenios>).

However the students can also look for and suggest new entities with which to establish collaboration agreements, to be subsequently agreed by UCO and FAVEUCO (<http://www.uco.es/organiza/centros/veterinaria/images/documentos/gveterinaria/practicas/solicitud-convenio-fave.doc>).

The selection and allocation procedures of the EPT are clearly set out and there is an EPT coordinator with whom the students finalise the details of their start date and working conditions.

During the EPT period, as well as fulfilling their obligations at the faculty, the students must draw up a report on their practical training and give an account of clinical cases. The students are made aware of a model EPT report and the evaluation criteria.

The students need to express their degree of satisfaction with the EPT in the report they send to their academic tutor and complete the survey regarding their satisfaction with the facilities visited and the treatment received.

During the 2018/19 academic year a digital portfolio (e-portfolio) has been developed for evaluating the competences and abilities acquired over the course of the Degree in Veterinary Medicine, as a monitoring instrument to improve the process of self-learning, enabling students to comprehend and reflect on the aforementioned process. The ultimate recipients are the students and professors involved in the Tutored Practical Trainings. The professors and students can thus identify the abilities that are evaluated and link them to the competences, ascertaining whether they have achieved their objectives, as well as setting themselves new challenges in their training and how these might be used to access professional employment. The EPT is also included in this digital portfolio.

In principle, the complaints process for EPT is similar to the one established for other degree subjects, as set out in **STANDARD 7**.

There is an official procedure for submitting complaints through the Quality Assurance Unit, and there is an anonymous procedure for submitting complaints, suggestions and endorsements, either in person or electronically (<http://www.uco.es/veterinaria/es/buzon-de-quejas-sugerencias-y-felicitaciones>).

In specific terms for the EPT, the coordinator of external placements and the subject coordinator as well as the Vice-Dean for Students are permanently available to re-

ceive reports of any incident, suggestion or complaint. The coordinator of external placements is responsible for taking initial action, getting in contact with the places concerned and the professional tutors.

Comments on Standard 3

The way teaching is organised at FAVEUCO enables students to acquire all the Day One Competences. Moreover, the structure of the degree programme takes into account the characteristics of the veterinary profession in the current socioeconomic context, with the aim of enhancing graduates' employment prospects in all professional areas. One of the significant improvements with respect to the preceding degree programme is the introduction of TPT, where the students engage in hands-on practical training during the last semester of the syllabus. Moreover, the addition of the Dissertation Thesis to the current degree programme has also improved students' acquisition of various transversal abilities (for example, presenting and defending their work in public, use of IT, accessing specialist sources of information and stimulating lifelong learning).

FAVEUCO has a quality assurance system that enables an analysis of all the procedures affecting the degree to be carried out and all the parties involved in its development to be kept informed, as well as minor modifications to be made in the event of problems coming to light. The existence of the complaints, suggestions and grievances box as part of the quality assurance system enables participants to complain anonymously about issues arising from the syllabus, including EPT.

In recent years participation in curricular and extracurricular external practical training has been strengthened. This enables students to have direct contact with the veterinary profession, and to this end there are active educational collaboration agreements with a considerable number of private companies and public institutions, notably the Ministry of Defence, the Andalusian Regional Government (AGAPA, IFAPA, SSPA) and local authorities (the provincial government of Córdoba and town councils)



The Plurilingualism plan operated by FAVEUCO has had notable success and it has grown year on year, fostering the internationalisation of the courses offered by UCO, and the mobility of students and teaching staff (both in-bound and out-bound) with other veterinary training centres.

Suggestions for improvement on Standard 3

During the 2019-20 academic year it is expected that the finishing touches will be put to the e-portfolio for all the subjects in the degree, such that students are aware of the extent of their acquisition of the competences established in the degree programme.

The Spanish Conference of Deans has conducted an in-depth analysis of its educational programmes. In light of the positive experience of TPT (Practicum), a proposal has been made to the Ministry of Education to increase the duration of the Degree in Veterinary Medicine at all faculties in Spain by one semester, which would enable the period of practical training to be increased and a temporal redistribution of the syllabus to be made.





HOSPITAL CLINICO VETERINARIO
UNIVERSIDAD DE CORDOBA

Standard 4: Facilities and equipment





4.1 All aspects of the physical facilities must provide an environment conducive to learning, including internet access. The veterinary Establishment must have a clear strategy and programme for maintaining and upgrading its buildings and equipment. Facilities must comply with all relevant legislation including health, safety, biosecurity, accessibility to people with reduced mobility, and EU animal welfare and care standards.

FAVEUCO is located on the Rabanales Campus (which has a surface area of 463,000 m²), three kilometres to the north east of Córdoba city centre. The campus is easily accessible by car from the nearby motorway (the A4). The fastest way to reach the city centre is by train (trains run hourly, and the journey lasts five minutes), although there is also a public bus service (a special Rabanales route). Bicycles are available on campus to

any student who registers with the service; this consists of four collection points at various locations on the campus, where bicycles can be collected and returned throughout the day. A dedicated cycle lane runs from the city to the university campus, but bicycles can also be taken on the train for those wishing to avoid a long cycle journey.

The Rabanales Campus currently encompasses the Veterinary Faculty, the Sciences Faculty, the Higher Polytechnic School and the Higher Technical School of Agronomy and Forestry.

The FAVEUCO facilities are housed in buildings shared with other faculties and its own buildings, all of them equipped with high-speed internet access.

Table 4.1.1. Description of FAVEUCO facilities and buildings

BUILDING	AREA/FLOORS	FACILITIES
Government building (Paraninfo)	9,883 m ² /4	Offices of the Dean of the Veterinary Faculty Offices of the Vice-Deans Administration offices Boardroom and other premises (2 nd floor)
Charles Darwin (C1)	14,003 m ² /3	Food Sciences and Food Technology Dpt. Pharmacology, Toxicology and Legal & Forensic Medicine Dpt. Cell Biology, Physiology and Immunology Dpt. (Veterinary Physiology section) Zoology Dpt. Food Technology Pilot Plant
Albert Einstein (C2)	11,110 m ² /3	Physics Dpt.
Gregor Mendel (C5)	11,387 m ² /3	Genetics Dpt.
Severo Ochoa (C6)	13,941 m ² /3	Biochemistry and Molecular Biology Dpt.
Francisco Santisteban Veterinary Teaching Hospital (VTH)	7,377 m ² /3	Animal Medicine and Surgery Dpt. Veterinary Teaching Hospital.
Ramón y Cajal	4,292 m ² /4	Centralised Research and Support Services
Animal Health	7,390 m ² /5	Comparative Anatomy and Pathological Anatomy Dpt. Animal Health Dpt. Necropsy Room Dissection Room
Animal Production Pavilion	7,568 m ² /1	Animal Experimentation and Nutrition Centre. Animal Production Dpt. Dairy Control Laboratory Meat Quality Laboratory
Rabanales University Teaching Farm (RUTF)	14,000 m ² /1 (1,172 m ² built)	Small ruminants module Porcine module Large animals module Small farm animals module Teaching room Ancillary rooms
Animal Experimentation Service (SAEX)	3,906 m ²	Experimental unit (rodents, lagomorphs & fish) Dog and cat unit Minipig unit P2 Biosecurity unit

Equine Sports Medicine Centre (CEMEDE)	1,136 m ² /1	Stables Six outdoor paddocks Outdoor exercise track Exercise ring and treadmill
Averroes lecture Hall	24,678 m ² /3	Lecture theatres Cafeteria Bank Audiovisual room Multipurpose room Computer rooms Main lecture theatre Photocopy service Other ancillary rooms
Maimonides Library	10,000 m ² /2	Periodicals library Study rooms
Organic Beekeeping Centre	623 m ² /2	
Juan XXIII Auditorium	1,100 m ² /1	
Train station	216 m ² /1	

A general map of the campus is included as **APPENDIX 3**. The buildings used by FAVEUCO are shown with letters, while the general campus services are numbered.

As far as the maintenance and repair of buildings is concerned, the maintenance strategy and infrastructure programme comes under the responsibility of the University of Córdoba Vice-Rector's Office for Infrastructure and Sustainability. The programme of works is planned on an annual basis to respond to requirements within budgetary constraints.

There is a budgetary allocation for what are known as RAM works (*Reformas y Ampliaciones*, literally refurbishments and extensions); departments and services submit applications to this for minor works on their premises. In addition, each department receives an annual budget aimed at general expenses that can be used to pay for certain maintenance requirements. The University of Córdoba Research Plan includes a programme of grants for the repair of scientific instruments. New equipment is purchased by applying to a fund called the State Programme for Knowledge Generation and Scientific and Technological Strengthening of the R&D&i System, in coordination with the European Regional Development Fund. **STANDARD 2** contains more detailed information.

The allocation of resources to the VTH is independent of the Faculty and is managed by the Governing Council, which approves the decisions affecting the management of the VTH, including the annual budget.

All the facilities comply with the regulatory requirements regarding sanitary conditions, security, biosecurity and accessibility for people with reduced mobility.

The relevant buildings and facilities also comply with the European animal welfare regulations.

FAVEUCO has set up a Biosecurity Committee, which is responsible for coordinating, reviewing and approving the biosecurity and protection protocols applied to the units where its various activities take place, namely its academic, clinical and research premises (www.uco.es/veterinaria/es/plan-de-bioseguridad). All this is in coordination with the UCO Risk Prevention Service.

All hazardous waste products deriving from teaching and research activities are classified, separated, deposited and stored until collection in accordance with the rules stipulated by the UCO Waste Management Unit (<http://www.uco.es/servicios/sepa/es/gestion-de-residuos/>), which falls within the remit of the campus Risk Prevention Service (<http://www.uco.es/servicios/prevencion/es/el-servicio-de-prevencion>).

The procedures in which animals are used have to be submitted to the UCO Bioethics Committee for approval (<http://www.uco.es/investigacion/portal/comite-de-bioetica-y-bioseguridad#ceea>), in compliance with Royal Decree 53/2013 – which incorporates European Directive 2010/63/UE – establishing the basic rules for the protection of animals used in experiments and for other scientific purposes, including teaching.

4.2 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. Students must have ready access to adequate and sufficient study, self-learning, recreation, locker, sanitary and food service facilities. Offices, teaching preparation and research laboratories

must be sufficient for the needs of the academic and support staff.

Lecturing

Premises for lecturing are distributed in several buildings. Most of the teaching activities are developed at the Averroes Lecture Hall, in which FAVEUCO has some dedicated lectures theatres. Some other classrooms are located at the Animal Health and Animal Production buildings and the VTH and RUTF. The number of places in the lecture halls is 1,765.

Table 4.2.1. Premises with lecture theatres/rooms

FACILITY* (N° OF PLACES)	SURFACE AREA (M ²)
Averroes Lecture Hall	
	320.67
Lecture theatres B2 (240), B3 (240), B9 (142), B10 (131)	321.02
	151.79
	151.76
	945.24 Total
Multipurpose room (40)	60.32
Main lecture theatre "Aula Magna" (549)	663.76
Veterinary Teaching Hospital	
HVB1 (92)	100.04
HVB2 (60)	64.89
Animal Health building	
SAB1 (96), SAB2 (96)	123.62
SAS1 (24), SAS2 (24)	95.84
	219.46 Total
Animal Production building	
PAB2 (30)	66.28
Rabanales University Teaching Farm	
Teaching room (24)	40.25
Equine Sports Medicine Centre	
Teaching room (25)	42.49

*Equipment: Air-conditioning, wheelchair-accessible, media and Wi-Fi coverage

Group work

Group work, seminars, tutorial and discussion sessions are carried out in small or medium size rooms available in different buildings. The total number of places in seminars and tutorials is 381.

Table 4.2.2. Venues for group work (seminars, tutorials)

FACILITY* (N° OF PLACES)	SURFACE AREA (M ²)
Darwin building (C1)	
Pharmacology Dpt. lecture room (C11S020) (10)	32.22
Toxicology seminar room (C11S040) (16)	65.32
Pilot Plant (50)	2428.00
Standardised tasting room (10)	60.30
Bromatology seminar room S1 (50)	52.50
Bromatology seminar room S2 (20)	30.20
Animal Health building	
Anatomical dissection room (SABE070) (100)	187.36
Large animals room (SABE060) (20)	59.01
Small animals room (SAB130) (10)	29.39
Animal Production building	
Rabbit room 1 (PA6B120) (15)	44.54
Small ruminants room 2 (PA6120) (15)	44.54
Computer room 5 (PA5B040) (20)	64.19
Departmental seminar room (PA1N270) (10)	28.64
Veterinary Teaching Hospital	
Seminar room HVB3 (25)	32.19

*Equipment: Air-conditioning, wheelchair-accessible, media and Wi-Fi coverage

Practical work

The Departments, the VTH and the RUTF host most of the facilities for intramural practical work facilities. They are mostly laboratories for practical training equipped with the required tools. These premises are managed and maintained by the Departments or Teaching Units. Total number of places in all different labs is 677.

Table 4.2.3. Venues for practical work (laboratories)

FACILITY* (N° OF PLACES)	SURFACE AREA (M ²)
Averroes lecture theatre block	
Laboratory (AUPB761) (50)	60.70
Microscopy laboratory (30)	97.92
Darwin building (C1)	
Physiology laboratory (2 nd floor) (20)	33.72
Professional training laboratory. Bromatology Dpt. (12)	66.59
Bromatology laboratory (C1B0040) (25)	61.39
Pharmacology laboratory (C1BE040) (24)	66.30
Toxicology laboratory (C1BE040) (30)	91.96
Food technology laboratory (C12O110) (5)	44.49
L-3 Bromatology laboratory (A1BN080) (20)	33.94

Food technology laboratory (C1BO030) (25)	71.63
Food technology laboratory (A1BN030) (15)	38.93
Gregor Mendel building (C5)	
Genetics practicals laboratory 1 (C5BS170) (25)	44.85
Genetics practicals laboratory 2 (C5BS230) (25)	48.01
Genetics practicals laboratory 3 (C5BS130) (25)	53.67
Animal Health building	
Necropsy room (SABE200) (40)	130.21
Infectious Diseases laboratory (SAB0140) (10)	75.55
Microscopy laboratory (SABO060) (25)	63.63
Parasitology laboratory (SABO131) (25)	97.89
Parasitic Diseases laboratory (SABO123) (50)	108.12
Systematics laboratory (SABO210) (24)	97.31
Microbiology and immunology laboratory I (16SASO270) (24)	72.30
Microbiology and immunology laboratory II (SASO280) (12)	80.56
Animal Production building	
Diet rationing and evaluation laboratory (PA7050) (12)	66.08
Agriculture laboratory (PA2B210) (25)	38.87
Meat laboratory (PA1B180) (12)	52.98
IT laboratory (PA7B040) (10)	66.28
Animal Production practicals laboratory (PA3B190+191) (20)	75.80
Animal Nutrition & feeding laboratory (PA4B131+134+135) (15)	148.91
Veterinary Teaching Hospital	
Practicals laboratory (HVBD200) (20)	50.5
Reproduction laboratory room (16HV1D050+16HV1D070) (25)	19.9+16.5=36.4

**Equipment: Air-conditioning, wheelchair-accessible, media and Wi-Fi coverage*

The FAVEUCO **Skill Lab** is located in the VTH, connected with two rooms for multipurpose exploration. Here students practise clinical skills such as lancing and venous catheterisation, intramuscular injections, sutures and dressings. To facilitate learning, simple plastic dummies or hand-made equipment (low-fidelity simulators) are used.

At the CEMEDE there is an exploration area, a room for a terrestrial treadmill and another area for an aquatic treadmill.

The extramural practical work is conducted at farms and other establishments based on collaboration

agreements with such entities, as described in **STANDARD 3**. A complete list of establishments with general collaboration agreements with UCO and specific agreements with FAVEUCO for the extramural itineraries of the TPT is included as **ANNEX 3.D**.

Study and self-learning

- The Maimónides Library occupies 10,000 m². It has 208 places divided between seven rooms. It offers free-access reading facilities, Wi-Fi, consultation, general information, specialist information, online public access catalogues, library loans, manual and electronic references and training and cultural activities. There is a general library and periodicals library providing online access to newspapers, periodicals, journals and abstracts, documents and documentation. There are rooms for group work and a research area. Automated research cubicles. A complete description of the Library facilities is given in STANDARD 6.
- Anatomy Museum. This occupies 160 m² in the Animal Health building. 146 animals are exhibited including complete specimens, anatomical regions, apparatuses and single organs, taken from 65 different species, including mammals, birds, reptiles, fish and some insects. 20 anatomical models are also exhibited. The exhibits are of two types: artificial anatomical models and natural exhibits, which are in turn divided into:
 - Osseous, isolated or skeleton-mounted exhibits
 - Desiccated exhibits
 - Plastinated exhibits

Catering

The Faculty has four cafeterias located inside the Averroes Lecture Hall (1), outside the Averroes Lecture Hall (1), outside the Governing Building (1) and near the Lucano Residence (1). Vending machines are also available in all buildings. The Averroes Lecture Hall and the vestibule of the Maimonides Library have been provided with eating areas equipped with microwave ovens and space for 224 people.

Locker rooms

A total of 872 lockers are distributed between the Averroes Lecture Hall, the VTH, the university farm and the Animal Health and Animal Production buildings.

Accommodation

- Lucano Residence: located on the Rabanales campus, this offers housing of three sizes, with 1, 3 or 4 bedrooms. They come equipped with a complete kitchen, living-dining room, bathroom, heating, air-conditioning, Wi-Fi, TV antenna. Communal area: multipurpose room, study room, laundry room.
- Nuestra Sra. de la Asunción Residence: located 8 km from the campus. Single and double bedrooms with air-conditioning, Wi-Fi and TV. All with external views. Communal areas: reading rooms, library, eight classrooms, covered sports hall, swimming pool (holds 520), three tennis courts, two padel courts, gym, dining hall (300 places), cafeteria, club room, function room, TV room, laundry, car park, gardens. With transport links to the campus. Information available at: <https://www.uco.es/servicios/alojamiento/es/>

- Student/visitor accommodation at the VTH: The Faculty has two facilities for on-duty members of staff, comprising a bedroom, a living-dining room and a study, and one facility for students, with beds, a living-dining room and a study. There is also a small apartment, containing two bedrooms, for visitors to the VTH.

Leisure

FAVEUCO students have their own leisure and sports areas on the university campus (TV room, games room). The UCO Sports Office, UCODEPORTE, aims to promote and foster sports activities on campus. It offers the following facilities:

4.2.4. University sports facilities

FACILITY	LOCATION	COMMENTS
"La Areté"	Rabanales Campus	Sports pavilion, two tennis courts, multi-sport court
"Monte Cronos"	Rabanales Campus	Football pitch (artificial grass, two 7-a-side pitches), football/rugby pitch (grass), six padel courts, four tennis courts, two beach volleyball courts, athletics track
University swimming pools	Rabanales Campus	Outdoor pool (50 m), heated pool (25 m)

Information available to students at: <https://www.uco.es/vidauniversitaria/deportes/>

Sanitary

There are toilets and washing facilities on every floor of all buildings. In the Animal Health building, at the VTF and the Food Technology Pilot Plant there are also showers in changing and locker rooms. There are several toilets, washing facilities and changing/locker rooms with showers at the VTH.

Staff offices and research laboratories

Staff offices are distributed throughout the Departments involved in FAVEUCO (11 Departments in six different buildings). The research laboratories are also located in these buildings. Altogether there are approximately 150 offices and 90 research laboratories, enough for the needs of the academic and support staff for teaching and research activities.

4.3. The livestock facilities, animal housing, core clinical teaching facilities and equipment used by the Establishment for teaching purposes must:

- be sufficient in capacity and adapted for the number of students enrolled in order to allow safe hands-on training for all students
- be of a high standard, well maintained and fit for the purpose
- promote best husbandry, welfare and management practices
- ensure relevant biosecurity and bio-containment
- be designed to enhance learning.

Facilities for HEALTHY animals

They are distributed in four different buildings: the VTH, for dogs and horses; the RUTF, for farm animals and horses; the CEMEDE, for horses; and the Animal Production Department for small ruminants and rabbits.

Table 4.3.1. Facilities for healthy animals**VTH**

SPECIES	NUMBER	COMMENTS
Dogs	10	Two outdoor courtyards
Horses	10	Five large outdoor paddocks

RUTF

SPECIES	NUMBER	COMMENTS
Small ruminants	100	Pen for young kids Four outdoor paddocks.
Pigs	20	Two maternity rooms, with three maternity pens in each room, one stud pen, five gestation cages, a confirmed gestation area measuring 39.5 m ² , three post-weaning rooms measuring 7.4 m ² , one rearing/fatteining room measuring 14 m ² and two open-range maternity modules.
Cows	8	One enclosed cattle shed of about 25 m ² ; One open cattle shed
Horses	4	
Birds	50	

CEMEDE

SPECIES	NUMBER	COMMENTS
Horses	1-3 Up to 20 in the grounds	Two large outdoor paddocks. Animals may run free in the grounds.

Animal Production department (UCO Animal Nutrition Centre)

SPECIES	NUMBER	COMMENTS
Small ruminants	24	24 cages
Rabbits	22	22 hutches

Facilities for RESEARCH animals

They are located at the SAEX. Some research activities can be also carried out at the RUTF and the Animal Nutrition Centre at the Animal Production Department.

Table 4.3.2. Facilities for research animals**SAEX**

SPECIES	NUMBER	COMMENTS
Exotic and free-roaming species	1,000	Rodents, lagomorphs, fish.
Dogs	30	13 rooms with outdoor areas attached Conventional facility for breeding and raising beagles and common European cats with specific areas for breeding and gestating animals, and spacious areas for raising and stock
Cats	30	13 rooms with attached outdoor areas
Pigs	50	Four rooms for minipigs. This is a unit for breeding and experimenting with minipigs, in a closed cycle, a controlled environment and separate areas for boars, gestation, sows, births and weaning; a perfectly equipped surgery and laboratory.

Andalusian Organic Beekeeping Centre

SPECIES	NUMBER	COMMENTS
Bees		Hives

Facilities for HOSPITALISED animals

The facilities for hospitalised animals are located at the VTH and the CEMEDE. When animals at the other locations need to be hospitalised, a specially adapted vehicle is used to take them to the hospital. Similarly, when specific treatments are required, the horses at the CEMEDE are transported to the hospital.

Table 4.3.3. Facilities for hospitalised animals**VTH**

SPECIES	NUMBER	COMMENTS
Dogs	32	17 cages in the intensive care unit, 13 cages in hospitalisation and two incubators
Cats	3	One specific hospitalisation room for cats, separated from dogs. Three cages
Horses, large animals	20	20 boxes (three boxes for stallions, separated from the rest; one box for neonatology with a foal area; one box for foaling; 15 boxes for routine hospitalisation)

CEMEDE

SPECIES	NUMBER	COMMENTS
Horses	12	12 indoor boxes (eight normal-large size)
	4	Four outdoor paddocks of varying sizes

The clinical activities are carried out at the VTH and at CEMEDE:

Table 4.3.4.

VTH

FACILITY (N°)	COMMENTS AND DESCRIPTION
Reception and waiting rooms (1)	Shared between small and large animals. Separate area for cats
VTH administrative and staff rooms (3)	One room for meetings; one room equipped with computers; one room for management
Experimental labs (4)	Used for diagnostic and reproductive biotechnology tests.
FACILITIES FOR SMALL ANIMALS	
Internal medicine clinics (3)	Equipped with basic material and computers. One of the clinics is exclusively for cats
Internal medicine specialist clinics (8)	Clinics for dermatology (1), reproduction (1), ophthalmology (3), ethology (1), physiotherapy and rehabilitation (1), intensive therapy, for chemotherapy and for renal replacement techniques and kidney dialysis (1)
Pre-anaesthesia clinics (2)	
Surgery clinic (1)	For general surgery, including odontology
Operating theatres (3)	Two standard operating theatres and one experimental operating theatre
Hospitalisation clinics (4)	One intensive care unit (12 cages), two hospitalisation units for dogs (13 cages), one hospitalisation unit for cats (four cages)
Clinic for infectious animals (1)	Specifically for infectious dogs (four cages)
CT clinic (1)	Used exclusively for small animals, includes a results interpretation room
Ultrasound clinic (1)	Ultrasound room for small animals
FACILITIES FOR LARGE ANIMALS	
Animal unloading area (1)	
Exploration rooms (2)	Equipped with livestock crushes
Specialist clinics	One neonatology room, one reproduction centre (two rooms, one laboratory, three boxes for stallions), one birthing room
Area for anaesthetised induction and recovery (1)	
Operating theatre (1)	
AREAS SHARED BY SMALL AND LARGE ANIMALS	
Radiological diagnostic clinic (1)	Room for small animals, room for large animals, shared results interpretation room
Pharmacy. Materials storage (1)	Shared by small and large animals and CEMEDE
Sterilisation room and materials storage (3)	Shared by small and large animals and CEMEDE

CEMEDE

FACILITY	CHARACTERISTICS
Reception and administrative area	One administrative office Two offices for veterinarians

Three main outbuildings	Main courtyard with three rooms (teachers' and veterinarians' offices) Three outbuildings: one with boxes, one with a terrestrial treadmill, one with an aquatic treadmill. Areas shared by the three outbuildings (area with a livestock crush, room for storing material, pharmacy, feed storage, one teaching area, one room for accommodating students)
Outdoor facilities	Grounds; large track; small exercise ring; treadmill

The diagnostic services are housed at the VTH and in the Animal Health department:

Table 4.3.5. Diagnostic services, including necropsies

VTH

SERVICE	COMMENTS
Clinical analysis (1)	Haematological and biochemical (including coagulation and blood gas) studies
Clinical diagnosis (1)	Equipped with a microscope connected to a TV monitor and laminar flow cabinet.
National data centre for osteochondrosis in Spanish thoroughbred horses (1)	Owners of horses wishing to register them as breeding animals in the Spanish Thoroughbred Horse Book need to send X-rays to this centre
Image-based diagnosis	Room for horses; room for small animals; area shared by both with computer

Animal Health building

SERVICE	COMMENTS
Pathological anatomy (Rooms SA2E110, SABE200)	Two necropsy rooms, refrigeration chamber (1) and freezing chamber (1). Hoist for large animals. Adjoining rooms for equipment and fixing samples. Laboratories for staining (histopathological and immunohistochemical) on the second floor.
Diagnosis of infectious Diseases (SAB120) (25)	Receives samples from the VTH, as well as from outside (cattle farms, clinics...)
Diagnosis of parasites (SABO120-123; SABO130-131)	Microscopy and parasitological and immunological analyses for university (VTH) and external services.

Table 4.3.6. Equipment for clinical services

VTH

SERVICE	BASIC EQUIPMENT	SPECIALIST EQUIPMENT
SMALL ANIMALS AREA		
Internal medicine clinics	Available	
Dermatology clinic	Available	
Reproduction clinic		Intrauterine insemination in dogs
Small and large animal reproduction laboratory	Available	Plasmatic progesterone analysis equipment. Computer assisted sperm analysis (CASA). Collectors for harvesting dog sperm. Photometer for evaluating sperm concentration. Equitainer refrigerated semen shipping container. Automated cryofreezer. Filling-sealing device for insemination straws. Heat-sealing of straws. Refrigerated chamber for handling semen. Liquid nitrogen canisters for storing gametes and embryos. Semen freezing box. VitSet equipment for the vitrification and cryo-preservation of oocytes and embryos. Laminar flow cabinet. Heated CO2 incubator for growing gametes and embryos. Fluorescence microscope. Centrifuges. Stereoscopic magnifier. Inverted microscope. Micromanipulator. Ultrasound. Osmometer. pH meter.
Ethology clinic	Available	

Ophthalmology clinic	Available	Slit lamps (2), tonometers (3), pachymeter, gonioscopes, tear evaluation systems, direct (2) and indirect (1) ophthalmoscopes, retinography-angiography (2), phacoemulsificator (1), ocular ultrasound (1)
Odontology clinic	Available	Ultrasonic dental cleaner, micromotor with straight and contra-angle handpiece, equipment for root canal treatment, resins/composites, dental X-ray films
Rehabilitation and physiotherapy clinic	Available	Treadmill for dogs
Intensive treatment clinic	Available	Equipment for renal replacement techniques: inhalational anaesthesia machine, multiparameter monitor, machine for performing renal replacement therapy. Equipment for oncology and chemotherapy
Pre-anaesthesia clinic	Available	Two inhalational anaesthesia machines, one oxygen generator, one neurostimulator, two multiparameter monitors, one arterial pressure monitor, one infusion pump
Surgery clinics	Available	Monopolar electrosurgery unit, monopolar/bipolar electrosurgery unit, CO2 laser unit, vascular heat-sealing unit, set of automated surgical staplers, continuous surgical suction unit, specialist neurosurgical instruments, specialist ophthalmological surgery instruments, specialist odontology instruments, specialist traumatological/orthopaedic instruments, specialist vascular microsurgery/surgery instruments, set of blocked orthopaedic implants, battery-powered surgical drill, surgical motor with drill, oscillating and milling saw, endoscopy tower with specialist instruments: laparoscopy, arthroscopy, endoscopy, thoracoscopy. Surgical microscopy
Operating theatres	Available	Three inhalational anaesthesia machines, three mechanical ventilators, three multiparameter monitors, two infusion pumps, three cardiac output monitors, one PTA (parasympathetic tone activity) monitor, one BIS (bispectral index) monitor
Intensive Care Unit- haemodialysis-chemotherapy	Available	Three incubators, one multiparameter monitor, two infrared lamps, one glucose meter, one blood pressure monitor, one oxygen concentrator, one Ambu, 12 infusion pumps, one perfusor, one nebuliser, one aerosol therapy device, electrochemotherapy
Hospitalisation of infectious animals	Available	Glucose meter, blood pressure monitor
LARGE ANIMALS AREA		
Exploration rooms	Available	Ultrasound (1)
Neonatology room	Available	Infrared lamps, glucose meter
Anaesthesia room	Available	Anaesthetic machine, mechanical ventilator, multiparameter monitor, two infusion pumps
Operating theatre	Available	Equipment for arthroscopy, laparoscopy, vascular sealing generator
Radiography room	Available	X-ray equipment for large animals
CT clinic	Available	Helical CT equipment, anaesthetic machine, multiparameter monitor
Reproduction centre	Available	Two optical microscopes, one heater, sperm-collection crush, refrigerated cabinet
Laser room	Available	Nd:YAG laser, CO2 laser
AREAS COMMON TO SMALL AND LARGE ANIMALS		
Radiological diagnosis clinic	Available	One fixed radiology instrument for small animals, one fixed radiology instrument for large animals, one anaesthesia machine
Ultrasound clinic	Available	Two ultrasound scanners, one electrocardiograph, two endoscopy towers with their pertinent equipment, one surgical laser
Clinical analysis service	Available	Haematology equipment. Dry biochemical equipment. Wet biochemical equipment. Blood gas analyser. Coagulometer. Thermal bath. Centrifuges (normal, for Eppendorf tubes, for microhematocrit)

CEMEDE

SERVICE	SPECIALIST EQUIPMENT
Equine sports medicine	High-speed treadmill for horses, aquatic treadmill, two ergo-respirometers, one multifrequency electrical bioimpedance system, one triaxial accelerometer, one extracorporeal shock wave system, one radiofrequency system (capacitive and resistive electric transfer), one endoscope, one ultrasound scanner with a probe for echocardiography, one Holter system, one portable X-ray device, static force plates, three lactic acid meters, three heart rate monitors, one weighing scale Other material: blood tube centrifuge, microhematocrit

SAEX

FACILITY	CHARACTERISTICS/SPECIALIST EQUIPMENT
Russell building (rodents, rabbits and zebrafish)	12 cubicles for animals/12 laboratories (ventilated racks, metabolic cages, fish racks, heater, stereomicroscope, centrifuges, indirect calorimetry equipment, pulse oximetry). Experimental operating theatre equipped with inhalational anaesthesia, surgical microscope, hydraulic table, mechanical ventilator, CO2 chamber Washing/sterilisation area (autoclave, SAS, rack washer, feeding bottle washer...)
Dog and cat building	This unit also has a small laboratory and clinic equipped with a pair of microscopes, centrifuge, blood biochemistry analysis equipment and ultrasound scanner, -20°C freezer
Minipig building	This has a fully-equipped operating theatre with two inhalational anaesthesia machines, laparoscopy system, telemetry, two hydraulic tables and a surgical microscope. The theatre is connected by an imaging system to the classroom, where the procedures being carried out can be viewed in real time. There is also a lab equipped with a laminar flow cabinet, refrigerator, binocular microscope, inverted microscope, stereomicroscope, microinjector, centrifuge and CO2 incubator, -80°C freezers and autoclave
Level-2 experimental biosecurity unit	Washing area with cage and feeding bottle washing, SAS pass-through, autoclave. Three animal cubicles with ventilated racks for mice, rats and rabbits. Two labs equipped with two biosecurity cabinets, centrifuges, -80°C and -20 °C freezer and refrigerator, CO2 incubator, agitator.

Food Technology Pilot Plant (FTPP)

The FTTP is located on the lower ground floor of the Annex to the Darwin Building (C-1). The Plant (2,428 m²) is equipped with processing facilities, ripening chambers (4), refrigerated chambers (10) and freezing chambers, a standardised tasting room, a kitchen, laboratories (microbiology of foodstuffs, chromatographic techniques, sample-preparation methods, instrumental analysis, physical/chemical analysis, specialist equipment), classrooms, offices, secretary's office, IT room, meeting room, toilets, changing rooms, library and stores.

All the activities focus on the practical teaching of the various subjects taught at the Department of Bromatol-

ogy and Food Technology. It currently has equipment for sensory analysis, the processing of meat products, the processing of dairy products, a vacuum cooking system, a canning line and other similar equipment, as well as laboratories equipped with instruments and material required for analysing food quality and safety.

Slaughterhouses

The FAVEUCO has agreements with various slaughterhouses of Andalusia, to carry out practical pre-professional training as described in **STANDARD 3**. The following ones have been collaborating with FAVEUCO in the last years:

SLAUGHTERHOUSE	SPECIES	LOCATION
COVAP	Pigs, ruminants	Pozoblanco, Cordoba
Hnos. ARIZA SL	Poultry	Encinas Reales, Cordoba
Celedonio Montilla	Cattle	Lucena, Cordoba
CARNICAZA	Game animals	Hornachuelos, Cordoba

FACSA - MISSA	Pigs	Malaga
FAMADESA	Pigs	Malaga
PIZARRA	Pigs, ruminants	Malaga
UVESA	Poultry	Malaga
INASUR	Poultry	Pedro Abad, Cordoba

COVAP slaughterhouse, belonging to the Cooperativa Andaluza Ganadera del Valle de los Pedroches (COVAP, <https://www.covap.es>), located in Pozoblanco, 80 km to the north of Córdoba, is the most important one for holding practical classes on meat inspection and hygiene. In accordance with the terms of the agreements, the students are accompanied throughout the slaughter and inspection process by veterinary inspection teachers. The COVAP slaughterhouse offers a full range of slaughtering services for cattle, pigs, goats and sheep. Its modern facilities are equipped with the latest technology, appropriate for high-performance processing, and fulfil all the hygiene requirements. The slaughterhouse engages in the following activities:

- Quartering, packing and storing meat.
- Cattle slaughter: 1,850 head of cattle/month.
- Pig slaughter: Iberian breed (November to March), approximately 30,000 animals/month; White pig (April to October), approximately 9,000 animals/month.
- Sheep slaughter: 7,000 animals/month.
- Goat slaughter: 60 animals/month.

Practical activities focusing on the poultry production process are carried out at the INASUR poultry slaughterhouse in Pedro Abad, 30 km from Córdoba (<http://inasur.es>). This plant has a poultry slaughterhouse, a quartering room and a finishing room with modern and recently-inaugurated facilities (2017).

FAVEUCO also has agreements with two major slaughterhouses in the province of Málaga: FACSA-MISSA (<https://www.faccca.com/es>), for pig, and UVESA (<https://www.uvesa.es>) for poultry, to enable students to complete their pre-professional external practical training.

4.4 Core clinical teaching facilities must be provided in a veterinary teaching hospital (VTH) with 24/7 emergency services at least for companion animals and equines. Within the VTH, the Establishment must 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 patients for performing clinical research and relevant QA procedures.

For ruminants, 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 or exceed the best available in the private sector.

The VTH and any hospitals, practices and facilities (including EPT) which are involved with the curriculum must meet the relevant national Practice Standards.

The VTH is open to companion animals and horses all year-round (24/7). Emergencies are run by specialist personnel made up of academics and veterinarians who have been specifically hired for the hospital, to whom the students are attached. Any intervention carried out by the students is overseen by the hospital's professionals and teachers.

The clinical practical training with farm animals (cattle, sheep, goats and pigs) and, in some cases, horses, is conducted on an ambulatory basis as part of the on-call service. Students participate in this practical training under the supervision of a VTH teacher. During the practical training, the students take part in the service as normal clinical practice and also on-call during university hours.

The general and specialist clinics for small animals are as follows: internal medicine, dermatology, reproduction, ethology, ophthalmology, odontology, physiotherapy and rehabilitation, cardiology, intensive treatment-haemodialysis/chemotherapy, pre-anaesthesia, surgery, operating theatre, intensive hospitalisation, hospitalisation for infectious animals.

The **internal medicine service** includes initial opinion and speciality consultations.

The **dermatology service** includes consultations, diagnostic and minimally-invasive treatment methods.

The **reproduction service** includes speciality consultations, diagnostic and therapeutic procedures and assisted reproduction techniques.

The **ethology service** includes consultations, diagnostic and therapeutic procedures.

The **ophthalmology service** includes consultations and surgical treatments.

The **physiotherapy and rehabilitation service** include consultations, diagnostic methods and non-invasive treatments.

The **surgery service** includes consultations and surgical procedures for soft tissues, orthopaedics and neurosurgery.

The **odontology service** includes dental prophylaxis, root canal surgery, dental extraction, oncological surgery and maxillofacial surgery.

The **intensive treatment-haemodialysis/chemotherapy service** carries out emergency treatments, renal replacement therapy for acute kidney failure, chemotherapy and electrochemotherapy.

The general and specialist clinics for horses are similar to the above except for intensive treatment-haemodialysis/chemotherapy, which is specific to small animals, and neonatology, which is specific to horses.

Shared diagnostic services: **radiology, CT scans, ultrasound and clinical analyses.**

The facilities and equipment of each of the services may be found in tables 4.3.4, 4.3.5 and 4.3.6.

The groups of students that carry out the clinical practice vary in size between 4 and 12 (see STANDARD 3). This enables each student to intervene directly on the patient under the supervision of a teacher. For each activity the number of students is governed by the clinical scenario and the handling procedures.

All the specialists and professors at the VTH and CEMEDE are collegiate members of the Official College of Veterinarians and adhere to the ethical code for the veterinary profession, as established by the General Council of Official Colleges of Veterinarians of Spain (<http://www.colvet.es/node/6236>).

The majority of clinical professors, both at the hospital and at CEMEDE, belong to a range of professional associations (AVEPA: The Association of Spanish Veterinarians specialising in Small Animals; AVEE: The Association of Veterinarians specialising in Horses; SECIVE: The Spanish Veterinary Surgery Society...), which ensures that they undergo continuous training and clinical improvement.

Moreover, some professors at the VTH are European and Latin American Diplomates in different specialities of the veterinary clinical practice: ECEIM, the European College of Equine Internal Medicine; CLOVE, the Latin American College of Veterinary Ophthalmologists; ECVS, the European College of Veterinary Surgeons; ECVP, the European College of Veterinary Pathologists; General Practitioner's Certificate (Cardio)- European School of Veterinary Postgraduate Studies.

4.5 The Establishment must ensure that students have access to a broad range of diagnostic and therapeutic facilities, including but not limited to: diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services, pharmacy and necropsy facilities.

All students have access to diagnostic and therapeutic facilities under the supervision of the academic in charge of the practical groups. Students are also permitted to access the clinical records of the VTH databases upon request by submitting an application to the staff in charge of each service.

4.6 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 and for prevention of spread of infectious agents. They must be adapted to all animal species commonly handled in the VTH.

Facilities for animals in isolation

There are facilities for holding animals in isolation at the Veterinary Teaching Hospital, the university farm, the Equine Sports Medicine Centre and the Animal Experimentation Service.

VTH

SPECIES	COMMENTS
Dogs	Hospitalisation room for infectious dogs with five cages
Cats	Cages for infectious cats in the hospitalisation room for cats
Horses	Four boxes isolated from each other, with glazing in the doors

RUTF

SPECIES	COMMENTS
Ruminants	One enclosed cattle shed of about 36 m ²

CEMEDE

SPECIES	COMMENTS
Horses	As a general rule, infectious horses are not permitted to enter the centre. If the animal develops an infectious illness during its stay, there are two possibilities: 1) removal to the infectious area of the VTH; 2) relative isolation area (four large boxes, separated from the rest).

SAEX

SPECIES	COMMENTS
Rodents, rabbits	Two quarantine rooms. Before entering the facilities the animals should be quarantined; they are theoretically healthy animals.

4.7 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.

The practical training in the ambulatory clinic is carried out during university hours (between September and June), one day a week, in groups of eight students at most. These students, together with two teachers and a faculty vehicle, travel to a variety of farms and horse herds, attending to cases as emergencies.

The ambulatory clinic travels in a nine-seater vehicle. The vehicle is equipped with clothing (overalls and boots) belonging to the students, and leggings for boots and gloves (also disposable gloves for examinations and disposable overalls for poultry farms) supplied by FAVEUCO. It includes surgical material, podiatry material for large animals, ultrasound equipment, insemination and semen collection equipment.

4.8 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.

FAVEUCO hires two vans (both seating eight) to transport students during the practical training, as well as the other vehicle for the activities of the ambulatory clinic. The vehicles are equipped with the instruments and equipment needed to attend to the clinical cases. The purchase of an all-terrain nine-seater vehicle is envisaged for the current academic year.

There are two vans for the transport of live animals (mainly horses). Normally the patients are transported by their owners.

As far as the transport of cadavers and material of animal origin is concerned, FAVEUCO has an agreement with SA-DECO (Córdoba Municipal Refuse Company) for the delivery and removal of cadavers. This agreement provides a source of dog and cat cadavers for dissections.

The VTH has agreements with companies for the removal of horse and small animal cadavers.

4.9 Operational policies and procedures (including e.g. biosecurity, good laboratory practice and good clinical practice) must be taught and posted for students, staff and visitors and a Biosafety manual must be available. The Establishment must demonstrate a clear commitment for the delivery of biosafety and biosecurity, e.g. by a specific committee structure. The Establishment must have a system of QA to monitor and assure clinical, laboratory and farm services, including a regular monitoring of the feedback from students, staff and clients.

The VTH has protocols ensuring its smooth operation, such as quality controls governing the following areas: the process of animal admission; purchases and standardisation of suppliers; the process of diagnosis and treatment; the hospitalisation process; the laboratory; the pharmacy; maintenance of machinery, facilities and equipment; maintenance, cleaning and sterilisation of instruments and rooms; the disagreements and complaints of animal owners; corrective and preventive initiatives; timetabling (for small animals, large animals and image-based diagnosis), control of equipment subject to calibration/verification; stupefacient drugs; veterinary medicines. In addition, the hospital has a strategic quality control plan.

The VTH and the clinical activity in general comply with the requirements of ISO 9001:2015 regarding the veterinary and hospital care of small and large animals, laboratories and pharmacy services.

The Animal Experimentation Service, SAEX, is certified in the quality standard UNE-EN-ISO 9001:2015 and 14001:2015; the service has an internal quality management system, and is furthermore certified at level 3 in the UCO Trébol programme.

The UCO has a specific department for biosecurity and health protection, within the Risk Prevention Service (<http://www.uco.es/servicios/prevencion/es/>) and the Environmental Protection Service (<http://www.uco.es/servicios/sepa/es/>). Thoses Services, in collaboration

with other local institutions, departments and university services and the participation of all UCO employees, both the teaching and research staff and the administrative and services personnel, undertakes activities leading to the procurement of a healthier and safer environment. It has manuals and procedures for the prevention of occupational hazards. This service is responsible for carrying out risk assessments of every department/service, and it consequently determines the steps or procedures to be taken as needed.

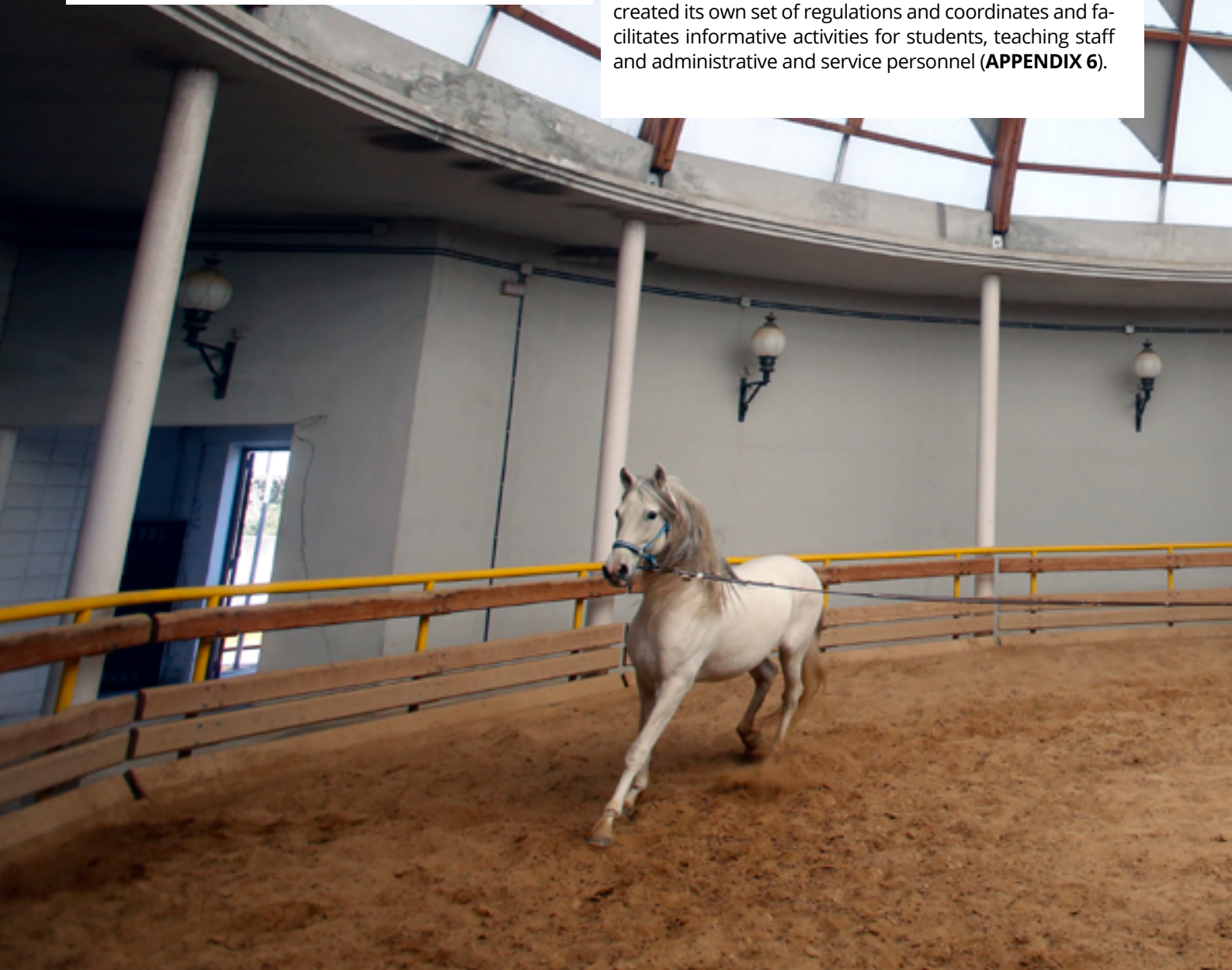
The FAVEUCO has its own biosecurity plan (APPENDIX 6) that includes the security measures needed to reduce risk in all the teaching and care activities. It also has a training programme for all groups: academic and support staff, students and visitors. The biosecurity plan and programme can be accessed at <http://www.uco.es/veterinaria/es/plan-de-bioseguridad>.

Comments on Standard 4

Since the last visit, medical specialities such as odontology and cardiology have been incorporated. In addition, the small animal cages in the isolation area for infectious animals have an individualised system for collecting faeces and urine. This system is not present in the normal hospitalisation cages, because many patients are catheterised and in other cases they can go out and roam in the areas adjacent to the hospital.

At present all the consultation rooms have a computer terminal with a veterinary management program installed, all of them connected to each other and to the registration system in reception. This is an enhancement since the last visit.

In recent years (2018-2019) FAVEUCO has implemented biosecurity in its teaching and research facilities and activities by setting up a committee that, to this end, has created its own set of regulations and coordinates and facilitates informative activities for students, teaching staff and administrative and service personnel (APPENDIX 6).



Also worth highlighting is the acquisition of new equipment devoted to teaching and research since the last visit, using ERDF funding, which has been especially important at the VTH, CEMEDE, Food Technology Pilot Plant and SAEX.

This year the university farm has had its facilities refurbished and extended, providing it with a new module for ruminants, a teaching room, a poultry module and a new layout for its sanitary facilities.

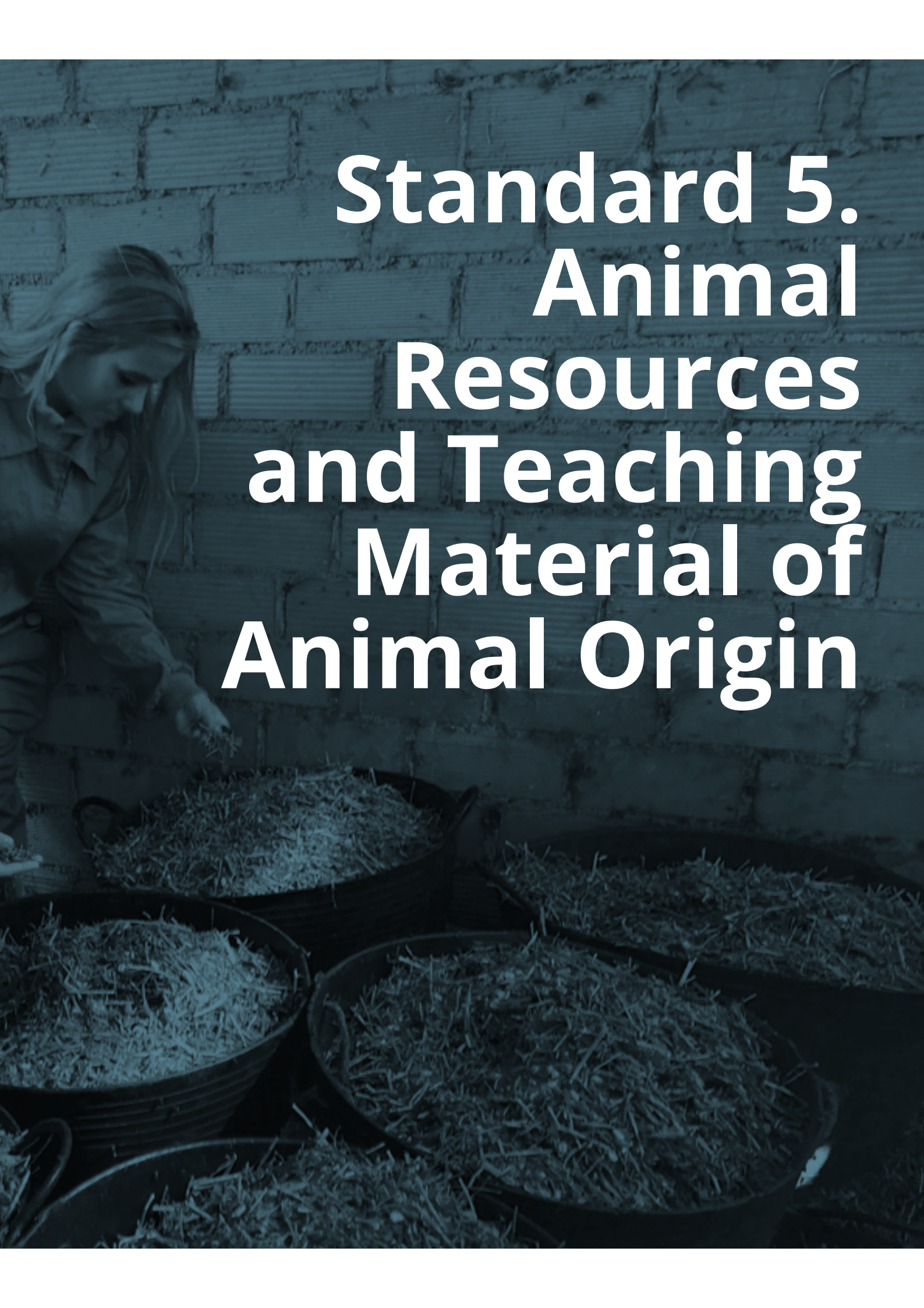
Suggestions for improvements on Standard 4

Given that the main infrastructure, such as the VTH and the RUTF, are not managed directly by FAVEUCO and their maintenance is the responsibility of the corresponding Vice-Rector's Office, it would be desirable to improve the procedure for coordination and to specify in greater detail the plan of action over the medium to long-term for the improvement of the facilities.

A specific programme for renewal and update of equipment for all services at the VTH and the different diagnostic units should be established, with the support of the UCO Infrastructure Vice-rectorate.





A woman with long blonde hair, wearing a light-colored jacket, is standing in a field. She is looking down at several large, dark-colored baskets filled with hay or straw. The background is a textured, light-colored wall, possibly made of brick or stone. The entire image has a dark, blue-tinted overlay.

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 and safe hands-on training (in the areas of Basic Sciences, Clinical Sciences, Pathology, Animal Production, Food Safety and Quality) and adapted to the number of students enrolled. Evidence must be provided that these data are regularly recorded and that procedures are in place for correcting any deficiencies.

The global strategy concerning the use of animals and material of animal origin is to ensure students' acquisition of the competences included in the curriculum, comprising Day One Competences, in accordance with ESEVT. It seeks to strike a balance between the provision of activities necessary for clinical training and application of the three Rs criterion: to Reduce, Replace and Refine the use of live animals, by using cadavers or model animals, thereby reducing risks to the students and promoting animal welfare as far as possible.

The distribution of clinical training per module/subject is based on the distribution in the FAVEUCO curriculum and is shown in **ANNEX 5.A**.

The specific strategy to ensure core clinical training is based on prior pre-clinical learning and specific clinical training.

Pre-clinical training involving the processing and pathological analysis of samples and materials of animal origin is carried out in specific laboratories located in the Animal Health building. The laboratories are equipped with the instruments necessary for students to be able to process cadavers and tissue samples, faecal samples, etc. so as to establish diagnoses (Table 5.1.1 and Table 5.1.6). Pre-clinical training involving healthy animals is given at the RUTE, the Animal Experimentation Service (SAEX) (<http://www.uco.es/sae/v2/>) and the UCO Animal Nutrition Centre (Table 5.1.2), as well as during visits to extra-mural entities.

Table 5.1.1. Cadavers and material of animal origin used in practical anatomical training

CATTLE - Specimens	2018/2019	2017/2018	2016/2017
	1 horn	1 horn	1 horn
	2 spleens (wet)	2 spleens (wet)	2 spleens (wet)
	4 heads - prosection (wet)	4 heads - prosection (wet)	4 heads - prosection (wet)
	2 heads - paramedian (wet)	2 heads - paramedian (wet)	2 heads - paramedian (wet)
	2 isolated bone collections	2 isolated bone collections	2 isolated bone collections
	2 hearts (wet)	2 hearts (wet)	2 hearts (wet)
	1 complete skeleton	1 complete skeleton	1 complete skeleton
	5 fetuses - different stages (wet)	5 fetuses - different stages (wet)	5 fetuses - different stages (wet)
	1 liver (wet)	1 liver (wet)	1 liver (wet)
	1 forelimb - prosection (wet)	1 forelimb - prosection (wet)	1 forelimb - prosection (wet)
	1 hindlimb - prosection (wet)	1 hindlimb - prosection (wet)	1 hindlimb - prosection (wet)
	1 foot - prosection (wet)	1 foot - prosection (wet)	1 foot - prosection (wet)
	2 placentae and uteruses (wet)	2 placentae and uteruses (wet)	2 placentae and uteruses (wet)
	5 kidneys (wet)	5 kidneys (wet)	5 kidneys (wet)
	2 kidneys - prosection (wet)	2 kidneys - prosection (wet)	2 kidneys - prosection (wet)
	2 embryo sacs (wet)	2 embryo sacs (wet)	2 embryo sacs (wet)
	1 udder (wet)	1 udder (wet)	1 udder (wet)
POULTRY & RABBITS - Specimens	2018/2019	2017/2018	2016/2017
	4 complete chicken cadavers (wet)	4 complete chicken cadavers (wet)	4 complete chicken cadavers (wet)
	3 complete rooster cadavers (wet)	3 complete rooster cadavers (wet)	3 complete rooster cadavers (wet)
	2 complete chicken cadavers (wet)	2 complete chicken cadavers (wet)	2 complete chicken cadavers (wet)
	1 complete rooster cadaver (wet)	1 complete rooster cadaver (wet)	1 complete rooster cadaver (wet)
	1 forelimb (bone)	1 forelimb (bone)	1 forelimb (bone)
	1 hindlimb (bone)	1 hindlimb (bone)	1 hindlimb (bone)
	1 feather	1 feather	1 feather
COMPANION ANIMALS - Specimens	2018/2019	2017/2018	2016/2017
	1 abdominal cavity (wet)	1 abdominal cavity (wet)	1 abdominal cavity (wet)
	2 female reproductive systems (wet)	2 female reproductive systems (wet)	2 female reproductive systems (wet)

	1 female reproductive system (plastinated)	1 female reproductive system (plastinated)	1 female reproductive system (plastinated)
	1 gravid uterus	1 gravid uterus	1 gravid uterus
	2 male reproductive systems	2 male reproductive systems	2 male reproductive systems
	12 heads - paramedian prosections (wet)	12 heads - paramedian prosections (wet)	12 heads - paramedian prosections (wet)
	1 head - transversal prosection (wet)	1 head - transversal prosection (wet)	1 head - transversal prosection (wet)
	1 head/neck - prosection (wet)	1 head/neck - prosection (wet)	1 head/neck - prosection (wet)
	7 complete dog cadavers (wet)	7 complete dog cadavers (wet)	7 complete dog cadavers (wet)
	4 dog cadavers - prosection (wet)	4 dog cadavers - prosection (wet)	4 dog cadavers - prosection (wet)
	8 thoracic cavities (wet)	8 thoracic cavities (wet)	8 thoracic cavities (wet)
	8 abdominal cavities (wet)	8 abdominal cavities (wet)	8 abdominal cavities (wet)
	9 isolated bone collections	9 isolated bone collections	9 isolated bone collections
	1 collection radiographs	1 collection radiographs	1 collection radiographs
	12 hearts (wet)	12 hearts (wet)	12 hearts (wet)
	4 hearts (plastinated)	4 hearts (plastinated)	4 hearts (plastinated)
	3 complete dog skeletons	3 complete dog skeletons	3 complete dog skeletons
	5 fetuses (wet)	5 fetuses (wet)	5 fetuses (wet)
	1 foetus malformation (plastinated)	1 foetus malformation (plastinated)	1 foetus malformation (plastinated)
	12 livers (wet)	12 livers (wet)	12 livers (wet)
	1 liver (plastinated)	1 liver (plastinated)	1 liver (plastinated)
	3 forelimbs - prosection (wet)	3 forelimbs - prosection (wet)	3 forelimbs - prosection (wet)
	1 forelimb - dissection (wet)	1 forelimb - dissection (wet)	1 forelimb - dissection (wet)
	3 hindlimbs - prosection (wet)	3 hindlimbs - prosection (wet)	3 hindlimbs - prosection (wet)
	1 hindlimb - dissection (wet)	1 hindlimb - dissection (wet)	1 hindlimb - dissection (wet)
	1 complete viscera collection	1 complete viscera collection	1 complete viscera collection
	2 placentae (wet)	2 placentae (wet)	2 placentae (wet)
	2 placentae (plastinated)	2 placentae (plastinated)	2 placentae (plastinated)
	30 lungs (wet)	30 lungs (wet)	30 lungs (wet)
	2 lungs (plastinated)	2 lungs (plastinated)	2 lungs (plastinated)
	8 kidneys (wet)	8 kidneys (wet)	8 kidneys (wet)
	2 embryo sacs (wet)	2 embryo sacs (wet)	2 embryo sacs (wet)
	1 thoracic cavity (wet)	1 thoracic cavity (wet)	1 thoracic cavity (wet)
	1 thorax - prosection (wet)	1 thorax - prosection (wet)	1 thorax - prosection (wet)
	2 complete cat skeletons	2 complete cat skeletons	2 complete cat skeletons
	1 cat foetus - malformation	1 cat foetus - malformation	1 cat foetus - malformation
SMALL RUMINANTS - Specimens	2018/2019	2017/2018	2016/2017
	1 abdominal cavity (wet)	1 abdominal cavity (wet)	1 abdominal cavity (wet)
	2 male reproductive systems (wet)	2 male reproductive systems (wet)	2 male reproductive systems (wet)
	2 spleens (wet)	2 spleens (wet)	2 spleens (wet)
	4 heads - paramedian (wet)	4 heads - paramedian (wet)	4 heads - paramedian (wet)
	3 head/necks - prosection (wet)	3 head/necks - prosection (wet)	3 head/necks - prosection (wet)
	2 complete cadavers (wet)	2 complete cadavers (wet)	2 complete cadavers (wet)
	3 cadavers - prosection (wet)	3 cadavers - prosection (wet)	3 cadavers - prosection (wet)
	1 heart (wet)	1 heart (wet)	1 heart (wet)
	1 brain (plastinated)	1 brain (plastinated)	1 brain (plastinated)
	3 stomachs (wet)	3 stomachs (wet)	3 stomachs (wet)
	3 stomachs (plastinated)	3 stomachs (plastinated)	3 stomachs (plastinated)
	3 open stomachs (wet)	3 open stomachs (wet)	3 open stomachs (wet)
	1 foetus (wet)	1 foetus (wet)	1 foetus (wet)
	3 livers (wet)	3 livers (wet)	3 livers (wet)
	3 forelimb - prosection (wet)	3 forelimb - prosection (wet)	3 forelimb - prosection (wet)
	3 hindlimb - prosection (wet)	3 hindlimb - prosection (wet)	3 hindlimb - prosection (wet)
	2 complete viscera collection	2 complete viscera collection	2 complete viscera collection

	2 pelvises (bone)	2 pelvises (bone)	2 pelvises (bone)
	3 placentae/uteruses (wet)	3 placentae/uteruses (wet)	3 placentae/uteruses (wet)
	4 lungs (wet)	4 lungs (wet)	4 lungs (wet)
	4 kidneys (wet)	4 kidneys (wet)	4 kidneys (wet)
	3 testicles (wet)	3 testicles (wet)	3 testicles (wet)
	1 thoracic cavity (wet)	1 thoracic cavity (wet)	1 thoracic cavity (wet)
	1 udder (wet)	1 udder (wet)	1 udder (wet)
EQUINES - Specimens	2018/2019	2017/2018	2016/2017
	2 female reproductive systems (wet)	2 female reproductive systems (wet)	2 female reproductive systems (wet)
	1 female reproductive system (plastinated)	1 female reproductive system (plastinated)	1 female reproductive system (plastinated)
	1 male reproductive system (wet)	1 male reproductive system (wet)	1 male reproductive system (wet)
	1 hip (dried)	1 hip (dried)	1 hip (dried)
	2 carpus (dried)	2 carpus (dried)	2 carpus (dried)
	4 elbows (dried)	4 elbows (dried)	4 elbows (dried)
	1 shoulder (dried)	1 shoulder (dried)	1 shoulder (dried)
	4 stifles (dried)	4 stifles (dried)	4 stifles (dried)
	2 tarsi (dried)	2 tarsi (dried)	2 tarsi (dried)
	2 spleens (wet)	2 spleens (wet)	2 spleens (wet)
	2 heads - paramedian (wet)	2 heads - paramedian (wet)	2 heads - paramedian (wet)
	4 heads - prosection (wet)	4 heads - prosection (wet)	4 heads - prosection (wet)
	1 head - transversal (wet)	1 head - transversal (wet)	1 head - transversal (wet)
	1 head/neck (frozen)	1 head/neck (frozen)	1 head/neck (frozen)
	2 heads/necks - prosection (wet)	2 heads/necks - prosection (wet)	2 heads/necks - prosection (wet)
	2 isolated bone collections	2 isolated bone collections	2 isolated bone collections
	1 radiograph collection	1 radiograph collection	1 radiograph collection
	3 colons (plastinated)	3 colons (plastinated)	3 colons (plastinated)
	2 hearts (wet)	2 hearts (wet)	2 hearts (wet)
	2 hearts - opened (wet)	2 hearts - opened (wet)	2 hearts - opened (wet)
	1 tooth	1 tooth	1 tooth
	1 brain (plastinated)	1 brain (plastinated)	1 brain (plastinated)
	1 complete skeleton	1 complete skeleton	1 complete skeleton
	1 stomach (wet)	1 stomach (wet)	1 stomach (wet)
	3 stomachs (plastinated)	3 stomachs (plastinated)	3 stomachs (plastinated)
	3 foetuses (wet)	3 foetuses (wet)	3 foetuses (wet)
	2 livers (wet)	2 livers (wet)	2 livers (wet)
	4 intestines (wet)	4 intestines (wet)	4 intestines (wet)
	2 larynxes + hyoids (plastinated)	2 larynxes + hyoids (plastinated)	2 larynxes + hyoids (plastinated)
	2 feet (wet)	2 feet (wet)	2 feet (wet)
	3 feet - prosection (wet)	3 feet - prosection (wet)	3 feet - prosection (wet)
	2 feet prosection (plastinated)	2 feet prosection (plastinated)	2 feet prosection (plastinated)
	2 thoracic cavities (wet)	2 thoracic cavities (wet)	2 thoracic cavities (wet)
	2 hindlimbs (wet)	2 hindlimbs (wet)	2 hindlimbs (wet)
	2 hindlimbs (frozen)	2 hindlimbs (frozen)	2 hindlimbs (frozen)
	2 forelimbs (wet)	2 forelimbs (wet)	2 forelimbs (wet)
	2 forelimbs (frozen)	2 forelimbs (frozen)	2 forelimbs (frozen)
	3 complete viscera collections (wet)	3 complete viscera collections (wet)	3 complete viscera collections (wet)
	1 stallion pelvis (wet)	1 stallion pelvis (wet)	1 stallion pelvis (wet)
	1 mare pelvis (wet)	1 mare pelvis (wet)	1 mare pelvis (wet)
	2 pelvic floors male (wet)	2 pelvic floors male (wet)	2 pelvic floors male (wet)
	3 penises (wet)	3 penises (wet)	3 penises (wet)
	2 penises - sections (wet)	2 penises - sections (wet)	2 penises - sections (wet)
	2 hooves (wet)	2 hooves (wet)	2 hooves (wet)
	2 placentae + uterus (wet)	2 placentae + uterus (wet)	2 placentae + uterus (wet)
	6 lungs (wet)	6 lungs (wet)	6 lungs (wet)

	4 kidneys (wet)	4 kidneys (wet)	4 kidneys (wet)
	4 kidneys - opened (wet)	4 kidneys - opened (wet)	4 kidneys - opened (wet)
	3 testicles (wet)	3 testicles (wet)	3 testicles (wet)
	3 thoraxes (wet)	3 thoraxes (wet)	3 thoraxes (wet)
	1 udder (wet)	1 udder (wet)	1 udder (wet)
	1 bladder (wet)	1 bladder (wet)	1 bladder (wet)
PIGS - Specimens	2018/2019	2017/2018	2016/2017
	3 female reproductive systems (wet)	3 female reproductive systems (wet)	3 female reproductive systems (wet)
	2 gravid uteruses (wet)	2 gravid uteruses (wet)	2 gravid uteruses (wet)
	2 male reproductive systems (wet)	2 male reproductive systems (wet)	2 male reproductive systems (wet)
	2 spleens (wet)	2 spleens (wet)	2 spleens (wet)
	1 head - paramedian (wet)	1 head - paramedian (wet)	1 head - paramedian (wet)
	1 head - prosection (wet)	1 head - prosection (wet)	1 head - prosection (wet)
	1 heart (wet)	1 heart (wet)	1 heart (wet)
	1 complete skeleton	1 complete skeleton	1 complete skeleton
	1 stomach (wet)	1 stomach (wet)	1 stomach (wet)
	5 foetuses (wet)	5 foetuses (wet)	5 foetuses (wet)
	2 foetus malformations (wet)	2 foetus malformations (wet)	2 foetus malformations (wet)
	1 foetus malformation (plastinated)	1 foetus malformation (plastinated)	1 foetus malformation (plastinated)
	2 livers (wet)	2 livers (wet)	2 livers (wet)
	2 larynxes (wet)	2 larynxes (wet)	2 larynxes (wet)
	1 hindlimb (wet)	1 hindlimb (wet)	1 hindlimb (wet)
	2 complete viscera collections	2 complete viscera collections	2 complete viscera collections
	2 placentae + uterus (wet)	2 placentae + uterus (wet)	2 placentae + uterus (wet)
	2 lungs (wet)	2 lungs (wet)	2 lungs (wet)
	3 kidneys (wet)	3 kidneys (wet)	3 kidneys (wet)
	2 kidneys - opened (wet)	2 kidneys - opened (wet)	2 kidneys - opened (wet)
	2 embryo sacs (wet)	2 embryo sacs (wet)	2 embryo sacs (wet)
	4 testicles (wet)	4 testicles (wet)	4 testicles (wet)

Table 5.1.2. Healthy live animals used for pre-clinical training

SPECIES	2018/2019	2017/2018	2016/2017	MEAN
Cattle	5	5	5	5
Small ruminants	58	58	56	57
Pigs	10	10	10	10
Companion animals*	34	33	34	34
Horses	12	12	13	12
Poultry and rabbits**	40	20	20	27

*Dogs

**Only birds in the 2016/2017 and 2017/2018 academic years. Birds and rabbits in the 2018/2019 academic year.

With regard to clinical training, FAVEUCO has a Veterinary Training Hospital (VTH) (www.hcvcordoba.es) for the training of students. The VTH has a Small/Exotic Animal Clinical Area which provides a general consultation service, by appointment, with morning opening hours for the duration of the academic year. There are also specialist consultations: Internal Medicine, Ophthalmology, Dermatology, Digestive, Neurology, Cardiorespiratory, Oncology, Diagnostic Imaging, Exotic Ani-

mals, Nephrology, Reproduction, Physical Therapy and Rehabilitation, Soft Tissue Surgery, Traumatology and Orthopaedics, Ethology and Continuous Arteriovenous Hemofiltration with Dialysis. There is also a dedicated 24/7 Emergency and Hospitalisation Service open all year round (**ANNEX 5.B**). In 2016, the service specialising in feline medicine was opened (Cat Friendly Clinic: certified by the International Society of Feline Medicine and pending ISFM Platinum accreditation). Two further

services have also been launched: the Physiotherapy Service and the Clinical Ethology Service, in collaboration with the Córdoba Municipal Animal Control Centre (CECA-SADECO) in the recovery and preparation of rescued animals, with a view to their adoption. To increase the number of exotic animal clinical care cases available to students, an agreement with the City Council (Ayuntamiento de Córdoba) is in place that allows students to contribute to the clinical care of animals at Córdoba Zoo (<https://zoo.cordoba.es/>), where there are 436 examples of 101 different species of mammals, birds and reptiles.

The Large Animal Clinical Area is focused primarily on Equine Medicine, Surgery and Reproduction, which is available as an appointment-only consultation service with opening hours in the morning and afternoon/evening for the duration of the academic year, as well as a 24/7 Emergency and Hospitalisation Service which is available year-round. In addition, it houses the CE-MEDE (<http://www.uco.es/cemedede/>), a clinical equine training facility featuring sophisticated equipment. An agreement with the Ministry of Defence has been in place since 2015 to house three horses from the

Spanish Armed Forces Equine Stud Farm at the VTH between the months of March and May, which has entailed an increase in the number of clinical cases being referred for reproduction through natural mating, and for preparation of semen doses for artificial insemination. The VTH offers an on-call service for the clinical care of farm animals, which is manned by an associate professor attached to the Ambulatory Clinic Unit. As a result, 100% of the farm animal clinic is extra-mural.

The number of intra-mural cases seen at the VTH is generally high, (**Table 5.1.3, ANNEX 5.C**) which ensures that the students receive sufficient practical training to acquire Day One clinical competences. In order to complete clinical training with farm animals, as well as practical trainings in modules at the VTH, all students participate in the Ambulatory Clinic itinerary of the TPT module, where development is extra-mural (point 5.2) (**Table 5.1.4**). The average number of first-opinion cases among companion animals, horses and exotic animals is 60%, 20% and 80%, respectively, and reaches 100% in the case of farm animals (**Table 5.1.5**). This affords students appropriate clinically-focused training in cases of common diseases right from the outset.

Table 5.1.3. Number of patients seen intramurally

SPECIMEN	2018/2019	2017/2018	2016/2017	MEAN
Cattle	0	0	0	0
Poultry & rabbits	24	0	0	8
Companion animals	5,753*	5,892**	5,738**	5,794
Small ruminants	0	0	0	0
Equine species	333*	300**	526**	386
Pigs	0	0	0	0
Exotic pets	41*	38	14	31

*In the period from January to October 2019.

** Estimated numbers. Our data system does not distinguish between visits for different conditions and repeat visits for the same condition.

Table 5.1.4. Number of patients seen extramurally

SPECIMEN	2018/2019	2017/2018	2016/2017	MEAN
Cattle	528	623	704	618,3
Small ruminants	16	22	11	16,3
Pigs	188	167	237	197,3
Companion animals*	0	0	0	0,0
Equine species	12	12	18	14,0
Poultry & rabbits**	0	0	0	0,0
Exotic pets	0	0	0	0,0

* Companion animals are not visited in the extramural training.

** Due to the production systems used for these species in this area, individual clinical care of these animals is very sporadic.

The average number of referral cases seen in specialist consultations is between 60 and 80% for companion animals and horses, although it can be as high as 70% for advanced surgical procedures and 90% for diagnostic procedures such as endoscopies and computerised tomography (CT) scans. These high values are related to the fact that the VTH acts as a reference centre for clinical veterinarians in the region, something that propitiates student training in specialist areas. The

percentages among acute and chronic cases among small animals have been between 55 and 45% in the last three years. The percentage among acute cases in horses exceeds 70%. Of the equine patients that attend the VTH, 35% remain hospitalised for at least a day. Finally, around 90% of clinical activity with this species corresponds to individual treatment and the remaining 10% is focused on herds.

Table 5.1.5. Percentage (%) of first-opinion patients used for clinical training

SPECIES	2018/2019	2017/2018	2016/2017	MEAN
Cattle	100	100	100	100*
Small ruminants	100	100	100	100*
Pigs	100	100	100	100*
Companion animals	60	60	60	60**
Horses	20	20	20	20**
Poultry and rabbits	-	-	-	-
Exotic pets	80	80	80	80

*Farm animals are seen exclusively by the Ambulatory Clinic.

**Percentages are due to the fact that the VTH acts as a referral hospital for clinical veterinarians in the region.

To complete students' clinical and pre-clinical training, they are given access to anatomical collections, anatomical models and virtualisation programs. Additionally, for reasons of animal welfare, various clinical subjects have been adopting the use of mannequins and simulators in recent years so that, while not eliminating training with live animals, their use in the learning of certain invasive techniques (venipuncture, cardiology, anaesthesiology, traumatology and orthopaedics) has been reduced. Six canine mannequins are currently available for fine needle puncturing-aspiration, two mannequins for practising dressings, eight arms for

venous catheterisation, three mannequins for urethral catheterisation, two heads for orotracheal intubation, and one dog and one cat for cardiopulmonary resuscitation. In addition, courtesy of a Teaching Innovation project, 3D printing is being used to manufacture a vulva and an ear for otoscopy. A plastinated digestive system for equine digestive endoscopy is also being made. A bovine model for dystocia simulation and, in partnership with the Andalusian Council of Veterinary Colleges, four mannequins (dogs and cats of both sexes) for venous catheterisation, cystocentesis and urethral catheterisation have recently been acquired.

Table 5.1.6. Cadavers used in necropsy

SPECIMEN	2018/2019	2017/2018	2016/2017	MEAN
Cattle	52	35	77	54,7
Poultry & rabbits	86	87	87	86,7
Companion animals	185	124	68	125,7
Small ruminants	195	115	184	164,7
Equine species	27	30	21	26,0
Pigs	115	155	127	132,3
Exotic pets	104	94	8	68,7
Rodents	14	17	6	12,3

Practical and safe hands-on training in Animal Production and FSQ also requires the use of animals and material of animal origin, which are provided in different modules:

In recent years, **training with farm animals** in farming conditions has primarily been covered in the Livestock Enterprises itinerary of TPT (point 5.2), but also in

other Animal Production Department subjects. (**Table 5.1.7, ANNEX 5.D**).

Table 5.1.7. Number of visits in herds/flocks/units for training in Animal Production and Herd Health Management

SPECIMEN	2018/2019	2017/2018	2016/2017	MEAN
Cattle	171	213	178	187
Small ruminants	111	148	169	143
Pigs	103	112	115	110
Poultry	76	45	29	40
Rabbits	0	0	0	0
Aquatic animals	0	0	0	0
Bees & snails	16	0	0	5

Training in Slaughterhouses and other food establishments is mostly covered in the Food Technology and Safety (intramural and extramural) and Slaughterhouses (extramural, point 5.2) itineraries of the TPT

(**Table 5.1.8**). In addition, the Small Ruminants Dairy Laboratory located in the Animal Production building offers practical training in milk quality and hygiene.

Table 5.1.8. Number of visits in slaughterhouses and related premises for training in FSQ.

	2018/2019	2017/2018	2016/2017	MEAN
Extramural visits				
Pig and ruminant slaughterhouses*	96	85	96	92
Poultry slaughterhouses**	72	32	72	59
Inspection of food industries***	72	107	96	92
Intramural visits				
UCO Pilot Plant****	96	160	120	125
Small Ruminants Dairy Laboratory*****	15	15	15	15

Each visit corresponds to one group of students and lasts for 5-6 h, except in the case of the Small Ruminants Dairy Laboratory, where the activity lasts for 2 h.

*one student per veterinary inspector.

**4-5 students per veterinary inspector.

***2 students per veterinary inspector.

****4-5 students per professor.

*****10 students per professor.

At the current time, the majority of clinical procedures are taught at the VTH using patients, whereas teaching practices involving experimental procedures are highly infrequent. The facilities where animals form part of the FAVEUCO teaching fall under the administrative responsibility of the university. The facilities are directed and staffed by capable, qualified personnel, in accordance with the requirements of Royal Decree 53/2013, where applicable. The use of animals in research and teaching is regulated at both a national and autonomous level by the 2010/63/EU Directive (incorporated into the Spanish legal system by RD 53/2013). All exper-

imental procedures for research need to be approved by the University of Córdoba Bioethics and Biosecurity Committee (<http://www.uco.es/investigacion/portal/comite-de-bioetica-y-bioseguridad>) and authorised by the appropriate body of the autonomous government (Andalusian Regional Government Directorate General of Agricultural and Livestock Production). Approval and authorisation is based on the application of the triple R concept: replacement with alternative techniques as much as possible, reduction in the number of animals used, and refinement of procedures to minimise damage to animal welfare. Procedures conducted exclusive-

ly for teaching purposes fall outside the scope of RD 53/2013 in accordance with points (a) (non-experimental agricultural practices), (b) (non-experimental clinical veterinary practices) and (d) (practices carried out for recognised animal husbandry purposes) of its article 2. Clinical teaching procedures (type b) are subject to the express authorisation of the owners of animals concerned by means of informed signed consent and the endorsement of the Animal Welfare Ethical Committee of the VTH, a body answering to the UCO Bioethics and Biosecurity Committee.

The supply of sufficient material of animal origin for Anatomy and Pathological Anatomy practicals is ensured and legalised through an agreement between FAVEUCO and the municipal institutions: Córdoba Municipal Animal Control Centre (CECA-SADECO), for the supply of (mainly) cat and dog cadavers, and Córdoba Zoo, for the supply of samples of exotic species. This supply is complemented by pig and small ruminant specimens from the RUTF, small ruminants and rabbits from the UCO Animal Nutrition Centre, pieces provided by regional slaughterhouses, as well the cadavers of dogs, cats and horses that have died at the VTH, when it is necessary to provide an exhaustive diagnosis.

To this end, FAVEUCO is recognised administratively as an establishment handling animal by-products not fit for human consumption for instructional and research purposes (SGUIT/DGITC/SVPAI/CJG/SANDACH-01-2016 resolution).

Waste is taken away by authorised companies and destroyed by incineration. The Anatomic-pathological Diagnosis Service has a computer program that assigns an individual code to each cadaver sent for necropsy or sample sent for biopsy, so that the number of cases available to students, as well as their diagnoses, are recorded.

With regard to how 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 are decided, communicated, implemented and revised, the number and distribution of clinical cases is evaluated at different levels. Firstly, the professors responsible for the subjects notify the course coordinators or the degree coordinator the need for a higher number of animals or material of animal origin. Secondly, the VTH Executive Committee conducts an annual review of the balance of cases and communicate the situation to the VTH-FAVEUCO Steering Committee. The QAU analyses the situation and proposes short and medium-term measures to ensure the correct development of practical teaching. Based on this,

the Faculty's executive team pursues new collaboration agreements for the receipt of samples prior to the following academic year.

All decisions and agreements of VTH Executive Committee, QAU and FAVEUCO Board are published in the minutes of the meetings of these organisms. The Centre informs about the most relevant initiatives via its website.

5.2 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 following the same standards as those applied in the Establishment.

All external sites at which students undertake their studies are organised and managed according to framework agreements between each establishment and the UCO, as well as specific agreements with the FAVEUCO. Activities for the various subjects, in which students are always accompanied by professors or professional external tutors (EPT), are organised on the basis of the list of available establishments in every academic course, depending on the existing agreements (http://www.uco.es/organiza/centros/veterinaria/imagenes/documentos/gveterinaria/practicas/tuteladas/Ofer-ta_practicas_Vet_18-19.pdf).

During their training, students have the opportunity to carry out pre-clinical practice at affiliated facilities such as CECA-SADECO, Córdoba Zoo, Écija Equine Reproduction Centre and Córdoba Provincial Livestock Station, in the Ethology, Ethnology and Animal Welfare subject. In addition, in the Data Analysis and Veterinary Management and Economics of Livestock Production subjects, students pay visits to livestock farms, so they are able to familiarise themselves with the different production systems and how they are managed.

In the Surgical Pathology subject, as well as compulsory intramural practicals, students have the opportunity to complete extramural clinical practicals with large animals. Moreover, in the Infectious Diseases subject, students go on two fieldtrips, having the option to choose between bovine, porcine or small ruminant holdings or hunting grounds, where they can gain experience in the breeding of wild animals.

In the TPT subject, specifically in the Ambulatory Clinic and Livestock Enterprises itineraries, students visit affiliated farms, divided into groups of a maximum of eight students (which are subdivided into two groups of four students) to accompany the associate profes-

sors and tutors (**ANNEX 5.E**). FAVEUCO has 12 associate professors and 12 tutors with multidisciplinary profiles (internal medicine, surgery and reproduction) to carry out the Ambulatory Clinic itinerary of the TPT, plus five associate professors and four tutors for the Livestock Enterprises itinerary. The size and location of the livestock farms can vary from year to year. During the 2018/2019 academic year, the number of animals ranged from 50 to 400 for cattle (dairy and meat), from 400 to 2,000 for small ruminants (sheep and goats), from 150 to 400 for pigs (Iberian and White breeds) and from 1,000 to 40,000 for poultry (**ANNEX 5.F**). On these practical trainings, students gain experience of the most common medical problems and types of surgery in farm animals, as well as sanitary programmes and biosecurity measures. Students actively participate in the identification, clinical history-taking, clinical exploration, collection of samples, administration of medication, use of animal identification systems, basic treatment of wounds and sutures, catheterisation and diagnosis of gestation.

During the Slaughterhouses and Food Technology and Safety itineraries of the TPT, FAVEUCO makes a particular effort to ensure there is a variety of food establishments available by means of a specific agreement to collaborate with the Andalusian Health Service (SAS), so that students can acquire wide-ranging experience in food safety. There is a total of 20 associate professors and eight professional external tutors available, all of whom are official SAS inspectors, to accompany students on visits (**ANNEX 5.E**).

5.3 The VTH must provide nursing care skills and instruction in nursing procedures. Under all situations students must be active participants in the clinical workup of patients, including problem-oriented diagnostic approach together with diagnostic decision-making.

Nursing care skills are implemented and taught to the students by the professors in charge of the various clinical subjects, while on rotation through the VTH services; all students must participate in the care of patients: clinical exploration, sampling and follow-up of the hospitalised animals (medication, cleaning, feeding, walking, etc.) (**ANNEX 5.A**)

For most of the different types of clinical training in services at the VTH, there are a maximum of five or six students per group; these can be subdivided between the various specialist consultations and activities simultaneously and supervised by different professors to guarantee sufficient hands-on training. In clinical practice with healthy animals for the core Propaedeutic, Obstetrics and Reproduction subjects at the VTH,

there is a maximum of 12 students per professor. For clinical practice in the core General Pathology, Pathological Anatomy (General & Specific), Parasitic Diseases, Infectious Diseases, Preventive Medicine and Sanitary Policy subjects in the FAVEUCO laboratories or at external farms there is also a maximum of 12 students per professor (**ANNEX 5.G and ANNEX 5.H**). On the Ambulatory Clinic itinerary of the TPT, the maximum number of students per professor is four. (**ANNEX 5.I**).

The hands-on involvement of students in the various clinical procedures on the various species differs according to the subject:

General, Specialist, Surgical and Medical Consultations

- Taking individual or collective patient histories, conducting complete physical explorations, including neurological, orthopaedic and ophthalmological examinations, as determined by the clinical case.
- Assessing the nutritional condition and welfare of animals individually and collectively.
- Preparing the list of disorders, the differential diagnosis, the work plan and the therapeutic focus.
- Communicating effectively with clients.
- Carrying out diagnostic procedures: fine needle aspiration cytology, collection of blood and urine samples, blood pressure, Schirmer's test, ocular tonometry, skin scraping, electrocardiograms, faecal and vaginal cytology, etc.
- Administering medicine orally, subcutaneously, intramuscularly and intravenously.
- Assisting in other diagnostic and therapeutic procedures such as endoscopies, analysis of cerebrospinal fluid, skin biopsies, chemotherapy, euthanasia, etc.
- Applying bandages and other immobilisation techniques.
- Keeping medical records and writing reports.

Hospitalisation, and medical and surgical emergencies

- Giving first aid.
- Reviewing clinical history, evaluating the state of the patient through physical examination and updating records.
- Preparing the list of conditions, the differential diagnosis, the work plan and the therapeutic focus.

- Carrying out routine diagnostic procedures on hospitalised animals: collecting blood and urine samples, blood pressure, etc
- Performing various therapeutic procedures: insertion of intravenous and urinary catheters, fluid therapy, alternative means of administering pharmaceutical drugs, dressings, cleaning and protecting wounds and other post-operative procedures.
- Designing and administering nutritive therapies.
- Assisting in other diagnostic and therapeutic procedures, such as the insertion of feeding tubes, drainage of internal bleeding, blood transfusions, tracheal intubation and mechanical ventilation, euthanasia, etc.
- Applying biosecurity measures.
- Effective communication with clients.
- Preparing medical records and writing reports.

Operating theatres

- Participating in the preparation of operations (surgical, operating theatre and patient material), taking biosecurity measures and aseptic surgery into account. Taking the lead in carrying out simple surgical procedures (female and male neutering, removal of tumours, etc).
- Assisting the surgeon with complex operations.
- Suturing surgical wounds and applying dressings and drainage.
- Taking responsibility for immediate post-operative care.
- Effective communication with clients.
- Keeping medical records and writing reports.
- Anaesthesia.
- Evaluating the pre-anaesthetic state of the patient,
- Discussing and designing the anaesthetic protocol to apply to each case and procedure.
- Carrying out ancillary tasks, including the administration of fluids, local anaesthetic and intubation.
- Administering the anaesthetic protocol pre-approved by the professor.
- Monitoring the anaesthetic protocol procedure (induction, maintenance and recovery) and being able to make decisions where necessary
- Diagnostic imaging.
- Collaborating with patient positioning.

- Initiating ultrasound investigations and assisting the professor with complete investigations.
- Discussing and interpreting radiological and ultrasound results and writing reports on them.
- Participating in computerised tomography investigations.

Necropsies

- Reviewing individual and collective patient histories.
- Performing complete and systematic necropsies, discussing the macroscopic findings and linking these to the clinical signs.

Reproduction of large animals

- Carrying out rectal palpations.
- Assisting in common procedures for diagnosis of gestation.
- Assisting in equine reproduction procedures

Infectious diseases and parasites

- Collecting samples
- History-taking
- Clinical examinations
- Carrying out microbiological and parasitological diagnostic tests
- Carrying out immunological tests
- Treatment proposals

Preventative medicine and Medicine of production

- Assessing farms' biosecurity measures for various animal species.
- Evaluating animal welfare conditions.
- Judging the possible role of environmental conditions as underlying factors of disease and evaluating environmental control systems on pig and poultry farms.
- Clinically evaluating animals so as to identify possible indicators of disease.
- Evaluating the corporal condition of animals and their feeding regime.
- Reviewing prophylaxis and prevention programmes on livestock farms.

- Collecting relevant biological samples for the diagnosis of disease in farm animals.
- Performing necropsies in event of fatalities in the herd.
- Reviewing mastitis control programmes on ruminant dairy farms.
- Describing and analysing data records.
- Applying sanitary programs.
- Carrying out common farm tasks such as reproductive control.

Every day, as clinical activity begins at the VTH, the students meet up with the professors and veterinarians to conduct a round of the day's cases. In this meeting, hospitalised patients are reviewed and the day's new cases are examined. The necessary diagnostic procedures, modifications to treatment and guidelines for future visits are discussed. When consultations are over, the professor and the students analyse and discuss the cases they have seen and the pathologies or the tests that have been carried out. Apart from the ward rounds, students may put forward evaluations and consult with the professors about clinical proceedings at any time. There are various clinical sessions over the course of the week (case discussions, journal clubs, etc.) in different specialisms (feline medicine, surgery, anaesthesia, neurology and so on) that TPT students may attend.

As has been explained in **STANDARD 3** (3.1.9), when students finish their specific rotation in Surgery and Anaesthesiology, they select and present a clinical case that they have directly assisted with or participated in. In their preparation of the case, they make a thorough argument based on the literature (evidence-based veterinary medicine) about the diagnostic options and therapeutic options, discussing the course of action that was taken and indicating their level of participation, helping them to deepen their knowledge of the case in question.

5.4 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.

Qvet® is the computer program used for recording clinical histories, billing, pharmacy control, sales and appointments at the VTH. The programme is accessible via the computers situated in the majority of clinical facilities, as well as in consultation rooms.

The VTH Reception area manages all patient-related administrative issues and comprises two members of administrative support staff who deal with payments, appointments and record maintenance. After hours, the veterinary interns on duty are in charge of opening new records. The first time a patient comes to the VTH, it is registered on the centre's computerised database with a unique record, including the owner's data (name, address, identity card, telephone number and email address), and the patient's details (species, breed, age and sex).

Test images are managed by KPACS® software, although copies of the images are also included within the clinical history of the patient on the QVet program, along with any reports from diagnostic tests that have been carried out. The VTH IT service makes regular back-up copies of both databases.

As well as the computerised clinical history on the Qvet program, each animal has a folder in which printed copies of the results of diagnostic tests are stored. These record folders are stored, in numerical order, in the VTH files, maintained by the reception/admission staff.

Staff may consult the records of patients for teaching or research purposes and for their learning activities at any time; upon request, students can access the reports under supervision. Staff in the reception/admission area are also in charge of answering phone calls (phone enquiries for clinicians are passed on to them), making appointments for the various specialist clinics both in person and on the telephone, and preparing patient records for each day's appointments before the consultations begin.

Comments on Standard 5

Since the last visit there has been a significant increase in the resources of animal origin used for student training at all levels, with increases both in the number of species and the various settings used for practical training.

Pre-clinical training is ensured by the sufficient availability of both healthy animals in various campus services, and cadavers, supply of which from these services is significantly complemented by agreements struck with a range of companies and organisations. The curriculum is organised so that, from the very outset of their studies (1st Year), students work with animals and manage them in accordance with the principles of animal welfare.

Clinical training with companion animals, horses and farm animals is extensive in both specific modules and in the VTH and Ambulatory Clinic itineraries of the TPT. These itineraries offer a large variety of first-opinion

and referral cases involving various animal species, which allows adequate acquisition of abilities orientated towards individualised attention, production medicine and the health of herds.

Training with farm animals in farming conditions and food safety is strongly driven by the corresponding itineraries of the TPT: Livestock Enterprises, Slaughterhouses and Food Technology and Safety. The choice of livestock farms is dependent on the peculiarities of the predominant systems of production in our region, but within these constraints, the aim is to provide students with the widest possible perspective and the greatest possible variety of production systems. However, due to the geographical location of FAVEUCO, training in aquaculture is very limited. The RUTF facilities are currently undergoing renovations and improvements to make them more user-friendly, more practical and more suitable for training, this being one of FAVEUCO's priorities. There is also a project to improve and bring up to regulatory standards the rabbit module in the Animal Production Department.

From the first year of their degree, in the Ethnology, Ethology and Animal Welfare subject, students also have the opportunity to engage in practical training at Córdoba Zoo, where they learn about wild animal species, courtesy of the agreement established with the municipal institution.

Teaching procedures have been revised in recent years to reduce the use of live animals, to the extent that this is possible, with the use of mannequins of different species in supervised clinical practicals. FAVEUCO supports, through the UCO Teaching Innovation and Improvement Programme, and in collaboration with sponsoring entities, the purchase of new mannequins for education and for undertaking new clinical procedures.

FAVEUCO has made a great effort to furnish itself with associate professors and tutors, as well as agreements with livestock farms in the region and the Andalusian Health Service, in order to provide students with good learning conditions throughout the TPT.



Suggestions for improvement on Standard 5

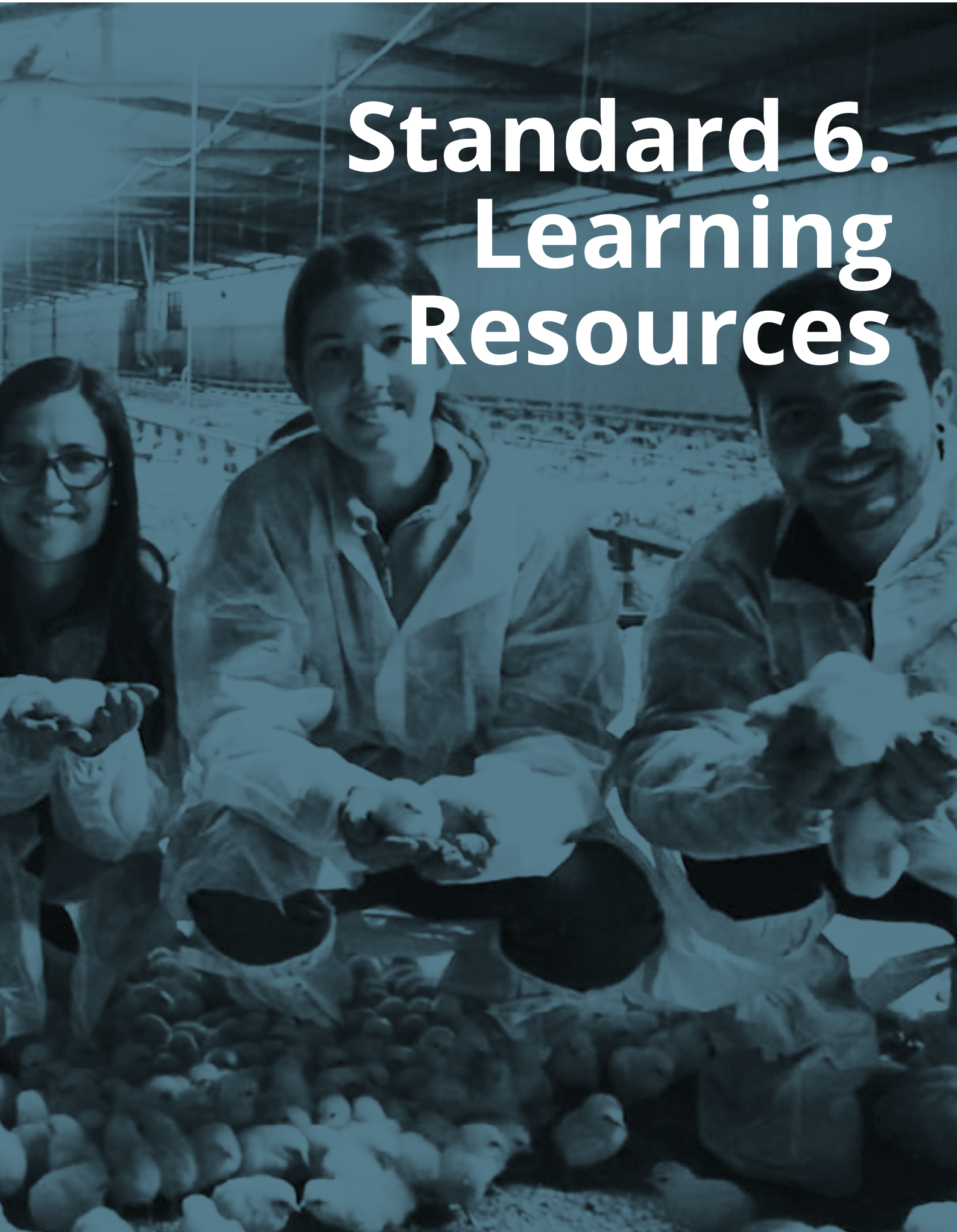
One of the main limitations for pre-clinical teaching with healthy animals, and intramural teaching with farm animals, has been the limited budget for renovation and administration of the university farm. At FAVEUCO's request, UCO has made a budgetary provision to provide a complete overhaul of facilities, with a view to improving their accessibility, biosecurity and hygiene measures, the variety of species and the number of animals, and the instrumental tools for the maintenance and management of the animals. Once the renovation is finalised, it will be possible to increase the number of practical activities at the facilities and enhance the teaching programme in line with the recently-introduced regulations. The possibility it offers for research projects and other services that could contribute to its self-funding.

Some campus facilities whose purpose is predominantly research-focused (CEMEDE, Animal Nutrition Centre) have not been used for pre-clinical teaching and/or work with farm animals in its different facets to their full potential, primarily because of economic and staffing limitations. At this time, action is being taken to ensure an offer of annually-programmed activities at these centres that contribute to improving resources of animal origin (more practicals with horses, new practicals with rabbits and birds) to aid teaching at FAVEUCO.





Standard 6. Learning Resources





6.1 State-of-the-art learning resources must be adequate and available to support veterinary education, research, services and continuing education. When the study programme is provided in several tracks/languages, the learning resources must be available in all used languages. 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.

The availability, adequacy and continuous enhancement of learning resources for veterinary education, research, services and continuing education are ensured by FAVEUCO in coordination with UCO Central Services, specifically:

- the UCO Library (<http://www.uco.es/servicios/biblioteca/>)
- the Centre for Virtual Resources UCODIGITAL (<http://ucodigital.uco.es>) with its MOODLE e-learning platform (<http://moodle.uco.es/moodlemapl/>).
- the UCO IT Service (<http://www.uco.es/servicios/informatica/>).

The management of teaching materials at FAVEUCO is carried out by various specific commissions in a complementary manner, as described in section 1.1:

- Library Commission
- Teaching Commission
- Permanent Training Committee

The majority of teaching materials are now virtual and are accessible via the website and on the MOODLE teaching platform at all times during the course. This approach guarantees that students, staff and stakeholders are able to access state-of-the-art learning resources at any time.

There is only one non-Spanish study programme, in English, available through FAVEUCO's Plurilingualism Plan, as described in **STANDARD 3 (3.1)**. Learning resources in that programme are provided in English (i.e., Moodle platform of the subject Food Hygiene, <https://moodle.uco.es/m1920/course/view.php?id=1727>).

Procedures for accessing and using **learning resources are taught to students** at different levels: at the beginning of the first academic year, the FAVEUCO team organises a Welcome Day for new students. Among other information, a brief explanation is given of how to access the Virtual Campus and how to manage their

official university email address. This information is also provided during the FAVEUCO Mentoring Programme for new students. The UCO Library also organises periodical presentations on the services, resources and procedures for student cohorts, including Veterinary students (http://www.uco.es/servicios/biblioteca/images/documentos/Novedades/Presentacion_UCO_web_sept.pdf) and offers on-site lessons, tutorials and learning materials on the website (<http://www.uco.es/servicios/biblioteca/servicios-biblioteca/formacion>) as well as online help (<http://www.uco.es/servicios/biblioteca/solicitud-de-formacion?form=10>).

The **procedures** followed for the acquisition of teaching resources are manifold. A large part of acquisition is managed by the University Library Commission (with the participation of librarians, teaching staff and students). This commission is tasked with gathering information from the recommended bibliographies in the teaching guides for each subject and for contacting the Coordinators of each degree course and the Deans to acquire the works that are recommended each year, up to the amount available in the budget. It also handles revised editions, new works submitted by suppliers and direct suggestions from both student and academic library-users.

Other teaching resources are acquired and managed directly by department academic staff using funds received for teaching activities and from teaching innovation projects overseen by the Postgraduate and Teaching Innovation Vice-Rector's Office (<http://www.uco.es/organizacion/calidad/innovacioneducativa/es/>).

6.2 Staff and students must have full access on site to an academic library administered by a qualified librarian, an Information Technology (IT) unit managed by an IT expert, an e-learning platform, and all the relevant human and physical resources necessary for the development of instructional materials by the staff and their use by the students. 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 through a hosted secured connection, e.g. Virtual Private Network (VPN).

The Library service of FAVEUCO is integrated in the UCO Library Service, concretely, in the Rabanales Campus Library (Maimonides Library), whose organisation and internal policies are the responsibility of the Vice-Rector for Information and Communication Technology (http://www.uco.es/servicios/biblioteca/images/documentos/ReglamentoBUCO_2017.pdf).

The library staff comprises 33 full-time qualified librarians (one director, 30 full-time librarians and two clerks) plus six recipients of grants. The library staff keep their knowledge up-to-date through regular training.

The library opens 283 days per year, from Monday to Friday, and the opening hours are from 8 am to 8.30 pm. The Library also has extraordinary opening hours during the exam period, when it remains open until 2 am. (<http://www.uco.es/servicios/biblioteca/horarios/ordinarios>)

In 2018, the library's annual budget for the entire university for scientific periodical subscriptions and online databases (the largest part of the budget), as well as online teaching books, was €1,160,011. For non-electronic materials, FAVEUCO received €33,107 (books) and €7,874 (periodicals). The budget is provided by both the University and the Consortium of University Libraries of Andalusia (CBUA).

The library facilities cover a surface area of 11,659 m², distributed over three floors; there are various sections such as a general reading room, the newspaper archive, several storerooms (11,069 m² of shelves for storage plus 732 m² off campus), group work rooms (85 seats), a staff working area, cubicles, training rooms, digitalisation spaces and exhibition spaces. There are a total of 1,976 reading seats and workstations, 1,734 of which are individual seats. The library is **located** in one of the central campus buildings, known as the Maimónides Library, and opened in 1999.

The **equipment** in Maimónides Library comprises 126 computers in rooms on the first and second floors. Users in possession of the required identification are allowed to use the internet, the University of Cordoba intranet and Office software programmes. These rooms may be booked for tuition and practical classes on the use of online documentary resources and database searches. The number of computers has proved to be sufficient, since most of the students bring their own laptops or tablets to the reading room. Power supply and wireless connection to the internet are available for the veterinary community. Staff have 45 PCs and workstations. The Computer Room offers PCs, OPACS and electrical connections for portable PCs.

With regard to **software for bibliographical search**, all information is online on the library website. The library uses the Millennium system (which supports the Mezquita Catalogue) for its management and services to users. Moreover, the Library offers software for many purposes relating to teaching and research. The most common way to gain access to learning resources is to consult the guide (<https://biblioguias.uco.es/c>

<http://www.uco.es/servicios/biblioteca/horarios/ordinarios>), and check the availability, reference or recommended literature on the subject, and to reserve and collect from the Main Library ("**Mezquita Catalogue**" using: <http://mezquita.uco.es/>).

Subsidiary libraries: Some departments in FAVEUCO have retained a departmental library, while in others, former library books are now held in the offices of the teaching staff who have requested them. In both cases, the books are listed as part of the Main Library holdings, and thus appear in the Mezquita Catalogue (which gives their location).

Brief description of the IT facilities and of the e-learning platform:

IT services for learning are provided by UCODIGITAL (<http://ucodigital.uco.es>) with its e-learning platform MOODLE (<http://moodle.uco.es/moodlemap/>) and the UCO IT Service:

- Personnel: one director, three administration and e-learning support technicians, two audiovisual production technicians and 47 operators/programmers.
- The facilities consist of: a distance-learning room with 30 seats and IT classrooms in different buildings; the Averroes lecture-theatre block which has five rooms with a total of 155 seats; the Ramón y Cajal building which has eight rooms with a total of 210 seats; and the Leonardo Da Vinci building which has five rooms with 136 seats.
- Connection software for virtual learning:
 - Adobe Connect (licensed for 21 rooms with up to 100 users in each) (<http://connect.uco.es/>);
 - Collaborative blackboard (licensed for unlimited users);
- Open Journal System, for the management of scientific journals (<http://www.uco.es/ucopress/ojs/index.php>);
- Open Conference System, for the management of conferences and seminars (<http://www.uco.es/servicios/ucodigital/ocs/index.php>);
- Omeka S (<http://www.uco.es/servicios/ucodigital/omeka/>).
- Software available: SPSS; MATLAB; SOCREATIVE PRO; SOLIDWORKS; INFOSTAT; ESS; AUTOSIM-200; ORIGIN LAB; PTC MATHCAD; SIGMAPLOT; ATLAS TI; EQS STRUCTURAL EQUATION MODELING SOFTWARE 6.3; ABB RobotStudio; CYPE; ANSYS; MIND-MANAGER 2018; FILMORA; GEXCAT; GRAPHER; NVIVO 12 PLUS; OFFICE 365 (1TB OneDrive access).

The Moodle platform (<http://moodle.uco.es/moodle-map/>) is the basic resource for managing online information for Veterinary degree subjects, as well as for Master's degrees and doctorates. It includes basic information, subject rules, academic content written by academic staff, management of Trained Practicals, submission and grading of student work, mechanisms for carrying out self-evaluations and evaluations of students, as well as attendance records and tutoring of the module by academic staff. This platform acts as a contact point for interaction and work by students and teaching staff, and is fundamental for progressing through subjects and for the evolution of students' learning. At the beginning of the course, each subject comes with an official virtual classroom, and academic staff can also request the creation of new classrooms for various purposes.

Electronic learning resources are made available to staff and students through custom-designed user-authentication systems (VPN, WAM and PAPI), and are accessible online from any computer, 24 hours a day, 365 days a year. Remote access to internet resources (including electronic library resources and learning materials) is provided through a safe VPN connection. A WAM protocol permits secure remote access to UCO electronic resources. PAPI authentication allows users to access restricted UCO content on the website which is provided through a safe connection for staff and students (<http://www.uco.es/servicios/informatica/servicios-basicos#conexion-a-la-uco>).

Wireless internet connection is available across the whole establishment. There are two different networks, UCONET and EDUROAM, which moreover enable any UCO member to have wireless connectivity throughout all participating institutions using the credentials of their home institution.

Identification as a student or member of teaching staff using these authentication systems gives the user complete access to teaching materials, databases, programs, software platforms, electronic books and journals, as well as access to and management of administrative processes of various kinds.

6.3 The Establishment must provide students with unimpeded access to learning resources, 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 changes in learning resources.

Veterinary books and periodicals: The policy of the university is to cover all reference literature from the main subjects and to provide the number of copies needed by students and staff. In the field of veterinary science, there are more than 26,000 books (Table 1) and nearly 800 periodicals available as hard copies.

Table 6.1. The Library offers the following number of titles related to veterinarian subjects:

CALL NUMBER	SUBJECT	ITEMS
174-340	Deontology, Legal veterinary medicine	185
351.765	Public Health	454
57.08	Laboratory techniques	332
574	Ecology	638
575	Genetics	1,358
576	Cytology	931
577.1	Biochemistry	1,097
578	Virology	99
579	Microbiology	601
6/61	Medicine, Pharmacology, Toxicology	7,675
619	Veterinary medicine	307
63	Agriculture and Animal Production	10,382
641-663-664	Food Science and Technology	2,361
TOTAL		26,420

Journals of interest to veterinary and related sciences include those classified under Animal Production (145 titles), Veterinary Sciences and Veterinary Medicine (408 titles), Biological Sciences (63 titles), Food Technology (146 titles) and Agricultural Sciences (22 titles).

Veterinary e-books and e-periodicals:

The Library has a large collection of electronic resources, to which the whole university community has access via the Digital Library website (<http://www.uco.es/servicios/biblioteca/bibliotecadigital/>); this site provides access to: databases, electronic books, electronic journals, a repository, online resources, reference management systems and material on journal impact factors and the use of electronic resources. The Digital Library includes 1,691 journals and books focusing on veterinary science and 1,853 focusing on related sciences.

The UCO Library has a collection of more than 843,000 resources, comprising more than 14,000 conference proceedings, 733,000 books and 42,000 journals, along with 196 million electronic resources, which comprise 581,000 books and more than 57 million scientific papers.

It also has subscribed to several collections of electronic journals. They can be accessed through the Mezquita Catalog or directly through the platforms of the different providers.

- **ACS**
- [Adis Journals](#)
- [Annual Reviews](#)
- [Cell Press](#)
- [Doyma](#)
- [Emerald](#)
- [Graó](#)
- [IEEEExplore Digital Library](#)
- [IUSTEL](#)
- [JSTOR Arts & Sciences](#)
- [Lippincott Williams & Wilkins](#)
- [Nature](#)
- [SAGE JOURNALS](#)
- [ScienceDirect](#)
- [SpringerLink](#)
- [Thomson Reuters Proview](#)
- [Wiley Online Library](#)

In addition, through the FECYT platform, users have access to online databases with veterinary contents (<http://www.uco.es/servicios/biblioteca/bases-datos>):

- [AENORMás](#)
- [FSS](#)
- [FSTA](#)
- [Índice](#)
- [Journal Citation Reports \(Índices de impacto\)](#)
- [Medline desde OvidSP, ProQuest, WOS y Ebsco-host](#)
- [Science Citation Index](#)
- [SciFinder Scholar](#)
- [SCOPUS](#)
- [WOS](#)

Other e-books and e-periodicals: some departments within the Veterinary Faculty maintain departmental libraries with their own budgets, with their location listed in the Mezquita Catalogue for the benefit of library users.

Students have wide-ranging access to all types of learning resources:

- Teaching materials and a bibliography for each subject is available on MOODLE.
- All bibliographical references, both on paper and in electronic format, are accessible in the UCO Library, in the journal collection.
- E-learning training is also provided by the UCO Library. Students have access to training material on Moodle and other electronic resources via the UCO Library (<https://biblioguias.uco.es/?b=g&d=a>), as well as interactive tutorials and problem-solving with UCODIGITAL staff. Courses on the various consultation tools (RefWorks, EndNote, Web of Science, Open Access, etc.) are organised throughout the year.
- By means of specific UCO agreements, software is also available. Possession of an official UCO email account gives the user a licence to use Microsoft Office 365 on various devices, and gives them a storage capacity of 1TB in the OneDrive cloud, which is a major advantage for both personal work and collaborative activities.

Specifically for use in **Skill Labs training**, there are anatomical collections, anatomical models, mannequins and simulators and virtualisation programmes available. This means that, while the use of live animals is not eliminated, their use can be reduced when learning of certain invasive techniques (venipuncture, cardiology, anaesthesiology, traumatology and orthopaedics) in the interests of animal welfare.

Academic staff are able to bring their online teaching knowledge up-to-date by availing themselves of the UCO Library academic staff-training programme, (<http://www.uco.es/servicios/biblioteca/servicios-biblioteca/formacion>), as well as various courses offered by the Vice Rector's Office of Postgraduate and Teaching Innovation (<http://www.uco.es/organizacion/calidad/innovacioneducativa/es/>). This Office oversees the Teaching Innovation and Improvement Programme (2019/2020) (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2019/00081>) and Regulation 1/2018 of UCO Academic staff Training (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2018/00670>). They can also count on the support of UCODIGITAL (Moodle) and the University IT Service.

Comments on standard 6

The quality and quantity of the learning resources available at UCO (centralised library, open sources, UCONET and EDUROAM Wi-Fi networks, remote desktop and connection software, etc) are significant. They have



changed the teaching model and have had considerable impact on the students' performance. The policy of FAVEUCO has always been to embrace change, based on an innovative model of teaching, which accounts for the fact that innovation is a key element within the Strategic Plan.

The training delivered by e-learning at UCO, both for students and staff, is wide-ranging and robust. There are many online computer training courses available (<http://www.uco.es/servicios/biblioteca/formacion/index.html>).

The UCO Library and IT staff work closely with the academic staff, and they are able to give workshops related to undergraduate, Master's and PhD theses.

Suggestions for improvement on standard 6

Measures for the improvement of learning resources include the continuous enrichment of our collections, the enhancement of user-training, and the development of self-study e-learning materials.

Innovation projects involving online portfolios and centralised access to clinical cases for teaching purposes, to complement printed versions, would be a very useful way of reinforcing the use of the virtual desktop and improving veterinary students' learning skills.



The background image shows a modern, multi-level university library. The top level is a mezzanine with a glass railing, where several students are sitting at tables, some working on laptops. Below, the main floor is a large, open-plan study area with numerous long tables and chairs. Students are scattered throughout, some sitting at tables, others standing and talking. The lighting is bright and even, and the overall atmosphere is one of quiet academic activity. The text 'Standard 7: Student admission, progression and welfare' is overlaid in white, bold, sans-serif font on the right side of the image.

Standard 7: Student admission, progression and welfare



7.1 The Establishment must consistently apply pre-defined and published regulations covering all phases of the student “life cycle”, e.g. student admission, progression and certification.

In relation to enrolment, the Establishment must provide accurate and complete information regarding all aspects of the educational programme in all advertising for prospective national and international students. Formal co-operations with other Establishments must also be clearly advertised.

FAVEUCO uses different mechanisms to inform prospective students about the rules that affect student life, from student admission, to the progression and certification of Veterinary degree students:

- All general information for the new enrolling students concerning procedures, rules and Trained Practicals, etc. can be accessed through the Student Information Portal (PIE) (<https://www.uco.es/pie/>) on the UCO website.
- FAVEUCO’s own website (www.uco.es/veterinaria/) sets out the details of objectives, curriculums, teaching staff, calendars, timetables and all other particulars related to Veterinary studies.
- Via social media (Facebook, Instagram and Twitter) and information leaflets (**ANNEX 7.A**) available at both the Faculty and institutions and centres related to veterinary activity.
- Visits to state and private secondary schools: giving informative talks to potential future students about the Veterinary degree curriculum, the academic calendar, course aims, admission requirements, enrolment, fees, cancellation procedure, scholarships and grants, career paths, web content, etc.
- Receiving accompanied state and private school students and careers advisers through the “OrientaUCO” Programme (UCO Career Guidance Programme) at the FAVEUCO facilities. Career guidance talks are given by professors and students in their final years of veterinary studies, educational games and activities are arranged and there is an information stand with demonstrations, videos, catalogues and other information related to veterinary studies.

FAVEUCO has an International Relations and Mobility Office (<http://www.uco.es/veterinaria/es/movilidad-fave>) specifically for foreign students, located in the student secretary's office, which offers support, guidance and advice for incoming and outgoing students. This office manages the collaborative bilateral

agreements held with other institutions for international mobility programmes in Europe (ERASMUS) or at a global level (UCO-Global), as well as national programmes (SICUE) and special agreements relating to FAVEUCO practical training. The office is coordinated by the Vice-Dean for Students and International Relations and is supported by two technical staff members and two interns who manage reception and assist with student mobility (incoming and outgoing). Detailed information on agreements with other Veterinary Establishments in Europe and number of students in exchange programmes is provided in **ANNEX 7.B**.

7.2 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.

The number of students admitted each year is limited to 150, in accordance with an agreement between the Faculty Board and the UCO Governing Council. This is based on maintaining the practical capacity and the teaching quality at FAVEUCO. The offer complies with the UCO proposal for the Degree in Veterinary Medicine (VERIFICA document) which was approved by ANECA (member of ENQA), and is in accordance with the teaching capacity for achieving the required standards, based on the available resources, facilities and personnel. The market demand for veterinary graduates is another factor that is taken into consideration.

Table 7.2.1 Number of new students admitted by the Faculty

Type of student	2016/2017	2017/2018	2018/2019	Mean
Grant holders	64	78	151	
Standard	-	-	-	
Total	148	152	151	

Table 7.2.2 Number of veterinary degree students enrolled at the Faculty

Year	2016/2017	2017/2018	2018/2019	Mean
1st Year	152	148	150	
2nd Year	167	154	152	
3rd Year	161	144	145	
4th Year	137	136	132	
5th Year	369	417	422	
Total	986	999	1001	

Table 7.2.3 Number of veterinary students graduating annually

Type of students	2016/2017	2017/2018	2018/2019	Mean
Grant holders	94	139	122	
Standard	-	-	-	
Total	94	139	122	

Table 7.2.4 Average duration of veterinary studies

Duration (in years)	% of students who graduated in 2016/2017
5+0	27
5+1	36
5+2	26
5+3 or more	5

7.3 The selection and progression criteria must be clearly defined, consistent, and defensible, be free of discrimination or bias, and take into account the fact that students are admitted with a view to their entry to the veterinary profession in due course. The Establishment must regularly review and reflect on the selection processes to ensure they are appropriate for students to complete the programme successfully. If the selection processes are decided by another authority, the latter must regularly receive feedback from the Establishment. Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.

The admission procedures are the same for all students.

Student admission criteria and procedures for the admission of students into Public Universities of Andalusia are established by the Ministry of Education, Culture and Sport and by the Autonomous Community of Andalusia (Andalusian Single University District) within the general framework outlined by Royal Decree 1892/2008, and are shared by all the Degrees subjects at the University of Córdoba.

Selection criteria

Access to the UCO Veterinary Degree course is regulated by a *numerus clausus* system: the minimum grade required for admission is set in accordance with the number of students that can be admitted (150) and the number of students applying for a place on the Veterinary course.

There are several admission paths in place:

- Ordinary path: to gain admission to the university, senior high school students must pass the University Entrance Examination (PEvAU). They are selected

according to their test score average, obtained during their final two years of high school (accounting for 60%), and in the University Entrance Examination (40%). There are no additional specific tests or exams required for entry to Córdoba FAVEUCO. Detailed information about the UCO student admission process can be found on the UCO website (<http://www.uco.es/pie/estudiantes-que-acceden>), and on the FAVE webpage (<http://www.uco.es/organiza/centros/veterinaria/es/sistema-de-acceso/>).

The University Entrance Examination has two phases: the first is general, compulsory for all high school students, in which a maximum of ten points can be obtained, and the other specific, which is voluntary, and contains subjects related to an area of interest, enabling students to improve their score up to a maximum of 14 points. Taking into account the high admission scores necessary to gain a place on the UCO Veterinary degree, all students in the new intake need to pass both phases. The final grade is calculated according to the following formula:

Admission score = $0.6 \cdot \text{AHSG} + 0.4 \cdot \text{GPS} + a \cdot \text{M1} + b \cdot \text{M2}$
Where:

AHSG = Average High School Grade (Years 12 and 13);
GPS = General Phase Score in the University Entrance Examination;

M1, M2 = The two highest scores from subjects in the Specific Phase of University Entrance Examination;

a, b = weighting of subjects in this specific phase. The subjects that are weighted in the specific phase for admission are published at (https://www.juntadeandalucia.es/economiaconocimientoempresasyuniversidad/sguit/?q=grados&d=g_b_parametros_top.php).

- In the case of international students who have already met the entrance requirements in their own countries with recognised secondary studies, the item $(0.6 \cdot \text{AHSG} + 0.4 \cdot \text{GPS})$ is replaced by the Average Admission Score of the corresponding qualification, diploma or studies according to specifications in https://www.juntadeandalucia.es/economiaconocimientoempresasyuniversidad/sguit/?q=grados&d=g_eue_requisitos.php. For those students with a background in vocational training linked to veterinary studies, it is not required that they sit the University Entrance Exam. The Higher Diploma in Livestock Farming and the Animal Healthcare qualifications have priority in the admission procedures for the Veterinary degree (https://www.juntadeandalucia.es/boja/2018/127/BOJA18-127-00001-11495-01_00138809.pdf).

In the 2018/19 academic year, the FAVEUCO minimum entry score was 11.12, on a scale of 0-14, and the number of students that applied for a place on the UCO Veterinary Degree was approximately 1,500.

- As well as the standard procedures, a percentage of places are reserved for students in special circumstances (<http://www.juntadeandalucia.es/economiainnovacioncienciayempleo/sguit/?q=grados>): 5% for disabled students (with a disability rating of 33% or more); 3% for gifted athletes; 1% for students already holding degrees; 2% for mature students over the age of 25; 2% for mature students over the age of 40 with verified professional or work experience; 2% for mature students over the age of 45 with no academic or professional experience.
- In addition, places on the UCO Veterinary degree are reserved for non-EU International Baccalaureate Students (2%) and for students transferring from other Spanish faculties (5% of the students admitted onto the Veterinary course last year). Annually, in the month of April, a "File transfer" process is initiated at UCO (<http://www.uco.es/pie/traslados-haciauco>), whereby students from other Spanish universities may apply for places in the various academic years of the Veterinary degree. The criteria for admission to the Veterinary course can be consulted at (<http://www.uco.es/organiza/centros/veterinaria/es/traslados-de-expediente>). Between 40-50 transfer applications are received annually at FAVEUCO for the eight places reserved to that end, which are subject to approval from the Faculty Board each academic year. (<http://www.uco.es/organiza/centros/veterinaria/es/sesion-de-19-11-18>).

Composition and training of the selection committee

There is no specific selection committee for the admission of students onto the Veterinary degree course, given that admission is based on the score obtained in the University Entrance Exam.

Appeal process. As far as prospective students are concerned, unsuccessful applicants and those who dispute their marks can address appeals to the examining board for review via the UCO website (https://www.uco.es/pau/doc/2019_reclamacion_PAU.pdf).

Advertisement of the criteria and transparency of the procedures. University Entrance Exam results and student applications are considered in the standard university admission procedure which is fully advertised and transparent. All related information is pub-

lished online (<http://www.uco.es/pie/acceso-pevau>). Results of the admission procedure for all the public universities of Andalusia are also published online at the same time, and sent personally to all applicants (<https://www.juntadeandalucia.es/economiaconocimientoempresasyuniversidad/sguit/?q=grados>).

As indicated in point 7.2, the number of students admitted each year is already determined and is contingent upon available educational resources (facilities and equipment, staff, healthy and diseased animals, material of animal origin), as well as biosecurity and welfare requirements.

In accordance with the document approved by the ANECA academic standards agency concerning the Veterinary degree, the estimated number of admissions for the next three years will be similar to, and never more than, the current number (150 per year).

7.4 There must be clear policies and procedures on how applicants with disabilities or illnesses are 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.

As pointed out above, 5% of the intake places are reserved for disabled students, and those with permanent special educational needs, who can submit an official certificate demonstrating a disability level of 33% or more. The Andalusian Single University District determines the procedure for requesting the adapted version of the University Entrance Examination for students with special educational needs.

Once admitted, there are protocols for making methodological adaptations to the education programme. However, it is borne in mind that the declared disability will enable the students concerned to attain the Day One Competences once they have graduated. Furthermore, UCO offers a Diversity Service, run by the Vice-Rector's Office for Inclusivity and University Life (<http://www.uco.es/servicios/sad/>), which includes an Inclusive Education Unit (UNEI). This focuses directly on disabled students, with the aim of attending to their needs so they can fully integrate into the University of Córdoba.

7.5 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.

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.

The criteria for progression and procedures for all students are set out in the UCO Academic Regulatory Framework for Undegraduates Degrees, which clearly and precisely establishes the rules for remaining enrolled and academic progression for students. (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2019/00582>):

- Full-time students in the new intake enrol for a minimum of 60 ECTS credits and a maximum of 78 ECTS. To continue their studies, they must pass at least six credits in that first year and enrol for at least 37 credits each year. Part-time students will enrol for between 24 and 36 credits.
- There are two official examination sessions for each subject per year, and up to a maximum of six examination sessions per subject, with a “non-attendance” option which does not affect further opportunities to sit exams.
- In order to restrict academic progress to within the curriculum, students with unpassed subjects for which they have formally enrolled in previous years, have to give priority to choosing 50% of their pending credits prior to selecting new subjects.
- For Veterinary degree studies, structured across five years, the total period of time available to complete the degree course is nine years for full-time students and 13 years for part-time students, with the exception of those students who find themselves in exceptional circumstances that have been duly verified.
- Students still requiring up to 15% of the credits needed to obtain their degree certificate, (not including the Dissertation Thesis and TPT), may bring forward their exam date in order to obtain these credits.
- Academic incompatibilities (core subjects): in order for students to obtain adequate acquisition of competences and day one abilities, the UCO Veterinary degree has a system of academic incompatibilities, whereby students may not enrol for certain subjects if they have not passed subject(s) that are closely-related to them, enabling the acquisition of the necessary competences. These requirements are set out in the Veterinary degree verified report (<https://www.uco.es/veterinaria/images/documentos/gveterinaria/2017011-memoria-verifica->

da-vet.pdf) and in the Teaching Guidelines for the subjects.

There are various tools for **reinforcing and supporting students who are failing to progress adequately**, among them are:

- Tutorials: tutorial sessions from the teaching staff responsible for the subject are the best option. The professor offers guidance and advice on all aspects of teaching capable of improving the teaching-learning process in a direct and personalised manner. To this end, all academic staff have a specific tutorial programme that must be respected (minimum six hours per week).
- The QAU for the Veterinary degree course (<http://www.uco.es/veterinaria/es/calidad-fave>), integrated into UCO's QAS, ensures that the student guidance and counselling services aimed at enhancing their academic performance are fulfilled by means of a series of procedures set out in its manual (<http://www.uco.es/veterinaria/images/documentos/manual-sistema-garantia-calidad-gveterinaria.pdf>). One of these procedures is a monitoring plan for students undergoing prolonged durations of study. It has an alert system that advises coordinators and professors whenever students resit an exam for the fourth time in any subject, so as to establish, with sufficient time, any measures deemed appropriate to assist the students concerned with their progression.
- Other systems encouraging progression and completion of studies in place at the University are:
 - Students sitting an exam for the sixth time and those who opt to use the extraordinary sitting, as an alternative to the normal procedure (in the event of their having 15% of their credits or less to complete their studies), have the right to be evaluated by a tribunal made up of three professors selected by the Departmental Council from the area of expertise related to the subject, to the exclusion of professors who actually teach it in the academic year concerned.
 - Students who have used up all six attempts at sitting an exam may request an extraordinary retake from the Rector, which is accepted if the Dean approves it, or they can be evaluated by a tribunal (seventh opportunity), appointed by the Rector at the behest of the Departmental Council, complying with the same requirements of the point above.



Students may request a compensatory evaluation (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2016/00251>) to pass a subject which would lead to their obtaining the Veterinary degree, where they are lacking a single subject (with the exception of a TPT or Dissertation Thesis), or two, in the case of core subjects (although compensation may only be sought for a single subject), and they have exhausted their six attempts at the exam at UCO. In the case of subjects belonging to the final two years of the degree, the number of exam sittings may be five. Requests must be clearly justified, are awarded in extraordinary circumstances and are evaluated by a commission that includes the Faculty Dean (https://www.uco.es/organizacion/secretariageneral/images/doc/docs/normativas/Normativa_Reguladora_Tribunales_Compensacion_Titulos_Oficiales.pdf).

As for **notifying students and the transparency of these criteria and procedures**, all the aforementioned information related to enrolment, policy for disabled students, progression, etc. can be accessed through the UCO website, and specifically through the Student Information Portal (<http://www.uco.es/pie/>).

The rate of attrition is provided by the Data Management and Statistics unit, from within the Vice-Rector's Office for Academic Planning and Quality, which is responsible for calculating the various indicators concerned with tracking the quality of different degree subjects. The official drop-out rate from the UCO Veterinary degree is low, varying in recent years from 6.01% in 2015/16, to 10% in 2016/17 and 12.33% in 2017/18 (There is still no available data for 2018/2019). This data may be consulted at: http://www.uco.es/sgc/index.php?option=com_content&view=article&id=142&Itemid=184/.

The main causes of attrition are difficult to establish. Some students drop out of the Veterinary degree on account of the course failing to meet their expectations, or due to not obtaining good academic results, while others transfer to another faculty. On other occasions, students drop out for work or personal reasons, and usually resume their studies once the difficulty is resolved.

As described previously, the procedures and criteria for admission do not depend on FAVEUCO, but rather are determined by the Andalusian regional government through the DUA, on the terms set out above. All this information is available on the respective DUA, UCO and FAVEUCO websites.

7.6 Mechanisms for the exclusion of students from the programme for any reason must be explicit. The Establishment's policies for managing appeals against decisions, including admissions, academic and progression decisions and exclusion, must be transparent and publicly available.

The mechanisms for the exclusion of students, the rules enabling students to remain and the policy concerning complaints regarding decisions about admission and academic decisions are described in the UCO academic regulatory framework (https://www.uco.es/pie/images/documentos/acceso/RRA_Refundido.pdf), as previously indicated (Section 7.5). The procedures and basic indicators are laid out in the Student Information Portal and FAVEUCO website.

7.7 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, career advice, and fair and transparent mechanisms for dealing with student illness,

impairment and disability during the programme. This shall include provision of reasonable adjustments for disabled students, consistent with all relevant equality and/or human rights legislation. There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).

There are various mechanisms in place to support the physical and emotional needs and wellbeing of Veterinary students, provided by UCO or directly by FAVEUCO, which include, among others, support and counselling services related to learning, professional advice and mechanisms for dealing with other problems impeding adequate progress on courses.

A) UCO: In addition to the services previously described in Standard 4, and the learning resources described in Standard 6, UCO provides its students with:

- **Student Information Website (PIE):** students can access scholarships and study grants through the University of Córdoba's own programmes, or scholarships from the Ministry of Education, Culture and Sport. Available scholarships are published on the Student Information Portal (<https://www.uco.es/pie/>).
- **Diversity Service (SAD):** this service (<http://www.uco.es/servicios/sad>) is made up of the Psychological Care Unit (UNAP), whose purpose is to offer psychological support to students, professors and staff; and the Inclusive Education Unit (UNEI), which provides a service to the university community on matters of disability and special educational needs, offering counselling, pedagogical guidance, support through material resources, strengthening of training and awareness, and carrying out personalised monitoring.
- **Work Experience and Employability Office (UCO-PREM2):** this is a specific UCO service that, in collaboration with FAVEUCO, offers Veterinary students a career guidance service and paid internships within the sector. Students are assisted by technical office staff.
- **UCO International Relations Office (IRO):** UCO has a central International Relations Office (IRO) which manages all student mobility programmes. (www.uco.es/internacional).
- **UCO Accommodation Service:** UCO provides an accommodation service for its students (<http://www.uco.es/servicios/alojamiento/es/>), at Nuestra Señora de la Asunción Residence, on the Menéndez Pidal University Campus and also on the Raba-

nales University Campus, where the Lucano Residence is located.

- **Satisfaction Surveys:** completed annually by students (either in person or online), these are run by the UCO Quality Assurance System for the evaluation of various items concerning the development of subjects and the work of the teaching staff. (<http://www.uco.es/organizacion/calidad/evaluacion-y-certificacion-docente>).

B) FAVEUCO, in addition to the above, makes available to students:

- **Student mentors:** FAVEUCO has the Tutorial Action Plan (TAP), a support and guidance tool for newly-enrolled students, which aims to offer specific attention to their academic and professional training, as well as the planning of their academic route using an efficient system of tutorials (<https://www.uco.es/organiza/centros/veterinaria/es/plan-de-accion-tutorial>). It is a voluntary programme for students (which must be explicitly requested), and it is based on a student mentor
- student mentee relationship, always under the supervision of experienced professors from the course who act voluntarily and are appointed by the Faculty Board.
- **Tutorials:** As indicated in previous point 7.5, all professors offer specific tutorials to the students taking their subjects, with published timetables when they are available to attend to students in person. Students may also request an appointment outside of these hours by emailing the professor directly or by using the Moodle tool for online tutorials.
- **Veterinary Faculty Plurilingualism Plan:** As described in Standard 3, since the 2015/2016 academic year, FAVEUCO has had an academic pathway available in English, in which students make take entire subjects, theoretical-practical modules or practical training in English (www.uco.es/vet-food). This is part of UCO's Plurilingualism Plan, where tracking, evaluation and improvement procedures are set out.
- **Student Council (CECYVET):** FAVEUCO has a student council, which is made up of students acting as student representatives (<http://www.uco.es/veterinaria/es/informacion-institucional#consejo>). Their mission is, in coordination with class delegates, to support students and to advise them on academic management, and to organise a series of extra-curricular activities. Additionally, there are specific themed rooms where students who show an interest in a particular subject can join together and cre-

ate rooms, under the supervision and tutelage of a professor who acts in a voluntary capacity as the academic director and is appointed by the Faculty Board. There are currently several of these rooms in existence: the Equus Room, Bull Room, Porcine Room, Feline Room, Food Room and AVAFES Room for exotic and native fauna (<https://www.uco.es/veterinaria/es/informacion-institucional>).

- **Veterinary Student Opinion Surveys:** as well as the surveys carried out annually by UCO's Quality Assurance System, the FAVEUCO Student Committee has produced a specific opinion survey, which addresses, among other issues, those aspects indicated in Standards 7 and 8 concerning the ESEVT Standard Operating Procedure (SOP), related to admission, progression and student wellbeing, and evaluation, respectively. (https://docs.google.com/forms/d/e/1FAIpQLSfq_hIbW0mixaKtZSYb-8wCgXPXEuYcwkZK3PHUmuQUVCnaqmQ/view-form?c=0&w=1)

As is set out in the following point (7.8), students have various systems for communicating their complaints concerning academic performance, progression and exclusion, as well as indicating interpersonal conflicts, cases of harassment and any other matter concerning student welfare. They can address the Faculty directly (or via a generic request addressed to the Dean), or the UCO via the complaints, suggestions and endorsements box, (<https://www.uco.es/veterinaria/es/buzon-de-quejas-sugerencias-y-felicitaciones>) or even appeal to the University Ombudsman (https://www.uco.es/organizacion/defensor_universitario/). In all cases, requests will reach, either via the QAU or directly, the Dean of the Faculty. Following the receipt of a complaint, a suggestion or endorsement, the Dean, along with the Vice-Dean for Students and Academic Affairs, determines how to proceed with each case. The Faculty Board Students Committee, degree and course coordinators, academic tutors and student mentors may intervene in the resolution of these situations.

7.8 Mechanisms must be in place by which students can convey their needs and wants to the Establishment. The Establishment must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding compliance of the Establishment with national and international legislation and the ESEVT standards.

- **FAVEUCO Complaints inbox:** on the home page of the FAVE website there is a link to the UCO general complaints, suggestions and endorsements box (<http://www.uco.es/veterinaria/es/buzon-de-quejas-sugerencias-y-felicitaciones/>). This box enables

users to make their contribution anonymously through the UCO Electronic Administration Unit (<https://sede.uco.es/GOnceOV/tramites/acceso.do?id=32>).

- **General requests:** as has previously been mentioned (point 7.7), FAVEUCO has a procedure for requests, grievances and miscellaneous issues (<http://www.uco.es/organiza/centros/veterinaria/es/normas-documentos-impresos-secretaria>). Students can fill out a general request addressed to the Dean from FAVE on any topic related to academic performance, progression and exclusion, as well as any other procedure not described. Additionally, through this channel, students may express complaints, interpersonal conflicts, cases of harassment and any other subject related to student wellbeing. Similarly, this is the channel through which students express comments, suggestions and complaints about whether the Faculty is complying with national and international legislation, as well as well as the EAEVE framework standards.
- **University Ombudsman:** The University Ombudsman is another important figure in mediation and guidance for the university community. Mediation services are available on request from the University Ombudsman (https://www.uco.es/organizacion/defensor_universitario/).

Comments on Standard 7

Suggestions for improvement on standard 7

It would be desirable for veterinary education to have a rational focus regarding the needs of the veterinary profession and society in general. Similarly, a system for controlling student admission based on a critical needs analysis would be desirable at all Spanish veterinary faculties.

With regard to controlling student progression, the existence of core subjects may be causing the rate of graduation to be lower than hoped; because of this, work is being done to reduce the number of core subjects as much as possible, and there is even the possibility of their total elimination at some future date.

Progress is also being made in implementing of a more effective special monitoring plan for students having difficulty passing a certain subject, improving the connection between the QAU, course coordinators and subject coordinators.



A blue-tinted photograph of a large fountain with a central statue and a building in the background. The fountain has multiple tiers and water is spraying upwards. The building behind it has large windows and a classical architectural style. The text 'Standard 8: Student Assessment' is overlaid in white on the right side of the image.

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.

The evaluation of students at FAVEUCO is regulated by UCO academic regulations (<http://www.uco.es/docencia/grados/normativa>):

- The UCO Academic Regulatory Framework for Degrees studies, which sets out the tests, the number of examination sessions per year, the total number of times students may attempt any given exam (**STANDARD 4**), the rules for remaining enrolled and the types of enrolment.
- The Official Academic Calendar, approved each year by UCO's Governing Council, sets out the evaluation periods, as well as ordinary and extraordinary exam sittings.
- Regulations for the Accreditation of Linguistic Competence for obtaining Degrees. It is a compulsory requirement to obtain certification of linguistic competence at a minimum of B1 level in a foreign language, in accordance with the levels established in the Common European Framework of Reference for Languages (CEFR).

The QAS (<https://www.uco.es/organiza/centros/veterinaria/es/calidad>) ensures that the evaluation in training programmes is coherent and complies with requirements established in the curriculum, through a set of procedures that include specific initiatives, set out in procedures P-4 (procedure for the evaluation and improvement of the quality of teaching and teaching staff), P-6 (procedure for the evaluation of external practical training) and P-8 (meta-evaluation of student competences). The goal of the latter is to carry out monitoring with a view to reviewing and improving evaluation procedures of the degree's specific and transversal competences.

Evaluation is carried out by competences, and they encompass general University competences, UCO competences and transversal and specific FAVEUCO competences, which are described in Spanish legislation (<https://www.uco.es/organiza/centros/veterinaria/es/objetivos-y-competencias>). The majority of subjects combine ongoing evaluation, work carried out under supervision and written exams, plus evaluation of practical knowledge and skills. In the teaching guidelines, teaching staff must include several methods of evaluation (at least three), along with the evaluation criteria (the weighting applied to each of the systems in the final

evaluation), as well as the criteria for obtaining a distinction with honours and the validity period of passed sections. Teaching guidelines are published sufficiently in advance of the beginning of the academic year that students may consult them and plan the forthcoming year in accordance with the requirements and recommendations for each subject (<https://www.uco.es/organiza/centros/veterinaria/es/planificacion-de-la-ensenanza>). The following systems are specified:

-) theoretical knowledge;

The evaluation of theoretical knowledge is principally based on written exams. The specific methodology depends on each subject (and is described in the teaching guidelines, along with the proportion it should represent of the final grade), through long or short response written examinations, multiple-choice testing or ongoing evaluation of supervised work. The method used depends on the teaching material and is freely put forward by the academic staff in the teaching guidelines.

-) pre-clinical practical skills;

The systems for evaluating pre-clinical practical skills are based on problem-solving, which may require the use of statistical calculations using computer programmes, diverse laboratory techniques, diagnostic teams, consultation of specialist websites, etc. Attendance at practical sessions is obligatory and may include the use of live healthy animals, organs, dissections or pathological samples. A positive evaluation is essential for passing the subject.

-) clinical practical skills

The evaluation of clinical practical skills involves supervised clinical work using mannequins and live animals. The students have to demonstrate that they possess the abilities and skills that should have been acquired during the academic year. The evaluation is generally completed at the end of programmed practical activities. Additionally, during their final term of study, the students must take the TPT subject. This subject is evaluated on the basis of four criteria: attendance (minimum 80%), general, basic and transversal competences, and the verification of day one abilities through clinical performance exams, which are assessed by three academic tutors from each itinerary, who may be UCO professors or clinical tutors; the latter are professional veterinarians who render their services to companies with the pertinent educational cooperation agreements with FAVEUCO.

-) soft-skills

Soft skills are evaluated transversally in various subjects. The systems of evaluation used are seminars, drawing up reports and presentations of part of the material studied using IT. In these types of activities, the interaction and participation of students is fostered. The diversity of evaluation methods used promotes the acquisition of different transversal competences, such as oral and written communication. These types of skills are also evaluated in the Graduation Thesis, where work carried out by students under the supervision of at least one doctoral academic is presented publicly and defended before a tribunal, which is made up of three professors from the degree course and selected by the Faculty Board each academic year.

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.

The evaluation process is officially regulated by the University of Cordoba Academic Regulatory Framework, ensuring that exam periods are published sufficiently in advance. At FAVEUCO there are various systems of evaluation in place, which reflect the characteristics of the material and subjects included in the curriculum. The Teaching Guidelines set out all information concerning evaluation systems and criteria and they are published on the website before the academic year begins.

FAVEUCO intervenes in the evaluation process when the Faculty Board approves and subsequently publishes on the website (<https://www.uco.es/organiza/centros/veterinaria/es/horarios-aulas-y-examenes>) the following:

- Timetabling, duration and rooms used for examinations, which are proposed at meetings of students, professors and the executive team (Degree Coordinator, Vice-Dean for Academic Planning and Quality and the Academic Registrar), approved by the Faculty Board and sent to the Vice-Rector's Office for Academic Planning and Quality and the Campus Coordination Service (room reservation). In cases where two exams fall on the same day, students may opt to take the exam at a later sitting, as long as they request this from the department secretary in advance.
- Teaching guidelines, which contain information about the subject and the evaluation systems and criteria, at the behest of Departments and approved by the Faculty. (<https://www.uco.es/organiza/centros/veterinaria/es/planificacion-de-la-ensenanza>).
- Planning and evaluation of TPT, through the Tutored Practical Training Committee (<https://www.uco.es/organiza/centros/veterinaria/es/practicas-tuteladas>).

[uco.es/organiza/centros/veterinaria/es/practicas-tuteladas](https://www.uco.es/organiza/centros/veterinaria/es/practicas-tuteladas)).

- Proposal and approval of lines of Graduation Thesis, appointment of tribunals, timetabling and evaluation criteria (<https://www.uco.es/organiza/centros/veterinaria/es/trabajo-fin-de-grado>).
- Management of EEPT, appointment of tutors, annual planning and the system of evaluation (<https://www.uco.es/organiza/centros/veterinaria/es/practicas-extracurriculares>).

The final grades for each subject are expressed using a scale of 0 to 10 to one decimal place, which is complemented by the corresponding qualitative scoring system: 0 - 4.9: Fail (*Suspense* - SS); 5.0 - 6.9: Pass (*Aprobado* - AP); 7.0 - 8.9: Merit (*Notable* - NT); 9.0 - 10.0: Distinction (*Sobresaliente* - SB). A Distinction with Honours (*Matrícula de Honor*) may be awarded to students who have obtained a grade above or equal to 9.0. This special distinction can only be awarded to a maximum of 5% of the eligible students for that subject; where there are fewer than 20 students, this distinction may only be awarded to one student. According to these regulations, it is the task of the professor responsible for each subject to determine the conditions in which the evaluation methods and their weightings are applied.

The review of grading is an essential part of the teaching-learning process and the starting point for feedback. Students can find out their provisional final grade via the academic management platform SIGMA within a period of no more than 20 days after taking the official evaluation tests. As well as the provisional grades, the place, day and time of their review will be made public within the space of 48 hours to four days, where the professor and student may undertake a complete review of the exam and the way the process unfolded by means of a personalised tutorial.

In the event of disagreement regarding the results of the evaluation and review, students may submit an appeal to the Departmental Council in the first instance within a period of ten working days, which will need to appoint a review tribunal. They will need to submit their appeal to the Governing Council in the event of disagreement with the Departmental Council. Those students who are on the sixth exam attempt and want to avail themselves of the extraordinary sitting may submit their request to the Rector, and an evaluating tribunal appointed by the Departmental Council may be formed (as set out in section 7.5).

These procedures for the review of exams and appeals are clearly specified in the UCO Academic Regulatory

Framework, under Heading IV, concerning Evaluation (<https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2019/00582>).

The professors responsible for each subject establish a system of tutorials to attend to student needs, including the monitoring of evaluation results, in accordance with the indications laid out in the UCO Academic Regulatory Framework (n. 67, <https://sede.uco.es/bouco/bandejaAnuncios/BOUCO/2019/00582>). This tutorial system is published for all subjects in each department, both on the Moodle platform and on the noticeboard. In addition, the Faculty also has a Tutorial Action Plan available, (PATU, <https://www.uco.es/veterinaria/es/plan-de-accion-tutorial>), promoted by the University of Córdoba. Within the Veterinary Faculty, PATU has been applied for several years with the aim of facilitating the adaptation of students of both degree levels to the university environment, and improving academic performance. Similarly, PATU is used to provide information to students to facilitate their insertion into the working world, their professional development and the continuation of their university studies. The Quality Assurance Unit also carries out a specific monitoring programme for students who are underperforming, in coordination with course coordinators, tutors and the professors responsible for the subjects involved (as has been described in Standard 7.7).

8.3. The Establishment must have a process in place to review assessment outcomes and to change assessment strategies when required. 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.

All the content of the teaching guidelines for subjects, including the evaluation criteria and systems, are reviewed annually by the professors responsible in coordination meetings in each department. These must be approved by the Departmental Council, in which students, academic staff and administrative and service personnel are represented. They are then reviewed by the Faculty (Teaching Commission and QAU), which may propose modifications before finally being approved by the Faculty Board. After being passed, they are published on the Faculty website in June, so that students have the information sufficiently early prior to the start of the next academic year. This procedure complies with the official Veterinary degree document approved by DEVA-ACC and the FAVEUCO QAS.

As has been indicated, the Graduation Thesis and TPT subjects follow a different procedure, set out in a specific Regulation approved by the UCO Governing Council

(<https://www.uco.es/organiza/centros/veterinaria/es/trabajo-fin-de-grado>), which details the evaluation systems and criteria. Teaching guidelines are created under this regulation each year by the Degree Coordinator and the Vice-Dean for Academic Planning and Quality.

The competences and results of learning that need to be acquired by all students, as well as the evaluation systems used, are described in detail for each subject in the curriculum. During coordination meetings of professors, students and the degree coordinator, an analysis of the results obtained is carried out and, along with the satisfaction surveys, are submitted to the QAU. Discrepancies between expected results and those obtained are analysed by the degree coordinator and the QAU, which then puts improvement proposals before the Faculty Board.

8.4. Assessment strategies must allow the Establishment to certify student achievement of learning objectives at the level of the programme and individual units of study. 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.

All competences are worked on and evaluated in at least one of the subjects, ensuring that the students acquire them over the course of their studies. The evaluation systems and criteria in each subject ensure that students obtain the learning outcomes proposed in the curriculum. Moreover, these are overseen by the Teaching Commission and the degree course QAU, both at a programme (curriculum) level and at a study unit (subject) level.

In the process of learning by competences, the academic staff at FAVEUCO is increasingly starting to use systems that promote the participation of students in all phases of the learning process, to a large extent by using the virtual platform Moodle. There also exists the role of student collaborator at UCO, someone who collaborates both in research and in teaching under the supervision of the professors. Finally, students participate in the writing and approval of the teaching guidelines through their representation in the Departmental Councils (as explained in **STANDARD 3**, point 3.2).

8.5. 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.

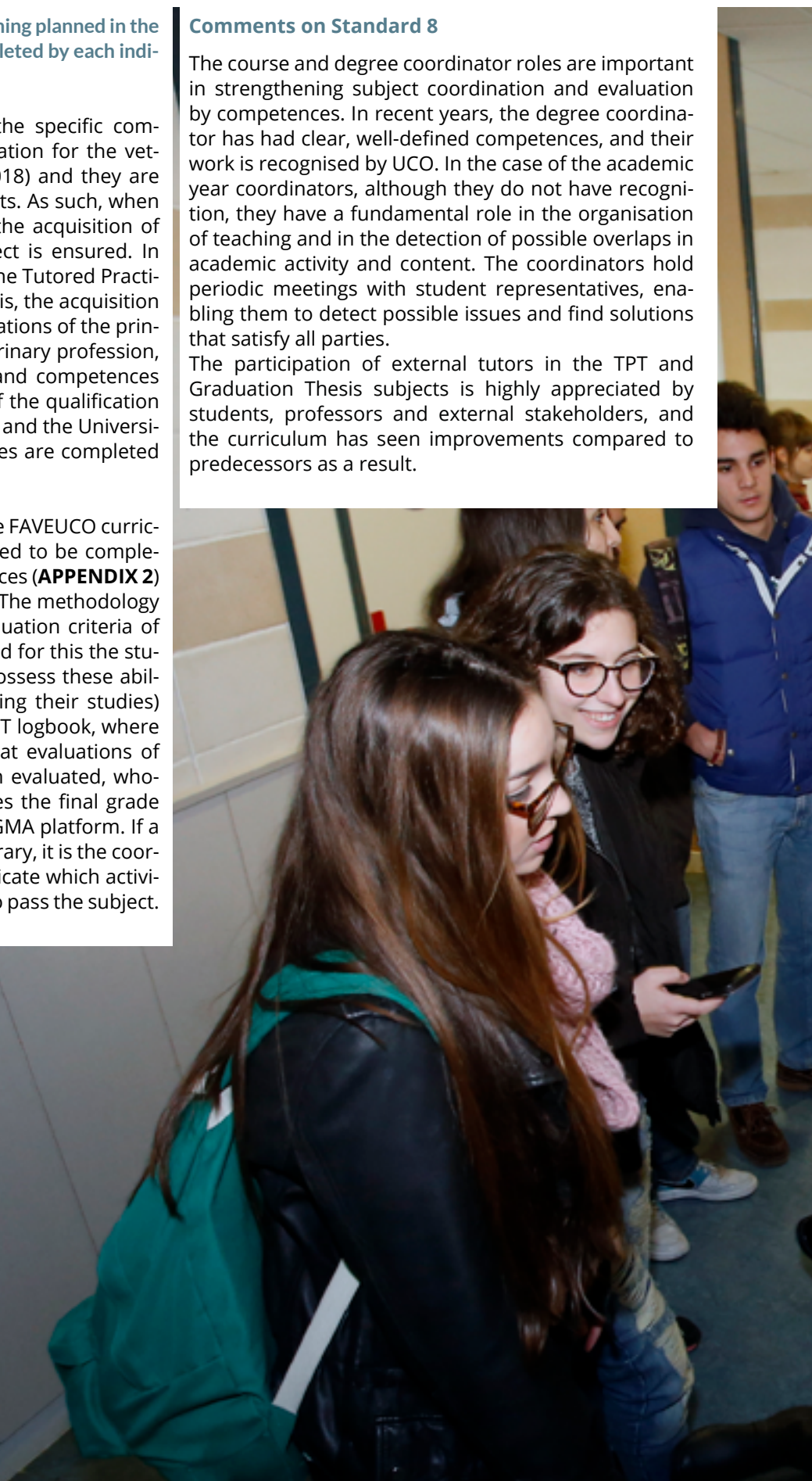
The FAVEUCO curriculum sets out the specific competences described in Spanish legislation for the veterinary profession (Order ECI/333/2018) and they are distributed across the various subjects. As such, when students pass the various subjects, the acquisition of competences included in each subject is ensured. In the final two subjects of the degree, the Tutored Practical Training and the Graduation Thesis, the acquisition of the knowledge and practical applications of the principles and methodologies of the veterinary profession, as well as the acquisition of skills and competences described in the general objectives of the qualification (Competence CE 74), day one abilities and the University's basic and transversal competences are completed and ensured.

The Day One Abilities are set out in the FAVEUCO curriculum (**ANNEX 3.A**), and are considered to be complementary to ESEVT Day One Competences (**APPENDIX 2**) and are evaluated in the TPT subject. The methodology currently used is based on five evaluation criteria of the coordinators for each itinerary and for this the students must demonstrate that they possess these abilities (which have been acquired during their studies) to the academic tutors, using their TPT logbook, where each tutor verifies their attendance at evaluations of ability. Once all itineraries have been evaluated, whoever is in charge of the subject issues the final grade and completes the process on the SIGMA platform. If a student has not passed a certain itinerary, it is the coordinator of the itinerary who must indicate which activities need to be done for the student to pass the subject.

Comments on Standard 8

The course and degree coordinator roles are important in strengthening subject coordination and evaluation by competences. In recent years, the degree coordinator has had clear, well-defined competences, and their work is recognised by UCO. In the case of the academic year coordinators, although they do not have recognition, they have a fundamental role in the organisation of teaching and in the detection of possible overlaps in academic activity and content. The coordinators hold periodic meetings with student representatives, enabling them to detect possible issues and find solutions that satisfy all parties.

The participation of external tutors in the TPT and Graduation Thesis subjects is highly appreciated by students, professors and external stakeholders, and the curriculum has seen improvements compared to predecessors as a result.



Suggestions for improvement on Standard 8

- FAVEUCO is developing a computer application to facilitate coordination and evaluation of Day One Competences and Abilities in the TPT subject.
- Another application (an electronic logbook) is also being developed so that each student can carry out detailed tracking of the competences (abilities) that they work on and pass in each subject.
- Day one abilities at FAVEUCO are subject to review, in order to redefine them so they are better aligned with the ESEVT Day One Competences.
- Work is being done to ensure that the special monitoring plan for students having difficulties in passing a certain subject is implemented in a more efficient way, improving the connection between the QAU, course coordinators and subject coordinators.





A blue-tinted photograph of a group of people in academic regalia, including gowns and hoods, walking down a set of stairs. The scene is overlaid with a semi-transparent dark blue rectangle containing white text. The text reads "Standard 9: Academic and Support Staff".

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 national and EU regulations and must apply fair and transparent processes for the recruitment and development of staff.

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 academic staff (calculated as FTE) involved in veterinary training must be veterinarians. It is expected that more than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians.

The hiring of teaching staff in Spanish universities is regulated by the Organic Law on Universities (Organic Law for Universities, LOU) (<https://www.uco.es/organizacion/secretariageneral/normativa>) and the regulations derived from it. This establishes that all permanent university professors in the various areas of knowledge should be accredited by a Spanish or regional accreditation agency (member of ENQA). Once accreditation is obtained, they may occupy one of the existing teaching roles. At FAVEUCO all members of the academic staff meet the legal requirements, ensuring that they comply with national and EU regulations, and hence are appropriately qualified and prepared for their role in any particular subject.

Training of the teaching staff is coordinated from the UCO Vice-Rector's Office for Postgraduate and Teaching Innovation, from the Secretariat of Training and Teaching Innovation (<http://www.uco.es/organizacion/calidad/innovacioneducativa/es/formacion-del-profesorado>). For all newly-hired teaching staff, UCO has an initial "Training Programme for New Academic Staff", aimed at the professionalisation of professors with fewer than five years' teaching experience, in an expert-accompanied process (mentored teaching practice, tutored innovation). Once this has been completed, they obtain the Expert in University Teaching diploma (<http://www.uco.es/organizacion/calidad/innovacioneducativa/es/formacion-del-profesorado#titulo-experto-docencia>).

Additionally, all professors have access to the Instrumental and Cross-Curricular Competence Training Programme, aimed at ongoing training in teaching, research and management competences, by means of both in-person and online courses. (<http://www.uco.es/organizacion/calidad/innovacioneducativa/es/formacion-del-profesorado#formacion-pdi>).

FAVEUCO also offers a professor training channel specifically for veterinary teaching. The Permanent Training

Commission proposes courses and training days to the Faculty Board and subsequently, in collaboration with the Permanent Training Secretariat, transversal and specific courses are organised (Veterinary Skills, EAEVE and Biosecurity and so on), within the Faculty Training Programme (<https://www.uco.es/organizacion/calidad/innovacioneducativa/es/formacion-del-profesorado#impresos>).

Biosecurity training of university staff is the responsibility of the Risk Prevention Service at the UCO. The FAVEUCO has set up a Biosecurity Committee (<http://www.uco.es/veterinaria/es/plan-de-bioseguridad>) in charge of reviewing and publishing operational procedures and, in coordination with the Risk Prevention Service, carrying out annual planning of the training in this area, by means of the Training Committee.

Another strand of training is found in the Erasmus + Training (STT) and Erasmus + Teaching (STA) programmes. Every academic year, teaching staff are invited to submit applications for the 12 bursaries available for the purpose of Lecturing in English training courses at the University of Edinburgh, which has had considerable uptake among the faculty's professors. All offers of training involving international mobility programmes can be found on the UCO website (<http://www.uco.es/internacional/movilidad/es/>).

Specialization in any of the recognized veterinary specialist European Colleges (<https://ebvs.eu>) constitute another available training pathway for the FAVEUCO teaching staff. There already are some International Diplomates (<http://www.uco.es/veterinaria/es/especializacion-del-profesorado>) and also some Internship can be performed in FAVEUCO.

To ensure that the training received by students is appropriate in accordance with professional competences, the departments responsible for teaching staff may include certain requirements in their job descriptions for available positions (for both permanent or temporary professors), such as holding a degree or doctorate in Veterinary Medicine, as well as working in a particular professional sector related to the material to be taught, in the case of associate professors (https://www.uco.es/gestion/laboral/images/laboral/normativa/NORMATIVA%20PROFESORADO%20NUEVA/Baremo_Prof_Aso-ciado.pdf).

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 educa-

tional programme and fulfil the Establishment's mission. A procedure must be in place to assess if they 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 professors.

The complete and detailed list of academic staff of FAVEUCO is included in APPENDIX 1.

The majority of permanent teaching staff at FAVEUCO hold degrees in Veterinary Studies (> 85%), as can be seen at table 9.2.2. The majority of permanent non-veterinary teaching staff hold degrees in Biology or Biochemistry and teach in the Basic Science subjects in the first two years. The third, fourth and fifth years are delivered almost entirely by professors with veterinary qualifications, which ensures that teaching has a suitable veterinary focus.

The percentage of temporary teaching staff who hold Veterinary degrees is greater than 94%. Included in this category for example is the role of the adjunct professor

by arrangement with the healthcare authorities. These professors derive from a specific agreement made between the Andalusian regional government and the UCO for the use of health institutions in research and teaching. It is managed by a Mixed Commission shared equally between the UCO and the Andalusian Public Health Service (SSPA), the chair of which alternates between the two. Such staff members make their professional activity within the SSPA compatible with teaching on the Veterinary degree. Alongside these professors are other veterinary practitioners working in large and small animal clinics, and other companies within the veterinary sector. Almost 5% of temporary professors hold degrees in Agronomy (within the area of Animal Production), Medicine (in the area of Medical Law and Forensics), Biochemistry, Biology or Physics. Aside from the first two cases, these professors only teach classes in the first two years of the Veterinary degree within the Basic Sciences, as indicated in the case of permanent professors.

Table 9.2.1. Academic staff of the veterinary programme

TYPE OF CONTRACT	2018/2019	2017/2018	2016/2017	MEAN
Permanent (FTE)				
Full professors	39	30	24	31
Associate and contracted associate professors (including intern staff)	63	77	66	68.7
Total permanent teaching staff	102	107	90	99.7
Temporary				
Assistant/Adjunct professors and substitute intern professors	25	21	20	22
Associate professors (including Centre for Sociological Research staff)	45	46	38	43
Emeritus Professors	2			0.7
Visiting Professors		1		0.3
Total temporary teaching staff	72	67	58	65.7
Total	174	175	148	165.7

Table 9.2.1 shows the trend and average number of Veterinary Faculty teaching and research staff working on the Veterinary degree over the past three academic years. The teaching and research staff are divided into "Areas of Knowledge", which group together teaching staff in the same fields of specialisation. The areas of knowledge are determined by national regulations and in some cases, UCO is able to demarcate them more precisely. Departments are structured around areas of knowledge, and teaching needs reflect the number of credits taught by each professor ("teaching capacity" is the sum of all credits professors are able to teach)

and must be balanced against the "teaching load". This is calculated to include the number of theoretical and practical credits in the teaching capacity of the teaching staff in the department and takes into account the number of enrolled students. If there is an imbalance, the department is responsible for requesting new staff to cover teaching needs from the UCO. This request is analysed within the annual university plan, bearing in mind budgetary restrictions and priority areas. Finally, the proposal is approved by the Governing Council of the University and published on the website (<https://>

www.uco.es/gestion/laboral/convocatorias-de-empleo/oferta-de-empleo-publico).

Matters related to professor training (types and procedures) were described in the previous section (9.1).

Table 9.2.2 Percentage (%) of veterinarians in the academic staff

TYPE OF CONTRACT	2018/ 2019	2017/ 2018	2016/ 2017	MEAN
Permanent (FTE)	82.4 (84)	84.1 (90)	83.3	83.3
Temporary (FTE)	94.6 (66)	97 (65)	98.7	96.8
Total	86.7	89.1	89.9	88.6

Table 9.2.3. Support staff of the veterinary programme.

TYPE OF CONTRACT	2018/ 2019	2017/ 2018	2016/ 2017	MEAN
Permanent	68	78	66	70,67
Temporary	19	9	8	12
Total	87	87	72	82

The number and distribution of administrative and service personnel is established in the current Employment Programme (RPT, "Relación de Puestos de Trabajo") at a university level. This programme takes into account the requirements of each faculty and/or department involved. It should be noted that departments may provide services or staff to various faculties. In these cases, the data set out in this report relates to the staff who deal exclusively with veterinary degree students and the proportion of staff who also work for other faculties.

There are two types of administrative and service personnel (Table 9.2.3): permanent support staff (civil servants and employees contracted on a long-term basis) and contract staff (short-term or temporary). In both cases, financing, selection and appointment of staff is dealt with at a university level, i.e. funding is obtained from the university budget, except for research support staff, whose salaries may be paid through research contracts and projects financed by external public and private organisations.

Table 9.2.4. Research staff of the Establishment (total number)*

TYPE OF CONTRACT	2018/ 2019	2017/ 2018	2016/ 2017	MEAN
Permanent**	-	-	-	
Temporary***	-	-	-	
Predocctoral grant holders	5	4	5	4.7
Postdoctoral grant holders	3	4	4	3.7
Contracted (by Research project/Group)	12	18	13	14.3
Total	20	26	22	22.7

*Research staff can work part-time or full-time; their work focus can change during the year.

**Permanent academic staff also conduct research activities

***The academic staff employed on a temporary basis are not included, although they may also conduct research activities

Table 9.2.4. indicates the number and characteristics of research staff who teach classes at the Veterinary Faculty. The regulations that govern teaching at the University of Córdoba authorise pre- and postdoctoral staff to collaborate in teaching, in accordance with the rules governing their scholarship/contract. Predocctoral staff have university staff training contracts, whilst postdoctoral staff have "Ramón y Cajal" or "Juan de la Cierva" contracts. At FAVEUCO, there are staff contracted to carry out projects in the majority of the departments that participate in teaching the degree. Such researchers can teach for a maximum of 90 hours and they need to be proposed by the Departmental Council in which they carry out their work.

In the next few years, it is envisaged that the policy of consolidating the teaching and research staff will continue, increasing the number of civil servants while fostering generational renewal by increasing the number of posts filled by a competitive selection process, with accreditation being necessary for the posts concerned.

The selection and evaluation of the teaching and research competences of teaching staff is carried out in accordance with the legal provisions and specific UCO procedures. In any academic category, the candidate must be accredited by a Spanish agency that has evaluated their teaching and research activity. In such accreditation processes, high scores for student-rated teaching work, participation in innovative projects and good teaching practice, academic consultation work and tutoring external training practice are highly valued. Once accreditation is obtained, in order to take up a permanent post candidates must compete for a place offered by the university, where a tribunal comprising professors from the specific subject in question (in accordance with national legislation) evaluates teaching, research and management activities. In the case of posts offering temporary employment contracts, selection and hiring is carried out by hiring committees drawn from the specialist area concerned, within the department, which evaluates the candidates' CVs.

Normally the posts offered by the university fall within non-permanent categories of staff (Assistant professor and Doctoral Assistant professor) since they are the start of the professional teaching career. Depending

on the credits covered, this can also involve Associate Professor positions. For these posts, selection and hiring is carried out by the Hiring Commission for the area concerned, which assesses the merits of the candidates and scores them according to a predefined university-approved scale. (https://www.uco.es/gestion/laboral/images/laboral/normativa/NORMATIVA%20PROFESORADO%20NUEVA/Baremo_General_Meritos_PDI_Laboral_marz18.pdf). The Dean does not participate directly in the request for more staff for FAVEUCO, although he or she is in close contact with the heads of department in order to oversee teaching requirements and ensure that posts are covered by adequate teaching staff, especially for the TPT subject.

Civil service support staff are appointed through competitive public exams run by the university itself. Support staff contracted on a short-term basis are funded through the university budget and are selected from a permanent bank of qualified candidates. Those appointed need to be approved by the Appointments Commission. Posts related to contracts or research projects are decided upon by the research group in question in accordance with previously published criteria.

Continuing education courses for support staff are offered by UCO annually (<https://www.uco.es/gestion/laboral/fpas/cursos-formacion/cursos-activos-y-solicitudes>). Support staff must take a minimum of 30 hours of continuing education per year. They can attend non-UCO courses offered by various institutions for continuing education in specific sectors.

Regarding the formal rules governing outside work, full-time professors are not allowed to have another job (consultation or private practice) outside UCO. Only part-time professors are allowed to do this, once authorised by UCO. An exception is the case of Adjunct Professors who are renowned specialists holding positions outside the academic environment and who perform part-time teaching duties at FAVEUCO.

9.3 Staff must be given opportunities to develop and extend their teaching and assessment knowledge and must be encouraged to improve their skills. Opportunities for didactic and pedagogic training and specialisation must be available. The Establishment must clearly define systems of reward for teaching excellence in operation. Academic positions must offer the security and benefits necessary to maintain stability, continuity, and competence of the academic staff. Academic staff must have a balanced workload of teaching, research and service depending on their role. They must have reasonable opportunities and resources for participation in scholarly activities.

Training opportunities for the teaching staff at FAVEUCO were set out in previous point 9.1. The training process, whether via UCO, FAVEUCO or external academic pathways for training and specialisation, is fundamental component in the promotion and stability of the teaching staff.

The current categories of teaching and research staff are defined by their level of permanence, dedication, civil service conditions, doctorate requisites and teaching accreditation. They are as follows:

- Civil servants, tenured:
 - Full professor (permanent, part-time or full-time, civil servant, in possession of a doctorate and national accreditation)
 - Associate Professor (permanent, part-time or full-time, civil servant, in possession of a PhD and national accreditation.)
- Non-civil servants, tenured:
 - Contracted Associate Professor (permanent, full-time, non-civil servant, in possession of a doctorate and national accreditation)
- Non-tenured:
 - Assistant Professor PhD (in possession of a PhD)
 - Intern Professor (part-time or full-time, doctorate not compulsory)
 - Associate/Adjunct Professor (part-time professor in combination with professional occupation)

With regard to the balance between teaching, research and other activities, each teaching post comes with an assigned teaching load for each academic year. The number of credits imparted in a given year for permanent teaching staff positions is 24 (240 hours). The rest of the time is distributed between research, clinical activity and continuing education. To facilitate greater involvement of teaching staff in research or management activity within the university, UCO has a balanced system for recognising and distributing the workload, which is published annually in the Teaching Planning for each department. (https://www.uco.es/gestion/coordinacion_docencia/images/documentacion/documentos/Reglamento_reconocimiento_actividad_docente.pdf).

9.4 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 mentoring procedures.

Staff must have the opportunity to contribute to the Establishment's direction and decision-making processes. 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.

The professional progression of the academic and support staff is regulated by national and regional laws (see point 9.2), which are public and ensure equal opportunities for all.

The formal appraisals of academic and support staff are integrated into their career progression. For every position, specific appraisal procedures are established, as described previously (see point 9.3).

There are no officially determined mentoring or support procedures. Academic staff generally work under the guidance of one or more senior academics, usually integrated into a teaching group and a research group. Support staff dedicated to administrative duties work under the guidance of a senior departmental staff member, and technical staff work under the guidance of one or more research or academic staff members.

The involvement of teaching staff and administrative and service personnel in the Establishment's direction and decision-making processes is developed in the departmental councils, in the various commissions and work groups and in the Faculty Board. In addition, they are represented on the UCO Governing Council. The evaluation of teaching needs is undertaken by the Departmental Policy Commission, which is chaired by the Vice-Rector concerned and is composed of teaching staff and administrative and service personnel. The task of overseeing the hiring process, applying mandatory scales and supervising tribunals in the competitive public entry exams is carried out by the Hiring Commission, chaired by the pertinent Vice-Rector, which also includes teaching staff as well as administrative and service personnel, and is responsible for supervising the application of scales and monitoring the work of the tribunals in the competitive exams.

9.5 A system for assessment of teaching staff must be in operation and must include student participation. Results must be available to those undertaking external reviews and commented upon in reports.

The evaluation of the teaching activity of academic staff at the University of Córdoba is carried out at the end of each academic year by students, by means of an on-line survey (http://www.uco.es/organizacion/calidad/images/doc/Teaching_survey_english_translation.pdf) which is made available by the Quality and Planning Service. The result of this survey is incorporated into a procedure for the evaluation of the teaching activity of teaching staff (Docentia-Córdoba Programme), which is based on the criteria and guidelines of Quality Assurance in the EHEA promoted by ENQA. The evaluation of newly-contracted teaching staff, as well as the teaching activity undertaken by established teaching staff is included in the QAS for Degree and Master's courses. (http://www.uco.es/organizacion/calidad/images/doc/Reglamento_evaluacion_actividad_docente_BOUCO.pdf).

The Docentia-Córdoba Programme enables teaching staff to be evaluated from a training perspective and, at the same time, facilitates summative evaluation geared towards providing conclusive results regarding their teaching work. The procedure evaluates teaching over the previous five academic years, or fewer for fixed-term contracts, which may be evaluated over periods of between two and five years. In the event of receiving an unfavourable evaluation, it is possible to request another evaluation once two academic years have elapsed. The result of the evaluation is either "unfavourable" or "favourable", and there may be reference to "teaching excellence". In order to obtain the favourable rating, it is necessary to reach 50% of the total defined score.

In addition, permanent teaching staff, comprising qualified civil servants and intern professors within university teaching bodies, may request the evaluation of their research and transfer activity every six years (six-year term) from the National Commission for the Evaluation of Research Activity (CNEAI). Positive evaluation is reflected in the salaries of teaching staff. The procedure and requirements are published on the following website (<http://www.aneca.es/Programas-de-evaluacion>).

Comments on standard 9

Over the last ten years there has been a notable increase in teaching staff numbers; in 2010 there were 143 professors, whereas now there are 170. Most striking is the high percentage holding doctorates in Veterinary Studies (86.7% of the total) currently participating in the delivery of the veterinary degree.

The UCO policy of fostering the careers of academic staff has greatly increased the numbers of civil service and permanently-contracted staff. Over the medium and long-term there is a programme for replacing the teaching and research staff and administrative and service personnel in those areas affected by aging, as set out in the UCO strategic plan.

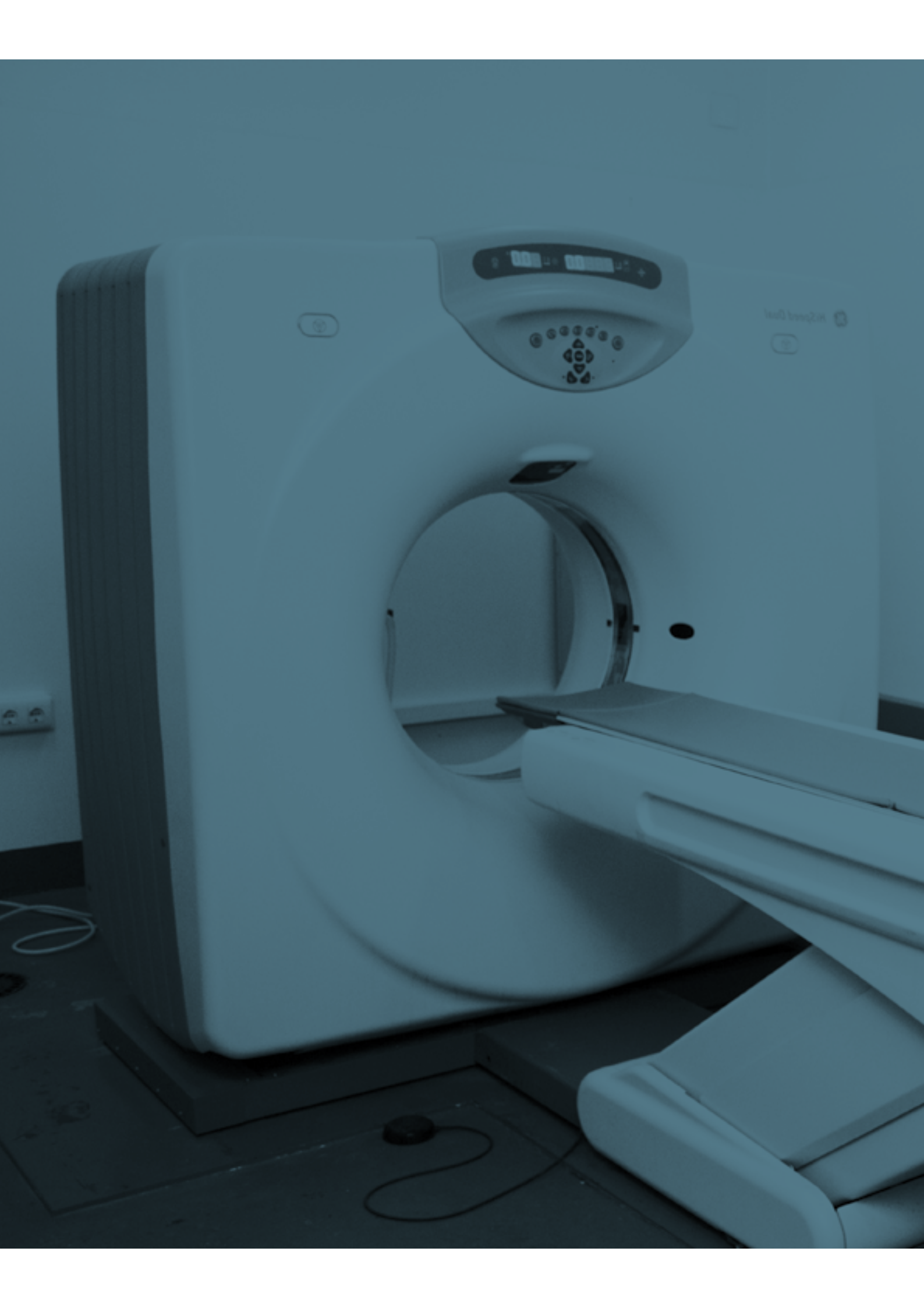
Both teaching and support personnel may request continuous training programmes, which are regularly delivered in a diverse range of specific and transversal subject areas.

With regard to support staff, administrative and service personnel, even though it would be desirable to have more of them, it should be emphasised that only those staff members who specifically support the teaching and research of the Veterinary degree have been accounted for here. In addition to these, there is a considerable number of shared personnel on the Rabanales Campus, who also support shared services such as counselling, library and central research support services.

Suggestions for improvement on standard 9

- Increase the number of specialised support staff, to guarantee adequate coverage of teaching activities, during both the morning and afternoon shifts, in order to provide appropriate support for research activity.
- Although teaching staff numbers have increased in recent years, the number of posts adapted to the EHEA should continue to be increased. Equally, it would be advisable to have channels that are more flexible and responsive for the hiring of associate professors to support teaching.
- It would be desirable to continue fostering the ongoing training of the teaching staff in teaching, research and management, making tools, channels and procedures more easily accessible so as to encourage their development from the moment they are hired by the university.
- The Faculty and departments should have more decision-making capacity for the assignation of support staff hired by the university, with the aim of ensuring that staff meet the specific needs of the degree. Currently, the department is able to set the specific requirements for each post, but the final decision lies with the Hiring Commission and the Rector's Office.







**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

Research and the transfer of knowledge are basic elements of FAVEUCO's mission, and both are intimately related to education. A principal FAVEUCO objective is to provide an appropriate research-based veterinary education. Research activity is essential for the training and advancement of the Faculty's academic staff, who are required to integrate into the Faculty's various research groups. Principles, methods and expertise in scientific research are then transferred into teaching (practical activities, clinical cases and laboratory activities).

At FAVEUCO there are 34 listed research groups (<https://www.gestion.uco.es/gestion/virtual/Metis/grupos/>), comprising at least five doctoral members of staff, of which 13 are led by women. These groups periodically receive funding for research in accordance with their scientific output (publications, books, conferences, research projects and contracts, patents and doctoral theses). According to the Shanghai Global Ranking of Academic Subjects – Veterinary Sciences (<http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/veterinary-sciences.html>), FAVEUCO was ranked 51st out of 200 in 2017 and 76th out of 300 in 2018; this ranking corresponds to fourth place for scientific output out of the 13 faculties that currently exist in Spain. FAVEUCO teaching staff participated in 580 scientific publications in indexed journals during the last three courses; the complete list of publications is included in **APPENDIX 5**.

The funding received by academic staff is also an important indicator in valuing the Faculty's research. Total funding for the 23 research projects (14 international, five national and four regional) in which a member of academic staff participated was €1,490,937 for the 2018/2019 academic year (**Table 10.1.1**). In addition, they participated in 164 research contracts with companies (14 projects in basic sciences, 148 in clinical sciences and two in food science), with revenue totalling €908,558 (**Table 10.1.1**). In total, the funding for projects and research contracts for the 2018/2019 academic year was €2,399,495 (**Table 10.1.1**).

The research profile and most prominent recent scientific output from our academic staff is published and regularly updated in the Faculty's internal repository (<http://www.uco.es/veterinaria/es/profesorado>). This document also includes teaching assignments aimed at initiating students into research activity.

Research-based teaching is also reflected in the teaching activities offered to students. From their first year and throughout the degree, students are encouraged to participate in research activities being carried out by the various groups. In all subjects, the professors provide information (via the teaching guide and theoretical and practical classes) about the lines of research related to the subject they teach and, in many of them, they propose activities related to scientific research and evidence-based medicine (bibliographic research, laboratory experiments, clinical research studies, analytical activities, critical reviews and presentation of results). In the final year of their degree, all students must complete a dissertation with a clear research focus (as described in the following section: 10.2)

Table 10.1.1. List of the main funded research programmes in the establishment that were carried out over the course of the last complete academic year prior to the visit (2018-2019)

SCIENTIFIC THEMES	SCOPE OF PROJECT	ANNUAL FUNDING (€)	DURATION (YEARS)
RESEARCH PROJECTS			
PHOTO-CY-APPS - Photosynthesis and photoprotection regulation in marine cyanobacteria and its potential applications	International	79,730	3
LIVE-ADAPT - Adaptation to Climate Change of Extensive Livestock Production Models in Europe	International	122,156	3
OK-Net EcoFeed - Organic Knowledge Network on Monogastric Animal Feed	International	10,000	3
Study of gene expression in cellular populations of canine mammary carcinoma and the utility of liquid biopsy	National	26,300	3
Analysis of pathogen-microbiota-host interaction to understand the mechanisms of colonisation and persistence of Salmonella in the porcine intestine	National	60,500	3
Genetic analysis of infertility and subfertility in equids: Quantitative, cytogenetic-molecular and association analysis of complete genome in PRE mares	National	52,434	3
Caloric restriction, mineral metabolism and renal disease	National	37,107	3

Genetic analysis of infertility and subfertility in equids: Quantitative, cytogenetic-molecular and association analysis of complete genome in PRE mares	National	52,434	3
Development of a management tool for integration in porcine holdings	Regional	28,750	3
New control measures and techniques for bovine tuberculosis in Andalusia (subproject AGR-149)	Regional	5,185	3
New control measures and techniques for bovine tuberculosis in Andalusia (subproject AGR-256)	Regional	17,393	3
New control measures and techniques for bovine tuberculosis in Andalusia (subproject RNM-001)	Regional	9,870	3
New control measures and techniques for bovine tuberculosis in Andalusia (subproject AGR-137)	Regional	9,550	3
Vaccines for animal parasites	International	261,000	4
Cross-Border Cooperation Project for the Integral Valorisation of the Dehesa - Montado Ecosystem	International	50,862	4
Enforcement of Mediterranean olive oil sector competitiveness through development and application of innovative production and quality control methodologies related to olive oil health protecting properties	International	80,255	3
Organic Knowledge Network on Monogastric Animal Feed	International	9,750	3
Strategies to face the removal of therapeutic ZnO from pig diets	International	22,000	3
Adaptation to Climate Change of Extensive Livestock Production Models in Europe	International	122,154	4
Improvement of preventive actions to emerging Lagoviruses in the Mediterranean basin: development and optimisation of methodologies for pathogen detection and control	International	36,667	3
Dehesa Ecosystems: development of policies and tools for biodiversity conservation and management	International	242,690	6

NIRS microsensors and ICT platforms for ensuring on-site authentication of high added-value European foods: Case study - Iberian pig ham	International	122,817	3
Trial scenario combining crop and livestock scenarios with new use cases (Creation of shared value for the beef supply chain from IoT and blockchain)	International	31,333	2
TOTAL RESEARCH PROJECTS		1,490,937	74
RESEARCH CONTRACTS			
Basic Science Contracts		223,288	19
Clinical Science Contracts		678,179	148
Food Science Contracts		7,091	1
TOTAL FROM RESEARCH CONTRACTS		908,558	168
TOTAL		2,399,495	242

10.2 All students must be trained in scientific method and research techniques relevant to evidence-based veterinary medicine and must have opportunities to participate in research programmes.

Students are informed about the importance of evidence-based teaching, the significance of scientific research for their training and the need for continuous learning using a range of procedures throughout their studies.

Upon admission to the Faculty, talks and seminars on these subjects are arranged for students; and they are trained to search for, and critically analyse, documents, textbooks and scientific articles. They are often encouraged to use these study materials and to carry out non-classroom guided tasks.

Throughout the course of the degree, and in all subjects, professors aim to reinforce the research dimension. The Teaching Guidelines for the subjects (<http://www.uco.es/veterinaria/es/planificacion-de-la-ensenanza>) reflect the lines of research of the professors, who, in the primary issues covered by the programme, highlight the importance and the topicality of the research to their discipline.

During the course of the TPT and throughout their entire clinical training, students practise evidence-based medicine in the study of the clinical cases they see, and write reports and bibliographical reviews using specialist journals. Often, the objective evaluations of curricular practical training are based on these guided activities.

Through the Scientific Culture Unit (<http://www.uco.es/research/ucci/es/proyectos-cultura-cientifica>), UCO regularly puts on external activities to highlight the importance of research in Higher Education (Science Week, Coffee with Science, Postgraduate Fair and Career Opportunities).

Every year, the Faculty organises research open days (<http://www.uco.es/veterinaria/es/cursos-y-otras-actividades>), in which students present their research work. This activity fosters multidisciplinary cooperation. In 2018, 149 students attended these open days with 71 contributions. In 2016, 73 students attended with 69 communications. Other activities include specific open days organised by the professors of various subjects from the curriculum in which professionals, researchers and visiting academics of recognised standing present the results of their research. Information about these events is usually disseminated via emails to the teaching staff, the administrative and service personnel and the Student Council.

As has already been mentioned, the Dissertation Thesis is a key element in the research dimension of veterinary training and ensures that students acquire competences and skills in the development of scientific methods and research techniques relevant to evidence-based learning of Veterinary Medicine. The dissertation is the gateway to acquiring a realistic introductory framework to scientific research. It enables students to develop skills that require searching for information, the application of scientific methods and research techniques as well as writing scientific documents. The lines of research offered and information on the way they are regulated can be consulted on the Faculty's website: <http://www.uco.es/veterinaria/es/trabajo-fin-de-grado>. The average number of dissertations per year over the last three years was 125.

The Departments encourage collaborating students to incorporate themselves into research activities in advance of embarking on their dissertations. Final year students can apply for collaboration grants, funded by the Ministry of Education. These grants enable students to embark upon their research training in a way that is compatible with their studies. There is also an internal University Research Plan (*Programa de Investigación Propio de la Universidad*), which has different sources of funding, and fosters the incorporation of undergraduates into research work (<http://www.uco.es/investigacion/portal/plan-propio/2-uncategorised/273-plan-propio-de-investigacion-2019>). A total of 81 FAVEUCO students have been awarded funding from these programmes over the last three years.

10.3 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

Official postgraduate research training programmes do not currently come under the direct responsibility of the Faculty, but rather are managed by the Postgraduate Institute (<https://www.uco.es/estudios/idep/>), which reports to the Vice-Rector's Office for Postgraduate and Teaching Innovation at UCO. It is in charge of coordinating and providing administrative support for Master's and Doctoral programmes.

The Master's degrees on offer at UCO (<https://www.uco.es/idep/idep-masteres>) have varied in recent years, in accordance with the specifications of the Andalusian regional government's academic authorities. Thus, as far as veterinary studies are concerned, there used to be a Master's in Animal Medicine, Health and Enhancement, which had a capacity of 30 places until four years ago. The number of admissions was later cut and in its last two years an average of 11 students per year were accepted onto the course (**Table 10.2.2**). This Master's was then discontinued from 2017/2018. In the 2018/2019 academic year, a new Master's course in Equine Sports Medicine was launched, in which 12 students enrolled (**Table 10.2.2**). This Master's offers training in basic and clinical sciences in relation to sports horses (www.uco.es/estudios/idep/master-medicina-deportiva-equina). In the current 2019/2020 academic year, the 30 places on offer have been fully subscribed. Furthermore, another new Master's course has been launched this year in Veterinary Public Health (<https://www.uco.es/estudios/idep/master-salud-publica-veterinaria>), which has also filled all 30 places on offer.

With regard to doctoral studies, there are several Doctorate Programmes centred around agrifood sciences, which have a relevance to the social context of the region. The most important is the Bioscience and Agrifood Science Programme (<https://www.uco.es/estudios/idep/escuelas-docs/2-uncategorised/97-biociencias-y-ciencias-agroalimentarias>). Its lines of research encompass Biotechnological, Agricultural, Food-related and Veterinary research roles. An average of nine students per year have enrolled in this programme in the last three academic years. In another programme, study is focused on sustainable management of natural resources (<https://www.uco.es/estudios/idep/doctorado-programas-recursos-naturales-y-gestion-sostenible>), where Veterinary graduates have also enrolled (**Table 10.2.2**).

In light of these data, and especially considering the figures for both Master's and Doctoral Programmes from the current 2019/2020 academic year, there seems to be the prospect of an increase in the number of postgraduate students in the next three years. With regard to the official Master's courses in Equine Sports Medicine and Veterinary Public Health, it is envisaged that the 30 places offered on each course will be filled and, consequently, the number of doctoral students in all UCO programmes could reach 12 students per academic year.

At the VTH there are also several internship programmes offered (**Table 10.3.3**), with a restricted number of positions offered every year.

At FAVEUCO, postgraduate students are integrated into the teaching and research staff in the departments, with responsibility for planning and teaching classes in clinical practice. Their clinical activity is well-defined in their development plans and is divided across the various services of the Veterinary Teaching Hospital. Undergraduate students' training is supervised and coordinated by the postgraduates, especially during their final year of study for reasons of rotation. In general, conflicts between undergraduates and postgraduates with regard to the handling of different clinical cases do not arise, as there is mutual cooperation between them.

Our academic staff currently includes 19 specialists and holders of diplomas from European institutions. Over the last three academic years, the average number of postgraduate students in clinical training was 22 students per year. Of these, 13 were interns at the Veterinary Teaching Hospital (eight working with small animals and five with large animals), and nine were residents working towards Diplomas from European Colleges of Veterinary Pathology, Internal Medicine and Management, and Porcine Health (**Table 10.2.1**). During this period, the average number of postgraduate students in clinical or professional training was 74 per year (**Table 10.2.1**).

FAVEUCO maintains close cooperation with a range of public and private institutions and associations related to veterinary sciences. As a result of these relationships, continuing education courses and seminars are periodically run within the Framework of the UCO Continuing Education and University Extension Programme. On average over the last three academic years, such courses were attended by some 45 people per year for courses exceeding 100 hours (**Table 10.3.1**) and by 152 students per year for courses of up to 100 hours (**Table 10.3.2**). Professional veterinary associations and institutions collaborate in many of these university contin-

uing education courses, with a focus on the needs of society and professional sectors.

Table 10.3.1. Number of students enrolled in postgraduate clinical training

	2016-2017	2017-2018	2018-2019	MEAN
Clinical training Internships				
Companion Animals	7	8	8	7.7
Large animals	5	3	6	4.7
Total	12	12	14	12.7
Residencies				
Medicine and Surgery	1	1	1	1
Animal Health	8	8	9	8.3
Total	9	9	10	9.4
Other Programmes				
Grants and Pre-doctoral Contracts				
Total	51	73	32	52
TOTAL	72	94	56	74

Table 10.3.2. Number of students enrolled in postgraduate research training

	2016-2017	2017-2018	2018-2019	MEAN
Doctoral Programmes				
Biosciences and Agro-food Sciences	5	11	11	9
Natural Resources and Sustainable Management			1	1
Total	5	11	12	9.4
Official Master's degrees				
Master's in Animal Medicine, Health and Enhancement	14	8		11
Master's in Equine Sports Medicine			12	12
Other official Master's degrees	3	4	7	4.7
Total	17	12	19	16
TOTAL	22	23	31	25.4

Table 10.3.3 Number of students enrolled in other postgraduate programmes (internships and external/distance-learning courses)

COURSE NAME (HOURS)	2016-2017	2017-2018	2018-2019	MEAN
Specialist Internship in Anaesthesia and Analgesia at the UCO VTH (1,000 hours)			1	1

Specialist Internship in Small Animal Surgery at the UCO VTH (1,000 hours)			1	1
Specialist Internship in Small Animal Internal Medicine at the UCO VTH (1,000 hours)			1	1
Internship in the Small Animal Clinic at the UCO VTH (1,000 hours)	3	8	11	7.3
Internship in the Equine Clinic at the UCO VTH (1,000 hours)	5	2	4	3.7
Advanced Training Course on Animal Protection and Experimentation 2017 (200 hours)	20	19		19.5
Food Safety and Quality Certification by the British Retail Consortium (BRC) and the International Food Standard (IFS); key elements in agrifood exports (125 hours)		62		62
TOTAL	28	91	18	45.7

Table 10.3.4 Number of attendees at continuing education courses run by the Establishment

COURSES OR ACTIVITIES (HOURS)	2016-2017	2017-2018	2018-2019	MEAN
Isolation, characterisation and identification of microorganisms in food (ACIMA 2018) (50 hours)		42		42
Healthy eating: the Mediterranean diet and cardiovascular prevention (50 hours)	5			5
Livestock Auditing: a veterinary specialisation (75 hours)	26			26
Food safety and preparation of menus in the educational setting (50 hours)	14	6		10
School canteen and before-school club (50 hours)			29	29
Course in Food Allergy and Intolerance Control (50 hours)	28	22	21	23.7
Nutritional Food Labeling Course (50 hours)	24	26	13	21
Handling High-risk Foods Course (50 hours)	41	14	18	24.3
Modern Implementation of Food Quality and Safety Systems Course (50 hours)		28		28
Course in Personalised Nutrition and other nutritional therapies (50 hours)			18	18
Infant Diet and Nutrition Course (50 hours)	9	9		9
1 st Equine Physiotherapy and Rehabilitation Course (50 hours)	122			122
1 st Extensive Cattle-Breeding Course (50 hours)		38		38
TOTAL	172	185	99	152

FAVEUCO also participates in other training courses outside UCO's institutional remit, organised in conjunction with other agri-livestock institutions, with professional veterinary bodies and associations, responding directly to specific professional training demands or meeting scientific and cultural dissemination needs. Information on those training courses and in continuing education activities is published in the website (<https://www.uco.es/veterinaria/es/divulgacion-fave>).

10.4 The Establishment must have a system of QA to evaluate how research activities provide opportunities for student training and staff promotion, and how research approaches, methods and results are integrated into the veterinary teaching programmes

The Faculty has a Research Committee, comprising various academics with acknowledged research track records, which is in charge of coordinating the Faculty's various lines of work. Research initiatives emerge autonomously from the various research groups, which prioritise and determine their own lines of research, and which regularly apply for funding in public and private tenders in the regional, national and international domains. The Committee gathers information about activity carried out during the academic year, analyses it and, using its findings, makes suggestions on courses of action to the Quality Assurance Unit and the Faculty Board to ensure that research activities contribute to research-based education at FAVEUCO.

The lines of research pursued by FAVEUCO groups are also integrated into postgraduate programmes (Master's and Doctorates) and continuing education programmes. Every Master's Programme and Doctorate is overseen by two autonomous bodies for their academic management (Academic Commission) and quality control (QAU). Both bodies comprise representatives from the teaching staff, students and administrative and service personnel. The Academic Commission oversees the programmed activities in the various courses offered, whilst the QAU is in charge of evaluating teaching activity and staff, the level of student satisfaction, rates of success, employability, etc; it also makes suggestions for the improvement of degree courses.

The implementation of postgraduate studies and continuing education is conveyed to all staff, students and interested parties through a period of public communication, giving an opportunity for declarations and improvement proposals to be received and addressed. Offers of these study programmes are circulated through the university website, on social media, with leaflets and posters, promotional videos, mailing lists and press articles.

Comments on Standard 10

FAVEUCO is currently in a very favourable position in terms of research, reflected in the funding it received in the last academic year, and the national and international impact of its scientific output and in the rankings shown. For these reasons, we consider research to be a well-consolidated pillar of strength at our Faculty. One aspect worth emphasising is the research carried out in a diverse range of fields, which encompasses animals for slaughter (pigs and ruminant livestock) and horses.

This strength in research provides added value to the importance the Faculty places on evidence-based medicine and the continuous learning of our undergraduate and postgraduate students. It is worth highlighting that our undergraduate students are introduced to these research tasks on a regular basis by means of credits that count towards their academic training and the obligatory dissertation requirement. In addition, a complete programme of undergraduate and postgraduate grants enables our students to commence non-compulsory research work. Furthermore, the significant number of contracts and predoctoral internships with companies has improved training in clinical sciences and our graduates' research. That said, the number of residents working towards diplomas awarded by European institutions continues to be modest.

The postgraduate offering covers major areas of veterinary and agro-livestock sciences. We are aware however that there are still shortcomings in other related areas, which need to be resolved or improved in the future. To this end, the possibility of extending the current Master's in Equine Sports Medicine to another official qualification is currently being looked at in collaboration with professional veterinary associations at a national level. This would be a wider, inter-university qualification on the subject of Sports Medicine and Rehabilitation, enabling dual and elective specialisation between small animals and horses. The design of new official Master's qualifications is also envisaged, one covering small animal medicine and surgery, and another covering the conservation and improvement of indigenous breeds.

Suggestions for improvement on Standard 10

Among the specific suggestions for improving research programmes, continuing education and postgraduate programmes, we highlight the following:

- Encouraging our academic staff to obtain research resources by providing information and access to public and private tenders processes, with international, national, regional and local scope; at the same time fostering activities generating the transfer of knowledge of social and economic value. These initiatives would serve to strengthen our teaching model based on scientific evidence and the permanent training of our graduates.
- Promoting university extension activities that foster interaction and reciprocal learning between different research groups affiliated to the Faculty with the aim of optimising available resources and encouraging the raising of additional funds through multidisciplinary research programmes.
- Showing greater commitment to student participation in the innovation and development structures of the Faculty's departments and research groups, promoting their earlier incorporation into research projects and facilitating access to information about all the research opportunities made available to them by the various public and private institutions.
- Encouraging our academic staff to obtain qualifications in Veterinary Sciences from professional European institutions. This would enable us to increase the number of interns with ambitions of obtaining the certification in question.
- Increasing and diversifying study options for both blended and distance learning for Master's degrees, advanced courses and ongoing training for veterinary professionals.



GLOSSARY

ACMP Area for Quality and Improvement of procedures,
AEVEE Spanish Association of Veterinary Equine Specialists
AGAPA Agrarian and Fishing Management Agency of Andalusia
ANCOS National Association of Breeders of Segureño Sheep
ANECA Spanish Agency for Quality Assessment and Accreditation
ANEMBE National Association of Bovine Medicine Specialists
ATIC Information and Communications Technologies Area
AVEPA Spanish Association of Veterinary Small Animal Specialists
CAM Master's Academic Committee
CAPD Doctorate Programme Academic Committee
CB Bioethics Committee
CBUA Consortium of University Libraries of Andalusia
CECA-SADECO Córdoba Municipal Animal Control Centre
CEd Continuing Education
CEFR Common European Framework of Reference for Languages
ceiA3 Agrifood Campus of International Excellence
CEMEDE Equine Medicine Sport Centre
CNEAI National Commission for the Evaluation of Research Activity
CT Computed Tomography
DEVA-ACC Evaluation and Accreditation Directorate of the Andalusian Knowledge Agency
DUA Andalusian Academic District
EAEVE European Association of Establishments for Veterinary Education
EBM Evidence Based Medicine
EBVS European Board of Veterinary Specialisation
ECAAH European College of Aquatic Animal Health
ECOVE European Committee on Veterinary Education
ECTS European Credit Transfer and Accumulation System
EPT External Practical Training
EEPT Extracurricular External Practical Training
EHEA European Higher Education Area
ENAC National Accreditation Entity
ENQA European Association for Quality Assurance in Higher Education
EPT External Practical Training
EQAR European Quality Association Register
ESEVT European System of Evaluation of Veterinary Training
ESG European Standards and Guidelines (for QA)
EU European Union
FAVEUCO Veterinary Faculty of the University of Cordoba
FISH Fluorescence in situ Hybridization
FPLC Fast Protein Liquid Chromatography
FSQ Food Science & Quality
FTPP Food Technology Pilot Plant
FVE Federation of Veterinarians of Europe
HACCP Hazard Analysis and Critical Control Points
ICU Intensive Care Unit
IFAPA Research and Training Institute for Agriculture and Fisheries

IM Intramuscular
INQAAHE International Network for Quality Assurance Agencies in Higher Education
IRO International Relations Office
ISFM International Society of Feline Medicine
IT Information Technology
IV Intravenous
LHC Clinical Skills Laboratory
LOU Organic Law for Universities
MCIU Ministry of Science, Innovation and Universities
MECES Spanish Qualification Framework for Higher Education
MRI Magnetic Resonance Imaging
OIE World Organisation for Animal Health
PACE Annual Student Recruitment Plan
PAC Adjunct Clinical Professor
PAOE Annual Programming of Teaching Organisation
PAPI Performance Application Programming Interface
PATU Tutorial Plan
PAU University Access Exam
PFID Innovation Program for Training and Teaching
PIE Website for Student Information
PIVA partial intravenous anaesthesia
PO Per os
QA Quality Assurance
QAU Quality Assurance Unit
RUCT Register of Universities, Faculties and Qualifications
RUTF Rabanales University Teaching Farm
S semester
SAD Diversity Service of the UCO
SAEX Experimental Animal Service
SAS Andalusian Health Service
SC Subcutaneous
SECIVE Spanish Association of Veterinary Surgeons
SEM Scanning Electron Microscope
SEMIV Spanish Association of Specialists in Veterinary Medicine
SEOVE Spanish Association of Veterinary Odontologists
SER Self Evaluation Report
QAS Quality Assurance System
SICUE Exchange System between Spanish University Centres
SRM Specified risk material
SSPA Andalusian Public Health System
TFG Graduation Thesis
TPT Tutored Practical Training (Clinical Rotations)
UCO University of Cordoba
UNED National Distance Education University
UNEI Inclusive Education Unit
VPN Virtual Private Network
VTH Veterinary Teaching Hospital of UCO
WAM Wide Area Network

ESVET INDICATORS

Name of the Establishment: Faculty of Veterinary Córdoba

Name & mail of the Head: Rosario Moyano Salvago

Date of the form filling: November, 2019

RAW DATA FROM THE LAST 3 FULL ACADEMIC YEARS		YEAR -1 18/19	YEAR -2 17/18	YEAR -3 16/17	MEAN
1	n° of FTE academic staff involved in veterinary training	143,4	149,9	148	147,1
2	n° of undergraduate students	1001	999	1011	1003,7
3	n° of FTE veterinarians involved in veterinary training	118,5	125,5	133	125,7
4	n° of students graduating annually	122	139	96	119,0
5	n° of FTE support staff involved in veterinary training	87	87	72	82,0
6	n° of hours of practical (non-clinical) training	646	646	688	660,0
7	n° of hours of clinical training	696,5	696,5	665	686,0
8	n° of hours of FSQ & VPH training	375	375	375	375,0
9	n° of hours of extra-mural practical training in FSQ & VPH	120	120	120	120,0
10	n° of companion animal patients seen intra-murally	5753	5892	5738	5794,3
11	n° of ruminant and pig patients seen intra-murally	0	0	0	0,0
12	n° of equine patients seen intra-murally	333	300	526	386,3
13	n° of rabbit, rodent, bird and exotic patients seen intra-murally	65	38	14	39,0
14	n° of companion animal patients seen extra-murally	0	0	0	0,0
15	n° of individual ruminants and pig patients seen extra-murally	744	824	970	846,0
16	n° of equine patients seen extra-murally	12	12	18	14,0
17	n° of visits to ruminant and pig herds	385	473	350	402,7
18	n° of visits of poultry and farmed rabbit units	76	45	15	45,3
19	n° of companion animal necropsies	185	124	68	125,7
20	n° of ruminant and pig necropsies	362	305	388	351,7
21	n° of equine necropsies	27	30	28	28,3
22	n° of rabbit, rodent, bird and exotic pet necropsies	204	198	290	230,7
23	n° of FTE specialised veterinarians involved in veterinary training	19	19	19	19,0
24	n° of PhD graduating annually	12	11	17	13,3

The boxes within the red frames must be filled in by the Establishment (the other values will be automatically calculated)

Name of the Establishment: Faculty of Veterinary Córdoba

Date of the form filling: November, 2019

CALCULATED INDICATORS FROM RAW DATA		ESTABLISHMENT VALUES	MEDIAN VALUES ¹	MINIMAL VALUES ²	BALANCE ³
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0,147	0,16	0,13	0,021
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	1,056	0,87	0,59	0,466
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0,689	0,94	0,57	0,123
I4	n° of hours of practical (non-clinical) training	660,000	905,67	595,00	65,000
I5	n° of hours of clinical training	686,000	932,92	670,00	16,000
I6	n° of hours of FSQ & VPH training	375,000	287,00	174,40	200,600
I7	n° of hours of extra-mural practical training in FSQ & VPH	120,000	68,00	28,80	91,200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	48,692	70,48	42,01	6,683
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	0,000	2,69	0,46	-0,464
I10	n° of equine patients seen intra-murally / n° of students graduating annually	3,246	5,05	1,30	1,948
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	0,328	3,35	1,55	-1,217
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0,000	6,80	0,22	-0,223
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	7,109	15,95	6,29	0,814
I14	n° of equine patients seen extra-murally / n° of students graduating annually	0,118	2,11	0,60	-0,477
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	3,384	1,33	0,55	2,837
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0,381	0,12	0,04	0,336
I17	n° of companion animal necropsies / n° of students graduating annually	1,056	2,07	1,40	-0,344
I18	n° of ruminant and pig necropsies / n° of students graduating annually	2,955	2,32	0,97	1,985
I19	n° of equine necropsies / n° of students graduating annually	0,238	0,30	0,09	0,145
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	1,938	2,05	0,69	1,246
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0,160	0,20	0,06	0,096
I22*	n° of PhD graduating annually / n° of students graduating annually	0,112	0,15	0,09	0,024
1	Median values defined by data from Establishments with Approval status in April 2016				
2	Recommended minimal values calculated as the 20th percentile of data from Establishments with Approval status in April 2016				
3	A negative balance indicates that the Indicator is below the recommended minimal value				
*	Indicators used only for statistical purpose				





EAEVE

EVALUATION VISIT 2020
UNIVERSITY OF CORDOBA FACULTY OF VETERINARY MEDICINE



UNIVERSIDAD DE CORDOBA