

# University of Extremadura



## Faculty of Veterinary

# EAEVE Self Evaluation Report 2010



**Self Evaluation Report**  
**VETERINARY FACULTY OF UNIVERSITY OF**  
**EXTREMADURA**  
**2010**

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# INTRODUCTION





## INTRODUCTION

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

It should cover:

- The main organisational changes
- New regulations relating to teaching
- Main changes to the study programme
- Important decisions made by the management of the establishment, or by the authorities responsible for it
- Major problems encountered by the establishment, whether resolved or not

The University of Extremadura (UEX) was founded in 1973 (Decrete 991/1973 of 10<sup>th</sup> of May) and is nowadays 36 years old. It is a small University, with approximately registered 20.000 students, and is built up of eleven Faculties and four University Schools and three University Centres.

An innate characteristic of our University is the existence of four different campuses, each one located in the cities of Badajoz, Cáceres, Mérida and Plasencia.

The University of Extremadura has been under constant evolution all along the past years. Actually it counts with a budget of 161,944,300 euros, and provides employment for 1904 teachers and 446 non-teaching staff. Its organization and management depends on the Autonomous Government, because the transaction from the Spanish National Government to local authority took place along 1995.

The Faculty of Veterinary (FV) was created in 1983, and therefore along the past year it celebrated its 25<sup>th</sup> Anniversary. It is now 26 years old. The creation of The Faculty was published in the Official Bulletin of the State (BOE) on the 31<sup>st</sup> of July in 1982 (RD 1786/82, BOE of 23<sup>rd</sup> February 1983, Order 27<sup>th</sup> January 1983), and depended at that time on the Spanish Ministry of Education and Sciences of the National Government.



The FV is located in the University Branch Campus of Cáceres, the Capital of one of the two provinces that make up the Autonomous Community of Extremadura. The installations are placed at the east of the town and approximately 4.5 km from the centre of the city. Nearby there are located other Faculties and Schools of the University, the Minimal Invasive Surgery Centre and the General Hospital (actually under construction). All together will form the future City of Health, which is an innovative and revolutionary project that will be built up and completed along the next ten years. The FV is unique in the Autonomous Community of Extremadura, and no other studies of Veterinary can be performed in our regional area.

The Academic Units of the Faculty are the Departments coordinated by a head of the Department. Each Academic Unit has its own statutes and budget, and is responsible of the supervision and coordination of the teaching duties and research activity among their members. Actually a Department is not necessarily restricted to one Faculty or School, and it is possible that there are branches located in more than one Centre of Studies.

The FV got an early visit by the Advisory Committee on Veterinary Training on the 12-13 February in 1985. And, following the recommendations of the Committee, our Faculty underwent a Full Evaluation Visit by a group of European Union Experts that took place on the 22-24 February in 1995. Since then we have worked on the suggestions proposed by the Evaluation Committee, solving the deficiencies found at that time.

The urgent deficiencies found at that time were related to 1) increase the number of patients and the obtention of necropsy material, and 2) improvement of the Academic Unit of Obstetric and Reproduction. In addition there were a number of suggestions that would improve the training given in the Faculty, which were related to 1) increase the number of support staff, mainly in the clinical area, 2) organizational changes in funding of veterinary training and students intake, 3) staffing plan for teaching and support personnel, 4) delegation onto the Dean and Faculty Board of responsibilities regarding teaching, research and service provision, 5) to avoid duplication of teaching, lack of collaboration, fragmentation of research and insufficient sharing of resources within the structure of the Academic Units, 6) reduction of the number of students without a reduction of funding, 7) to expand the

facilities for practical training, 8) to count with a veterinary hospital and a refurbishment of the farm, 9) to target the teaching of basic subjects and basic sciences appropriately, and introduce of new subjects within the plan of the veterinary course, 10) coordination and integration of essential parts of teaching of Animal Production and Nutrition into clinical subjects, 11) steps to be followed in order to improve the hospital function regarding management and organization, 12) to provide an emergency service and the availability of hospitalization and 24 hours supervision of patients in the clinic, 13) development of practical training in food inspection and food microbiology, 14) building for a new slaughterhouse, 15) availability of a working room for the students and appropriate usage of the library, 16) to get students with the adequate level of competence in the basic subjects prior to admission, 17) training for the support staff, 18) reduction of at least 20% in theoretical teaching, and changes in the organizational schemes of exams and timetables of basic subjects in order to improve the quantity and quality of the training, and 19) to create a Faculty Research Committee.

In the time period from 1995 up to date we have made important quantitative and qualitative advances with a final objective directed towards a better training of the future Veterinaries.

### **ORGANISATIONAL CHANGES**

Regarding this matter, important changes have been made following the recommendations made in the EAEVE evaluation of our Faculty in 1995.

The Dean, the Faculty Board and the Academic Units have increased nowadays their responsibilities regarding teaching, research and provision of the different services existing, and management and organization in order to improve the hospital function have been performed, in addition to the creation of a new building.

In this sense, the new Veterinary Clinical Hospital (VCH) has its own guidelines, counts with specifically directed staff and leadership posts for its main services (for example surgery, diagnostic imaging or internal medicine, between others). The VCH is now governed by a Management Committee; its structure allows a specific relevant budgetary contribution, having a positive effect on the increase in caseload, particularly in the case of horses.

In general, the VCH is opened all year long, with the only exception of the month of August. Consultations are based mainly on appointment from Monday to Friday. Patients are attended both in general consultations and on special clinical services from 10:00 to 17:00, whereas there is a hospitalization service and intensive care 24 hours. It allows the students access at anytime therefore promoting their participation in the hospital activities.

In addition to regular services the service of Reproduction of the VCH provides services of spaying and neutering for local shelters, and the equine hospital has a stallion station. Additionally, the VCH counts with an active Mobile Clinic, which allows the students to participate actively too.

With regard to changes in funding of veterinary training, the VCH has its own organizational scheme directed to funding sources and students intake, allowing its function parallel and synchronized with but not strictly dependent on the FV.

One of the major points raised during the last visit referred to the Academic Unit of Obstetric and Reproduction. This Unit has been reinforced by the supplementation with academical staff. It now counts with three teachers and one support staff member. In addition there is availability for practising with live animals, as well as space in the hospital for clinical teaching of the subject.

The training for the support staff has been improved by the University, with the establishment of an annual planning of training courses directed to staff members. There has been a mean of 20 courses per year since 2001, being increased up to 29 courses in 2008. On the other hand, the University counts with a Research Committee (Vice-chancellor) and a Bioethics Committee, who perform a constant survey of these processes, as well as a control on care and use of animals for research and practice.

Other organizational changes have been also made. Eleven new committees were created in order to better supervise major terms for organizational affairs of the FVC. Additionally, we count with a Coordinator of Students Exchange to deal with national or international student interchange programmes as well as other student issues.

Furthermore, in 2008, one of our major Departments, the Department of Medicine and Animal Health, was split into two new separate ones, the Department of Animal Medicine and the Department of Animal Health. With regard to the Departments responsible for basic science coursework, they are still Inter-Faculty Departments.

More recently, other organizational improvements achieved have been the creation of the Attention to Handicapped Students Office and the Office for Cooperation and Development. Moreover, in 2009 a new support staff position has been created, responsible for the Internal Quality Guaranty System, which is involved in the supervision, evaluation, maintenance and improvement of the quality of the organizational affairs relative to the Educational (Theoretic and Practical) Programme, Infrastructures and Materials. The Responsible Internal Quality Guaranty System is not a part of the Faculty Board, where the Dean is the highest authority and is supported by a Vice-Dean of Infrastructures and a Vice-Dean of Academic Affairs, but works in close contact with the Faculty Board.

The academic staff (PDI) counts with a yearly renewed teaching plan for the coming academic year is distributed by the Departments between the PDI.

### **NEW REGULATIONS REGARDING TO TEACHING (Major changes in regulation on higher education since 1995)**

The functions and services of the Central Administration of the State were transferred to the Autonomous Community of Extremadura by the RD 634/1995 (dated 21<sup>st</sup> April). Since then, the centralised educational administration as dictated by the Spanish Parliament has been changed to a decentralised model that divides the educational competences, in the sense that the actual Ministry of Education and Science (MEC) carries out functions of legislation and coordination of the Spanish Education System, whereas the Extremadura Autonomous Community has the political competences required for the finances of the University and also to develop minor legislation of local application.

A new curriculum was established after the 1995 EAEVE evaluation, regarded to as 1998 Studies Plan that, according to the new European Higher Education Schemes, has been recently modified (Veterinary Degree, Decree 214/2009, dated 25<sup>th</sup> September). At that time the curriculum was defined and structured by the UEX in

the Plan of Studies leading to the Veterinary Degree (BOE 12<sup>th</sup> November 2008). This Plan was performed in accordance to the RD 1487/1987, dated 27<sup>th</sup> November (BOE14<sup>th</sup> December) dictated by the Spanish Ministry of Education and Science, outlining the "Common General Guidelines of Curricula Leading to official University degrees" and subsequent amendments (RD 1267/94, RD 2347/96, RD 614/97, RD 1561/97, RD 779/98 and RD 1651/98); to the RD 1394/1991, dated 30<sup>th</sup> August, that state the Specific Guidelines referring specifically to the curriculum leading to the Official University degree in Veterinary Science to its granting; and to the European Community Directive 78/1027/EEC, dated 18<sup>th</sup> December 1978 (replaced by the Directive 2005/36/EU).

As a result of the process of the construction and adaptation to the European Space of Higher Education (ESHE), initiated with the Bologna Declaration in 1999, the Spanish Ministry of Education and Science published the latest University Organic Law (LOU), dated 21<sup>st</sup> December 2001. The LOU replaced the former Law on University Reform (LRU). This law introduced important changes in the structure of the different University bodies, defining new types and new systems of access to the academic posts. It also established mechanisms for quality assurance in teaching and research through the creation of the Spanish Agency for Quality Assurance and Accreditation (ANECA). The Law also provided for students and teaching staff mobility and many aspects regarding integration in the ESHE.

To adapt to the LOU, in 2003 the new UEX Statutes (Decrete 65/2003) regulating the organisation and operations of the University of Extremadura were published in the Official Bulletin of Extremadura Autonomous Community (D.O.E. 23<sup>rd</sup> May 2003) and in the BOE(23<sup>rd</sup> June 2003).

The LOU has been recently modified, Modification Law of the University Organic Law (LOMLOU), 4 April 2007, establishing two cycles, graduate and postgraduate, in higher education. More recently, new regulations such as the RD 1393/2007, 29 October 2007 (defining the new regulation for the Official Spanish Higher Education Studies replacing the RD 1497/1987), the Order ECI/333/2008 (defining the general conditions of the Veterinary Degree), and the Extremadura Autonomous Government Decree 214/2009, 25th September 2009 (regulating the adaptation of the new University Degrees of the UEX to the ESHE) have been published. Other objectives

derived from the declarations at Bologna were provided for by the new regulations about the implementation of the European Credit Transfer System (ECTS), the new system of academic marks, the European Supplement to the Degree, and the recognition of foreign Degrees. Therefore, the current curriculum has changed with respect to that of 1998 due to these new regulations.

The structure of the Bachelors Degree has been changed by the RD 1467/2007, dated 2<sup>nd</sup> November (BOE 6<sup>th</sup> November 2007), establishing its structure, and included in the Decree 115/2008, dated 6<sup>th</sup> June (DOE 18<sup>th</sup> June 2008), with a description of the contents of the Curricula for Bachelors Degree in the Autonomous Community of Extremadura. The objective is to provide students with adequate training, intellectual and human maturity, knowledge and skills that will let them to develop social roles and to join the society with responsibility and competences. Likewise, it will enable the students to access the higher education level.

In relation to the University, the final goal of all these modifications performed by the Spanish Ministry of Education and Science and the Extremadura Autonomous Government tend to get students with the adequate level of competence in the basic subjects prior to admission in the University studies.

With regard to the last modification performed in the Plan of Studies, the major challenge was to establish a reduction in theoretical teaching and changes in the organizational schemes of exams and timetables of basic subjects in order to improve the quantity and quality of the training. The basic subjects represent a 26%, the animal production module represents a 22%, whereas the clinical subjects represent 38-42% in the new plan. A special attention has been paid to the Practicum, obligatory extramural fieldwork (OEF) which comprises of 24 ECTS (8% of total). This means a reduction in the basic load and a significative increase in the clinical subjects load, whereas the animal production subjects load remains unchanged, with respect to the Plan of Studies of 1998.

In relation to the proposal of the EAEVE after their visit in 1995, a reduction of the number of students entering the Faculty has been proposed to the Chancellor's Office, establishing a maximum of 100 new students per year entering the first course of Veterinary Studies.

Finally, taking into account the legislation of the ESHE, the new plan of studies is directed to, and based on, the quality mobility, diversity and competitiveness in University Education.

### **NEW BUILDINGS OR MAJOR EQUIPMENT**

Many significant advances were implemented from 1995 until now. The Experimental Animal House, the VCH, and the Meat and Milk Processing Pilot Plants, were built; in addition, several well equipped laboratories integrated in the University Institute of Research for the Iberic Porc, the Building for Food Technology and the Control of Radioactivity Unit have been created. Other new buildings, reassignments and equipment include:

- Small teaching rooms (four).
- Two computer rooms and renewal of computers.
- Acquisition of new vehicles to attend to the needs of the teachers and the students doing their extramural fieldwork and for mobile clinic use
- Removal of the crematorium room and establishment of an agreement with external firm (TRAGSA) for this purpose.
- Agreement (TRAGSA) for waste treatment (biological and chemical).
- Parking: enlargement and implementation.
- Renewal of the microscopes of several laboratories.
- Remodelling of the Auditorium.
- Remodelling of the reception room.
- Remodelling of the dissection room in the Anatomy Unit.
- Remodelling of the former necropsy room of Pathological Anatomy.
- Remodelling and unification of spaces in the Departmental wing after relocation of Clinical and Medical Teaching Units.
- Installation and refurbishment of a new multidisciplinary laboratory for practical teaching to be shared by different subjects.
- Installation of computer equipment in every classroom and Auditorium with a digital projection system.
- Installation of a monitor in the Hall of the classroom building.
- Installation of several digital boards.
- Installation of a Wi-Fi system with coverage in all the Faculty and VCH.

- Acquisition of portable computers and portable digital projection systems.
- Computerisation and adaptation of the Library to the new IT technologies/resources.
- Creation of the Faculty Web Site.
- Creation of a collection system for laboratory residues (University level).
- Adaptation of buildings to accommodate the physically handicapped.
- The Faculty has become actively involved in a programme for risk prevention through the Prevention of Working Risks Service of the UEX; in addition, the Faculty participates actively in a Plan of Sustainable Development for the selective collection of residue (paper, toner, batteries, cell phones, computers and other electronically material).
- Renewal of gardens and installation of irrigation systems.
- New VCH Equipment
- Construction of the farm
- One more facility is being built, the Centre for Scientific and Technological Support. This Centre does not belong to the Faculty, but to the UEX. Nevertheless, it is expected to have a very positive impact on the Faculty, because many teachers will participate in their research activities.
- Optic fibre in the Campus.

All these changes cope with the suggestions made by the Evaluating Committee after the visit in 1995, regarding the veterinary hospital and a refurbishment of the farm, the steps to be followed in order to improve the hospital function regarding management and organization, to provide with emergency service and the availability of hospitalization and 24 hours supervision of patients in the clinic, or the availability of a working and computer room for the students and appropriate usage of the library.

### MAIN CHANGES TO THE STUDY PROGRAMME

The former curriculum (1983) was revoked by the new plan of studies of 1998 (BOE12<sup>th</sup> November 1998, and its modifications 27<sup>th</sup> September 2005 and 8<sup>th</sup> November 2007), which was considered an implementation of the curriculum, and represents a major modification since the 1995 EAEVE evaluation. The new curriculum fulfils the requirements addressed in the legislation governing basic veterinary training in the European Union countries (directive 2005/36/EU) as well as



those defined in the RD 1384/1991 that regulates Veterinary Curricula in Spain (mentioned above).

This new curriculum was published on the Spanish Official Bulletin (BOE) on the 12<sup>th</sup> November 1998. It started in the academic year 1999/2000, and it was completely modified in 2009, starting in the present academical year 2009/2010.

As an example of the important changes derived from the new curriculum in 1998, the theoretical activity has decreased by 22.59 % per student (from 2616 hours of lectures and seminars in the former curriculum to 2025 hours in the new curriculum) and the practical activity has increased by 55.67 % per student (from 986 hours in the former curriculum to 1535 hours in the new curriculum).

In addition, the clinical work has increased by 85.55 % per student (from 353 hours in the former curriculum to 655 hours in the new curriculum). In addition an important core subject was included in the new 1998 curriculum: pre-professional training scheme under an Obligatory Extramural Fieldwork (OEF), with a total of 150 hours. Additionally, the students can perform a total of 250 additional practical hours under the voluntary (non compulsory) practical scheme, which accounts for 400 hours of veterinary practicum. Moreover, in this curriculum the student has more than 600 hours of optional subjects.

In the 1998 Plan of Studies as well as in the latter Plan of Studies, a special attention was paid to avoiding duplication of teaching, lack of collaboration, fragmentation of research and insufficient sharing of resources within the structure of the Academic Units, to the fact of expanding the facilities for practical training (establishing agreements of cooperation between the Faculty and Veterinary Institutions), to target the teaching of basic subjects and basic sciences appropriately, and to the introduction of new subjects within the plan of the veterinary course.

In this sense, the total number of hours devoted to obligatory basic subjects and sciences was reduced from 1800 to 1290 hours, representing a 33% of the total of hours taught. Additionally, new subjects were introduced in the plan of studies. In this sense, the number of optional subjects was increased from 18 in the 1983

curriculum, up to 50 in the 1998 Plan of Studies. Moreover, some of the subjects were targeted to the later levels of the veterinary course.

Specially, the coordination and integration of essential parts of teaching of Animal Production and Nutrition into clinical subjects is taken into account in the new plan of studies, whereas the development of practical training in food inspection and food microbiology has been object for the establishment of an agreement of cooperation with appropriate Industries in the Extremadura Autonomous Community.

Additionally, since 1991, there is the possibility to study a Master in Science and Technology of Meat, as a specialization after the studies of Veterinary; it started as a Local Degree in 1991/1992 and was changed to Official Degree of Post grade in 2006/2007. Additionally, a Master in Health Science was created in 2009 for postgraduate students to get their doctoral degree.

### **IMPORTANT DECISIONS MADE BY THE MANAGEMENT OF THE FACULTY, OR BY THE AUTHORITIES RESPONSIBLE FOR IT**

Since the last visit of EAEVE in 1995 we have carried out important decisions, some of them derived from the evaluation report stated by the evaluation team of the EAEVE, and other as a result of the changes in the University, according to the new ESHE. These can be summarised as follows:

- 1) To increase the number of patients and the obtention of necropsy material.
- 2) The creation of the Internal Quality Guaranty System.
- 3) The elaboration of the new Plan of Studies (Veterinary Degree).
- 4) Voluntary undergoing of evaluation by ANECA.
- 5) To promote participation of PDI in activities under the ESHE.
- 6) To promote participation of PDI in training courses and activities for the external diffusion of the FV studies.
- 7) The creation of new committees in the FV.
- 8) The increase in the number of Collaboration Agreements with outside bodies, directed to the extramural fieldwork.
- 9) Reorganization of spaces in the Departments wing, as a result of the relocation of Clinical and Medical Teaching Units in the new VCH.

### MAJOR PROBLEMS ENCOUNTERED

The major problems encountered by the Faculty during the past years can be summarised as follows:

- Difficulties to obtain information. Whenever requested it has been a hard work to get details of different characteristics regarding subjects and activities within and out of the FV.
- All along this time there have been a lot of troubles and difficulties in obtaining funds.
- Although the total of teaching staff has increased notably since the 1995 EAEVE evaluation the increase in teaching practise as a result of the application of the new curriculum means that teaching staff are scarce in some areas of knowledge.
- The level of autonomy of the FV to make investments in infrastructures (buildings, works and installations) is practically non-existent because of economical and functional reasons.

## Chapter I.

# OBJECTIVES





## CHAPTER I. OBJECTIVES

### 1.1. FACTUAL INFORMATION

Indicate whether there is an official list of the overall objectives of the Faculty.

In this case,

- Please indicate these.
- Who determines the official list of objectives of the Faculty?
- By what procedure is this list revised?
- Do you have a permanent system for assessing the achievement of the Faculty's general objectives? If so, please describe it.
- If there is no official list, please indicate the objectives that guide the Faculty's operation.

#### 1.1.1. General Objectives of the University of Extremadura

The University of Extremadura is an Institution of a public higher education service that develops its functions in regime of autonomy and of coordination with other institutions and assumes the purposes and competences that determines the Spanish Constitution and other applicable legislation. Its activity and autonomy are based on the principle of academic freedom, which demonstrates in the freedoms of chair, of research and of study.

The general objectives of the University of Extremadura come from the mission statement of University of Extremadura defined in Article 2 of the Statutes of the University (BOE, 23<sup>rd</sup> May 2003):

a) The preparation to carry out professional activities that demand the application of knowledge and scientific methods and for the exercise of the artistic creation.

b) The creation, the development and critical transmission of the science, the technology and the human and social sciences, as well as of the arts, in order to

serve the society, in the satisfaction of its educational, cultural and professional needs, favouring the permanent and free training of its members.

c) The diffusion, the assessment and the transfer of the knowledge to the service of the culture, of the quality of life and of the economic development.

d) The diffusion of the knowledge and of the culture by means of the university extension.

e) The scientific and technical support to the social, economic and cultural development and a best knowledge of the Autonomous Community of Extremadura.

f) The national and international projection of our culture, the cooperation for the development and the scientific, technical and artistic exchange with other institutions and entities Spanish and foreigners.

g) The conservation, increase and diffusion of its patrimony (artistic, scientific, technical, documentary and real-estate heritage).

### 1.1.2. General Objectives of the Faculty

The general objectives of the Faculty of Veterinary must guarantee to the society the development of the professional activities: medicine and animal surgery, production and animal health, food-processing technology, hygiene and food safety and public health. These activities can develop in different sectors, the public sector or in the private sector, as an autonomous form or as a part of a managerial structure.

The aim of the Faculty of Veterinary is to be centre of reference in terms of teaching, research, and offering veterinary services to the Society of Extremadura, recognised inside and outside Extremadura for the professional excellence of our graduates and excellence in competitive lines of research.

There is an recently written document, the *Veterinary Faculty's Evaluation Quality Guarantee System*, currently being revised by the relevant national organism (National Agency for Quality Assessment and Accreditation), in which the draft copy (given that the document is not official until it has been approved by the

National Agency for Quality Assessment and Accreditation) explains the Veterinary Faculty's Quality Objectives. The commission charged with writing and annually revising the Quality Objectives is the Quality Commission of the Centre.

### 1.1.3. Specific Objectives of the Faculty

According with the European Directives (78/1026 and 78/1027/EEC, which has been seen replaced by Directive 2005/36/EU) and current Spanish legislation (Law of Health Professions 44/2003, BOE 22<sup>nd</sup> November 2003; the Spanish Specific Directive for Veterinary Studies, Royal Decree 1384/1991, BOE 30<sup>th</sup> September 1991, and Order ECI 333/2008, BOE 13<sup>th</sup> February 2008) and recommendations for veterinary education, the specific goals of the Faculty of Veterinary of the University of Extremadura are to provide adequate knowledge and professional skills to guarantee animal and human health by means of:

1.- Hygiene control, inspection and monitoring of the technology used in the production and processing of foodstuffs intended for human consumption, from stable to table.

2.- Prevention, diagnosis and treatment of animal diseases whether individually or in groups with particular reference to zoonoses.

3.- Control of animal rearing, management, welfare, breeding, protection and feeding, and improvement of yield.

4.- Obtaining of products of animal origin, in optimum and economically viable conditions, and evaluation of their environmental impact.

5.- Knowledge and application of legal, regulatory and administrative provisions in all areas of the veterinary profession and all areas of public health, including the ethical implications of health care in the context of a changing world.

6.- Development of a professional approach with regard to other healthcare professionals, acquiring the skills needed for effective teamwork, efficient use of resources and quality assurance.



7.- Identification of emerging risks in all areas in which the veterinary profession is involved.

### 1.1.3.1. Others Objectives of the Faculty of Veterinary

The Faculty of Veterinary provides postgraduate tuition, in the form both of official University of Extremadura Master's Degrees and of continuing education courses. It also offers a range of services outside the University, thus helping society in general, and carries out research, mainly in the fields of animal health and medicine, animal production, food sciences and food technology.

Over the last three academic years, the "Master's Degree in Meat Science and Technology" was taught by staff at the Faculty of Veterinary: Moreover at present an official Master's Degree of research is being implanted, "Master's Degree of research in Health Sciences specialized in Veterinary Science".

All these courses pursue the following aims:

- 1) To complete the academic and professional training of our graduates;
- 2) To combine solid training in the specific content of each master's degree program with sufficient flexibility to enable students to be trained in all the fields and specialties involved in those programs;
- 3) To create a reliable stratum of professional researchers in order to meet the current and future needs of society;
- 4) To enhance the status of the University of Extremadura and of its Faculty of Veterinary as a benchmark for learning and research; and
- 5) To provide direct access to doctoral research, and thence to a doctoral thesis and the degree of PhD.

The Faculty of Veterinary also promotes the sharing of knowledge and culture through University Extension Courses and Continuing Education Courses. The Faculty either organises such courses itself or provides support to the departments,

professional associations or companies responsible for their organisation. The Faculty is at all times mindful of social demand in the area of continuing education, and ensures that the courses offered are duly monitored and evaluated.

#### 1.1.4. Methods Used to Measure the Achievement of the Objectives

The methods used to evaluate and adapt the objectives established by the Faculty rely mainly on the quality of the teaching and also on the students' satisfaction with this teaching. Students are asked to participate in a survey about the teaching of each individual teacher.

The methods used are established by the University:

a) Annual questionnaire about the teachers' activities. In this survey, students give their opinion about various aspects of the teaching activities, such as the teacher's knowledge and mastery of his subject, his ability to make himself understood, and other parameters that help measure the teaching quality of each individual teacher. These questionnaires are assessed by the Vice-Chancellor of **Quality and Continuous Education** and the results and conclusions are sent to the individual teachers and lecturers, to the different departments and to the Faculty so as to take them into account and make the necessary corrections in those aspects that need to be improved.

b) There is also an evaluation of the research activity of the staff every six years, with economic consequences through retributive complements.

c) There are external and internal assessments of the teaching activity of the teacher having tenure which are requested from the Autonomous Community Government by means of the Social Council of University and from the Unit of Evaluation and Quality of the University of Extremadura respectively. To realize these assessments the University has recently implemented the DOCENTIA model for evaluating teaching quality. The model was developed by the Spanish National Agency for Quality Assessment and Accreditation. The first assessment is voluntary requested every six and five years and the second is obligatory for the same period. Once approved will ensure an increase in salary for the teacher.

With respect to the specific methods we are using to assess how well our objectives at the Veterinary Faculty are being fulfilled, we have two **Teaching Affairs Committees** (*Comisión de Evaluación de la docencia and Comisión de Calidad de las titulaciones grado*), which are appointed by the Faculty Board. These committees meet periodically to analyse and evaluate problems related to the curriculum, teaching methodologies, fulfilment of practical classroom activity goals and any other questions related to teaching. The Faculty also has the authority to organise the teaching requirements of every subject as far as class timetables and final examination calendars are concerned. The schedules are annually prepared and established by the Faculty Board and must take into account the Annual Teaching Plans, as deemed necessary by the Vice-Chancellor of Academic Management. The Annual Teaching Plans are based on the number of hours of class necessary for students to comply with the minimum time each student should spend in the Faculty as required by the present curriculum and syllabuses.

The *Veterinary Faculty's Quality Guarantee System* document, currently being revised by the relevant national organism (National Agency for Quality Assessment and Accreditation), includes a chapter called *Training Results* in which the draft (given that the document is not official until it has been approved by the National Agency for Quality Assessment and Accreditation) outlines that the Faculty of Veterinary guarantees that it measures and analyses the results of learning, of incorporation into the job market and the satisfaction of interested parties, as well as showing how decisions are taken based on the results to improve the quality of teaching under its control. The following procedures have been developed to this end:

- Procedure for the writing and revision of policy and quality objectives.
- Procedure to guarantee the quality of the formative programs.
- Procedure for planning and development of extramural fieldwork.
- Procedure for measurement, analysis and improvement.
- Procedure of public information.
- Procedure for the management of material resources.
- Procedure for the management of services of the Faculty.
- Procedure for the student's recruitment.
- Procedure for the student's guiding.

- Procedure for the evaluation of the teaching activity.
- Procedure for the student's mobility.
- Procedure for the claims.

As regarding the specific methods we employ to assess how well the objectives of the Veterinary Clinical Hospital are being fulfilled, the University-Society Foundation has a monitoring committee to study those proposals submitted by the Hospital and the Faculty as well as to authorise the annual budget and the activities developed. The Foundation also has a management committee which makes decision as *per* the functioning of the Hospital: hospital services, Residents, Scholarship holders, etc.

## 1.2. COMMENTS

In your view, to what extent are the objectives achieved?

What, in your view, are the main strengths and weaknesses of the Faculty?

The training objectives of our Veterinary Surgeons are currently being met for the most important facets of the Veterinary profession, such as Animal Medicine, Animal Production, Hygiene and Food Technology. They are also being fulfilled for the various aspects of biological and biomedical scientific training which are needed for a proper practice of the characteristics included in the recommendations enumerated by FVE, EAEVE (Newsletter number 9, 2000) and by the European Project VET2020.

### 1.2.1. Main strengths and weaknesses

Some strengths and weaknesses have been indicated by the Spanish National Agency for Quality Assessment and Accreditation in their evaluation report of the Faculty carried out in 2006. The major strengths and weaknesses can be summarized as follows:

#### 1.2.1.1. Strengths

##### **Student:**

Our Centre has a good reputation and demand for places at the Veterinary Faculty in Cáceres far exceeds the number of places available, for example in the 2009/2010 academic year 382 students applied for 100 places offered. According to the

University Recruitment system in Spain, our students have high standard, since in high school they must have maintained a grade point average of at least 7.64 on a scale of 0-10.

### Staff

**Academic staff:** The staff members at the Faculty make up an academic team of high standards. Most of them hold national or international PhD degrees.

#### - Teaching

During the last ten years, the Faculty of Veterinary has participated in many university courses for teaching innovation and many professors routinely apply new teaching methodologies such as self-learning or problem-solving oriented learning to their classes. In addition, most teacher use e-learning and have activated their subjects on University of Extremadura's Virtual Campus ([Campusvirtual.unex.es](http://Campusvirtual.unex.es)) where students can find teaching materials, course notes, pictures, videos, etc.

#### - Research

The Academic Staff is quite active in research, existing a high degree of implication in activities of research and development, theses activities have a positive influence in the program formative and therefore in the quality teaching. The Support staff (administrative offices, secretaries, laboratory assistants, hospital aides, animal caretakers, etc) also has the background, experience and skills necessary to execute the assigned tasks in a more than adequate fashion.

Most of the academic staff is involved in national and/or international competitive research programmes and projects in the different fields of veterinary, animal and food science. The Faculty has several masters that pursue different aims

1. - to complete the professional training of our graduates;
2. - to prepare the future professional researchers in order to meet the needs of society;
3. - to provide direct access to doctoral research, and thence to a doctoral thesis and the degree of PhD.

Our teachers regularly collaborate with other national and international universities, research centres, and private or public companies in research and development activities

### **Support Staff**

The support staff receives periodic courses, organized by the Service of continuing Education, so that they improve the university management and the instalment of services.

### **Facilities**

The facilities of the Faculty have been reinforced with the construction of the Veterinary Clinical Hospital, the Farm and other buildings that lodge laboratories of Chemistry, Biochemical and Cell Biology.

They have sufficient resources for the theoretical teaching, practices and clinical. Besides the students have spaces for personal study, works in group and consultations by computer.

### **Equipment**

The general equipment in the Faculty as well as the equipment in the research laboratories and the clinical hospital is adequate for our current requirements. Their care and maintenance is efficiently managed

### **The Veterinary Clinical Hospital**

The Veterinary Clinical Hospital of the University of Extremadura has modern facilities and the necessary equipment to carry out the clinical teaching sessions. This equipment has been recently improved. Two major equipments, a Magnetic Resonance Imaging system and a flow cytometer with a sorting unity to sex sperm, makes the Veterinary Clinical Hospital as one of the best equipped in Spain for the teaching of equine clinical sciences. It also provides Veterinary Medical Services for veterinarians and the citizens of Extremadura. The Hospital is committed to excellence in the diagnosis, treatment and management of companion, equine, farm, exotic and wildlife species through specialty services in Internal medicine, soft tissue surgery, traumatology, Reproduction, has a stallion station during the breeding season, equipment for digital radiography, Doppler colour ultrasound, Magnetic Resonance Imaging (both for small animals and equines), gammagraphy will available

soon, hospitalization, pathology, haematology and clinical chemistry laboratories, diagnosis of infectious and parasitic diseases and ambulatory clinic.

### **Organisation**

Any academic activity is planned well in-advance (i.e. type as well as time and place for every theoretical, practical or clinical activity, exams, and such) in order to allow the students to organise their complete agenda for the entire semester before it starts. All academic activities are also controlled and assessed.

### **Location**

The Faculty of Veterinary is located in a province with significant potential for extensive Livestock. The majority of the region is occupied by the *Dehesa* that is an ecosystem in which species of herbs, bushes and trees coexist in a semi-desert regime, contributing to the feeding of domestic (fighting bull, “merino” sheep, and Iberian pig) and wild animals.

The geographical area where the Faculty is located attracts many students from other Autonomous communities and Portugal.

The Faculty of Veterinary is located on a campus that is easily accessible by private or public transportation for students, staff and clients. Moreover, Cáceres is considered to be an economical place to live especially as far as accommodation and alimentation products are concerned. There are with two University Residence Halls available for the accommodation of students and visitors which help to facilitate national and international exchange programmes.

### **University Structure**

The structure of the University of Extremadura allows for a close collaboration with other Faculties and their Departments, and makes the use of most general services easy (i. e. central library, scientific and technological support, laboratory animal facilities, recreational sports office etc.).

#### 1.2.1.2. Weaknesses

##### **Budget Constraints**

The general economic situation has particularly affected the acquisition of teaching equipment and the hiring of new staff. We are now forced to look for external funding, since the ordinary budget is not enough to provide for both the necessary renewal of equipment as well as the implementation of more innovative actions in teaching. In many cases, the annual budget is not even enough to cover operating costs specifically related to teaching and they have had to be partially financed by Research projects.

##### **Curriculum**

At present there are two curricula in the Faculty: A Degree in Veterinary (approved by governmental resolution of 22<sup>nd</sup> October, 1998) and a new Degree in Veterinary (2009) adapted to the European Space of Higher Education. This situation originates several problems. In the study of degree of 1998 the great load of practical teaching originates logistic problems related to the coordination of schedules and the time of permanency in the Faculty. In case of the Degree in Veterinary (2009), the obligation to reduce the education face to face of the pupil can enter controversy with the requirements of the EAEVE.

##### **Teaching Farm**

The farm presents serious problems due to the little number of staff and to the cost of the maintenance of the animals. Moreover, despite the fact that the Faculty has many agreements with other farms in order to guarantee the development of practical classes in clinical and animal production subjects, the Spanish Ministry of Agriculture and the Extremadura Governmental Agency of Agriculture constantly regulate new bio-security laws that require more control and restriction of external access to farms. This is an increasing problem in the organisation of these practical classes in those food-producing animals under important Emerging Disease Alerts, i.e. as is the case of poultry with the menace of Avian Flu.

##### **Clinical Assistance at the Hospital**

The current organization of the Veterinary Clinical Hospital makes it difficult for the Faculty of Veterinary to be determinant in taking strategic decisions which allow for the development of initiatives which are considered important by the centre and



which affect the teaching.

Another difficulty is that some of the local Small Animal Clinics in Cáceres suggest that there exist conflicts of interest with the Veterinary Clinical Hospital because of the important increase in the caseload over the past few years.

### **Departments**

The University of Extremadura has four campuses (Badajoz, Cáceres, Plasencia, Mérida). As far as the Faculty of Veterinary is concerned, this division means that only three of the Departments that manage the major veterinary areas are located at the Faculty itself. The other 10 Departments work on an Inter-Faculty and inter-campus level, this fact can originate some coordination problem among the staff.

### **Student Recruitment**

The current University Recruitment System in Spain is quite fair, but it does produce undesirable effects in the make-up of the student population at the Faculty of Veterinary. Thus, most students enrolled prefer to study small or large animal medicine, making it difficult to reach a balance between the different Veterinary Professional Profiles. In addition, there is a remarkable imbalance between male (40%) and female students (60%).

### **Exchange Programmes for Students and Teachers**

There are now several agreements for academic exchange with other European and Spanish Veterinary Faculties open to our students and professors. This means that every year we receive about 30 incoming students from abroad and dispatch a similar number. There are two main reasons why our participation may seem limited:

(1) The restrictive policies that many European faculties practise.

(2) The fact that the scholarships available for students going abroad are not very well paid. The teaching mobility of our academic staff to other faculties is even lower and partly reflects the scarcity of funds that the University budgets for these actions.

**Buildings and Facilities**

The installations of the Faculty and its access are not adapted for physically handicapped people. The lack of space in offices and laboratories is becoming a bit of a problem at the Faculty because of the increase in Research Staff and equipment. In addition, some teaching rooms are not very versatile and in certain cases the thermal comfort conditions should be improved. Moreover is necessary to extent the areas for the new technologies.

**Research**

The lack of knowledge of activity between different research groups in the Faculty and their low level of collaboration prevents maximising human resources and infrastructures.

The lack of economic resources makes it difficult to carry out research in non-priority areas.

**Continuing education**

Continuing education presents some deficiencies as low number courses and in the diversity of the same ones

**1.3. SUGGESTIONS**

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

To improve the problematic situations mentioned above, we advocate the Implementation of certain possible solutions, some of which are already being developed:

- An increase in support staff for teaching and research.
- As regarding the Veterinary Clinical Hospital would be necessary the recognition of teaching capacity for all the members that provide clinical assistance.

- An increase the areas dedicated to new technologies
- To further facilitate the participation of professors and students in Exchange Programmes, pressure should be put on University of Extremadura authorities so that they increase the funding of these mobility actions, especially as far as the amounts awarded for scholarships are concerned.
- Budget constrains are difficult to overcome. However, increasing the relationship with private companies and non-profit organisations might contribute to the acquiring of more financial support for particular purposes that would provide a parallel benefit the both parties.
- It is necessary to modify the organization of the teaching farm to include full time technical staff.

## Chapter II.

# ORGANISATION





## CHAPTER II. ORGANISATION

### 2.1. FACTUAL INFORMATION

Please give the basic details of the establishment, starting with the name, address, telephone and fax numbers, e-mail addresses and website addresses

Basic details of our establishment:

**Name:** Veterinary Faculty in Cáceres.

**University:** University of Extremadura.

**Address:** Avenida de la Universidad, s/n. 10071-Cáceres, Spain.

**Telephone number:** +34 927 257106.

**Fax number:** +34 927257110.

**E-mail addresses:** Secretary of the Dean's Executive Team decanove@unex.es

**Website:** <http://www.unex.es/>, <http://veterinaria.unex.es/veterinaria/>

**Dean:** Julio Jesús Tovar Andrada, DVM, PhD, Professor of Animal Production

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

#### 2.1.1. Structure of the University of Extremadura

The Faculty of Veterinary in Cáceres forms part of the University of Extremadura. Founded in 1973 (Decree 991/1973 of 10<sup>th</sup> May). Initially the University of Extremadura was including two campuses Badajoz and Cáceres and, nowadays it is integrated by four campuses, both first ones and Mérida and Plasencia.

The creation of The Faculty was published in the Official Bulletin of the State (BOE) on the 31<sup>st</sup> of July in 1982 (RD 1786/82, BOE of 23<sup>rd</sup> February 1983, Order 27<sup>th</sup> January 1983). This Order authorizes to give the educations of the first course of Veterinary Licentiate from the year 1983. The Veterinary Faculty it was located in the city of Cáceres. The location of the Faculty of Veterinary in Extremadura is very important because of the rather significant advances that this course of studies bears upon the agricultural development of the region.

The University of Extremadura is a public University that depends on the Spanish Ministry of Education, on a national level, and also on Government of Extremadura Department of Economy Trade and Innovation (Junta de Extremadura). At present, the UEX is spread out over four campuses (in the cities of Cáceres, Badajoz, Plasencia and Mérida). These campuses of University of Extremadura complement each other and are also completely integrated within the University. Before the entry in the European Space for Higher Education, the Spanish Ministry of Education establishes the curriculum for all nationally recognized degrees, and defines the main political lines of higher education in Spain. The Department of Economy Trade and Innovation (Junta de Extremadura) is the body responsible for funding and managing the University in the Extremadura Autonomous Community Figure 1 summarises this interrelation.

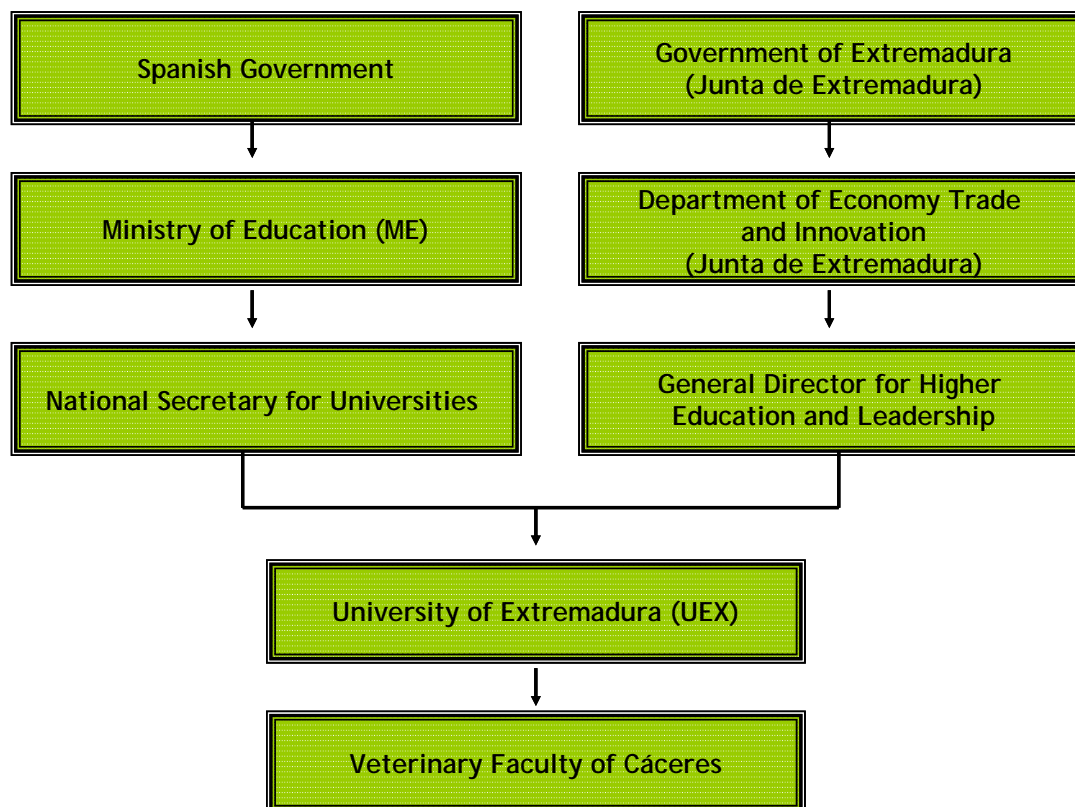


Figure 2.1. Administrative Organisation: How the Veterinary Faculty Fits Into the Hierarchical Structure of the Spanish Government, the Government of Extremadura and the University of Extremadura. More information is available at the UEX website <http://www.unex.es>

Certain basic figures about the make-up of the University of Extremadura are shown below (Tables 2.1 and 2.2).

**Table 2.1.** Faculties, Schools, Departments and other Centres in the University of Extremadura.

University structure	CAMPUSES			
	Badajoz	Cáceres	Mérida	Plasencia
Centres	3	1	1	1
Faculties	11	5	6	
University Schools	1	1		
Technical schools	3	2	1	
Departments on each Campus (Based in each Campus)	41	37 (23)	38 (18)	15

**Table 2.2.** Key numbers for the academic year 2008-09 (University of Extremadura).

Undergraduate Students	22424
Students graduated in 2007/2008	3626
Students in PhD Programmes	1059
Students in Masters Programmes	292
Foreign students (incoming)	268
students from University of Extremadura outgoing	525
Academic and Research Staff	1904
Support Staff	798
Degrees offered	47
Official Postgraduate Programmes	18
PhD Programmes	40
Masters Programmes	4
Specialist Courses	3
Continuing Education Courses	24
Budget (€ for 2009)	161944300

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

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

### 2.1.2. Organisation of the Veterinary Faculty

Current legislation (University Organic Law) divides and defines the organisation of the Universities in Spain into two entities with different specified functions (Figure 2.2):



- **Faculties and Schools:** Responsible for organising teaching and supervising the correct development of teaching activities.
- **University Departments:** Mainly responsible for research and undergraduate and postgraduate education.

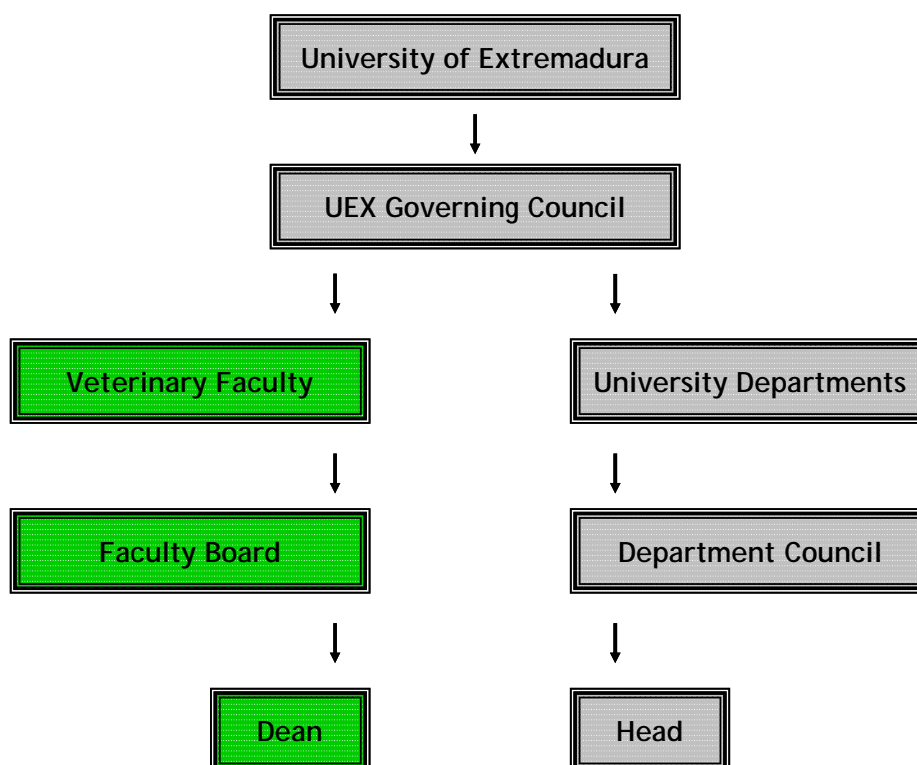


Figure 2.2. Organisation of the Faculty of Veterinary and the Departments

The Veterinary Faculty is the only centre offering a Degree in Veterinary Science in the Autonomous Community of Extremadura. As a part from the University of Extremadura, the Faculty is responsible for organising the teaching and other academic, administrative and management-related procedures leading to the award of the Degree in Veterinary Science, the Degree in Biochemistry, and the Master in Science and Technology of the Meat. The Faculty organises the curricula and assigns the teaching of the subjects needed to the Departments. The Faculty also supervises undergraduate teaching and implements the Quality Assessment Programmes. The Departments must develop the teaching duties assigned by the Faculty. Along other lines, the Departments may request new academic positions at the University and organise the hiring of new teaching staff.

The Faculty of Veterinary is governed primarily by the Statutes of the University of Extremadura (2003), and by the University's Academic Regulations and by the Regulations of the Faculty itself, approved by the Faculty Board and the Governing Council on the 9<sup>th</sup> March 2004.

All the information as regards these Regulations is addressed on the University and Faculty websites:

[http://www.unex.es/unex/gobierno/direccion/sec\\_gral/normativas/](http://www.unex.es/unex/gobierno/direccion/sec_gral/normativas/)

<http://veterinaria.unex.es>

The Statutes of the University of Extremadura stipulate the composition, structure, and functions of the Governing Bodies of the Faculty as well as those of the administrative and general services of the University of Extremadura itself.

### Government Bodies

#### A. The Faculty:

The Governing Bodies, as defined by the Statutes of the University of Extremadura, are: the Dean, the Dean's Executive Team and the Faculty Board.

- The Dean holds the highest representation of the Faculty and acts as managing director
- The Dean's Executive Team is comprised of Vice-Deans with delegated functions for specific academic activity areas. At present there are two Vice-Deans: (1) *Teaching Affairs* and (2) *Infrastructures* as well as a Secretary who is responsible for the editing and signing of official reports and certificates (Table 2.3.). The Faculty also has an Administrator who is a Civil Servant and is responsible for the Academic management of all issues related to the Faculty. She/he works in close, daily contact with the Dean. There is also an Administrative Secretary who is a Civil Servant.

Table 2.3. The dean and the Dean's executive Team

Dean	Julio Jesús Tovar Andrada
Vice-Dean for Teaching Affairs	Antonio González Mateos
Vice-Dean for Infrastructures	Carmen García González
Secretary	Eva M <sup>a</sup> Frontera Carrión
Administrative Secretary	M <sup>a</sup> Luz Padilla Guzmán

- The Faculty Board is the Managing and Governing body of the Centre. It is composed of representatives from all levels of the Institution. According to the Statutes of the University of Extremadura, the full members of the Faculty Board are: all the elected members of the Dean's Executive Team (the Dean; the Vice-Deans; the Secretary), the Administrator, representatives of the Departments, as well as elect members of four other groups: (1) all the permanent Academic Staff, (2) representatives of the hired teaching and research staff and research scholars; (3) representatives of the undergraduate students, and (4) representatives of the support staff. Thus, the Faculty Board, as such, has a composition that reflects the total number of each group: Group (1) 51%, Group (2) 16%, Group (3) 23%, and Group (4) (10%).

The Faculty Board meets at least three times every academic year.

The elect representatives for each of the groups listed above are elected by suffrage within the given group. Elected members hold the seat for a four-year term except for the representatives of the undergraduate students which are renewed annually.

The main functions of the Faculty Board are:

- To prepare, approve and modify the Veterinary Faculty Regulations.
- To elect and revoke the Dean.
- To prepare proposals for the modification of the curriculum.
- To guard over the quality teaching.
- To take part in evaluation of the Centre.
- To inform the requests realized by the Department about teaching posts.

- g) To debate and approve the general academic politics of the Faculty.
- h) To approve the annual budget.
- i) To elaborate the reports over the teaching activities and over the economic management of the Centre.
- j) To propose agreements for the accomplishment of works, as well as for the development of courses of specialization.
- k) To inform the Government Board of the University of Extremadura about the teaching capacity at the Faculty.
- l) To decide about the recognition of studies.
- m) To name the court of Graduation Dissertation.
- n) To propose nominations for *Doctor Honoris Causa*.
- o) To create working commissions.
- p) To elect the representatives of Centre in other committees.

#### **Committees Delegated by the Faculty Board**

To improve the assessment of different aspects of the Faculty management, the Faculty Board appoints Delegated Committees which analyse and propose solutions for problems arising in their areas. Moreover the Faculty Board may establish *ad hoc* Committees and/or Working Groups to deal with specific matters. Committee members shall be appointed by the Faculty Board (Figure 2.3).

**Quality Committees of the Degree.** This committee assesses teaching quality and supervises, modifies and analyses all aspects related to the teaching activity of the Degree. Its function is also to stimulate the coordination among the teachers and subjects and to propose those changes in the curriculum that need to be submitted for improvement of the formative program. The Committee comprises of a coordination teacher, seven teachers representing the permanent Academic Staff, Representatives of Undergraduates students and one representative of Support Staff.

**Quality Committees of the Postgraduate.** This committee assesses teaching quality and supervises, modifies and analyses all aspects related to the each activity of the postgraduate. Its function is also to stimulate the coordination among the teachers and subjects and to propose those changes in the curriculum that need to be submitted for improvement of the formative program. The Committee comprises of a

coordination teacher, seven teachers representing the permanent Academic Staff, representatives of undergraduate students and one representative of Support Staff.

**Quality Committee of the Centre.** The Quality Control Committee of the Veterinary Faculty is a body which participates in the tasks of planning and carrying out the Quality Guarantee System of the Faculty of Veterinary, as well as acting as an internal vehicle of communication on the policies, objectives, plans, programmes, responsibilities, and achievements of the system. This committee is proposed by the Dean and must be ratified by the Faculty Board. The commission is made up of the Dean, or his delegate, who acts as president, the Responsible of the Quality Guarantee System, who acts as secretary, the coordinators of the qualities committees of Degree and of Postgraduate, one representative of support staff and two student's representatives.

**Teaching evaluation Committee.** The composition and function of this committee are regulated by the Statutes of the University of Extremadura. And it is responsible for the accomplishment realizing individual evaluations of the teaching activity and for proposing to Faculty Board the necessary actions for the improvement of the teaching quality. The Committee is chaired by the Dean or, in his absence, Vice-Dean for Teaching Affairs, and comprises of five representatives of academic staff and one student's representative.

**Extramural Practices Committee.** This committee is responsible of the assignment of tutors to students enrolled in core subject Obligatory extramural fieldwork ("estancias"), the establishment of criteria for distribution of grants, and for any other duties entrusted to it by the Faculty Board. The Committee is chaired by the Dean or, in his absence, Vice-Dean for Teaching Affair, and comprises of eight teachers of the areas implied in the subject Obligatory extramural fieldwork and one student's representative.

**Validation Committee:** This Committee is responsible for evaluating the global aptitude for receiving the degree exhausted most of the ordinary procedures of overcoming of the subjects of the curriculum. The Committee is chaired by the Dean or, in his absence, a Vice- Dean, and comprises of 5 teachers of the Veterinary Degree, a teacher of other University Centre, designed by the Chancellor, and the Secretary.

**Infrastructure Committee:** This Committee deals with all issues relating to infrastructure and equipment, and with any other duties entrusted to it by the Faculty Board. The Committee is chaired by the Dean or, in his absence, the Vice-Dean for Finances, Equipment and Services, and comprises of four representatives of the academic staff, one representative of support staff, and one student's representative.

**Extension and University Cooperation Committee:** This Committee is responsible for all matters relating to the scheduling and coordination of cultural and university-extension activities and for any other duties entrusted to it by the Faculty Board. The Committee is chaired by the Dean or, in his absence, the Secretary, and comprises of four representatives of the academic staff, one representative of support staff, and one student's representative.

**Council of the teaching farm.** The committee plans teaching and research needs on the Faculty farm and establishes the system of evaluation and improvement of the offered services. This committee is made up of the Dean and the Head of the Animal Production and Food Science Department and the follow elected members: The Director of the farm, one teacher in the area of Animal Production, one teacher from the area of Animal Health, two members of the support staff linked to the farm, the Head of the Department of Animal Medicine and the Dean's Executive Team.

**Internal committee for EAEVE evaluation.** This committee is responsible for drafting the self-evaluation report to be presented to EAEVE, for coordinating all aspects of the evaluation visit by the team of experts, and for addressing any deficiencies noted. The Internal Working Group comprises the Dean's Executive Team, the Director of the University Veterinary Hospital, the responsible of the Quality Guarantee System, the Director of the Farm, three representatives of the Department (Animal production and Food Science, Animal Medicine and Animal Health), eight representatives of academic staff, two representatives of the support staff, and two student's representatives.

**Committee for the Modifications of the curriculum.** This Committee deals with the modifications of the Veterinary curriculum and other duties entrusted to it by the

Faculty Board. The Committee is chaired by the Dean or, in his absence for a Vice-Dean, and comprises twenty three teacher representatives of all areas, one representative of support staff, two extramural members and two student's representatives.

Committee for proposing new University Degree and Master. This Committee is responsible for proposing official University Degrees and Master, for elaborating the curricula and for other duties entrusted to it by the Faculty Board. The Committee is chaired by the Dean or, in his absence for a Vice-Dean, and comprises of ten teacher representatives of all areas implied.

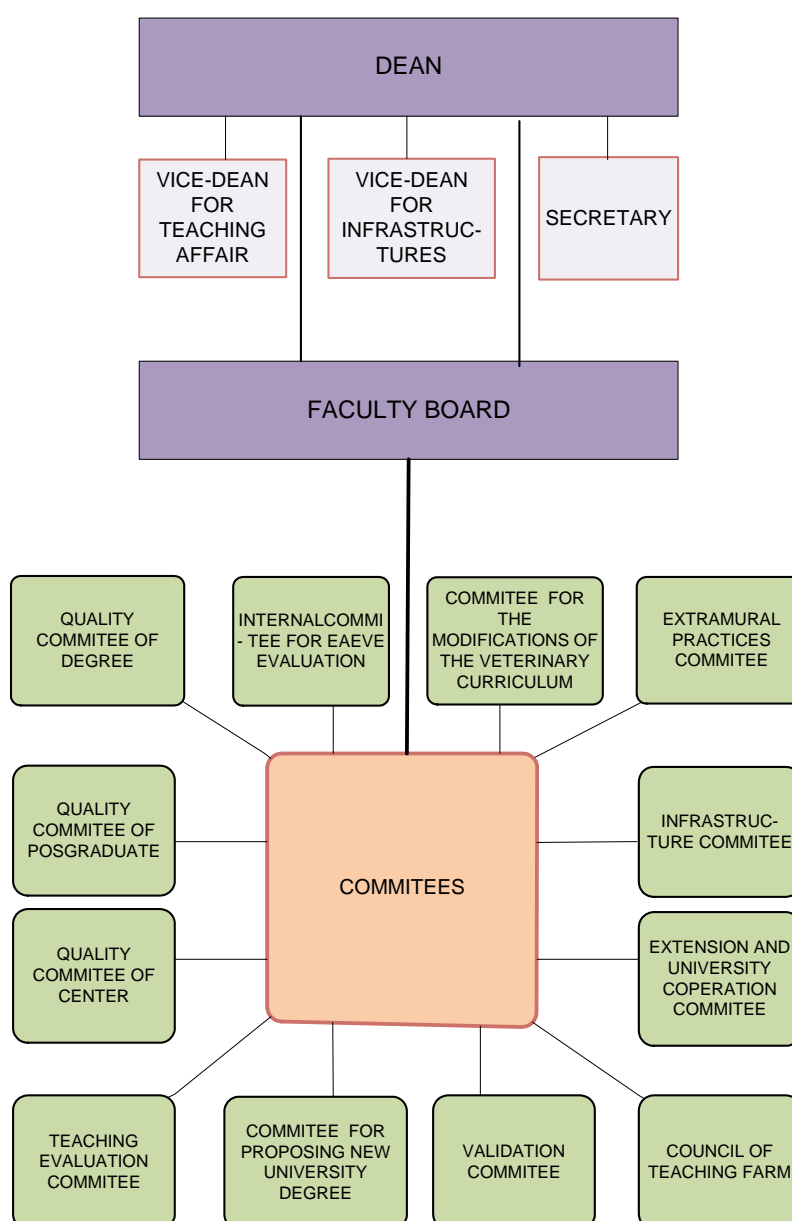


Figure 2.3. Organizational scheme of the Faculty Board

## B. The Departments

The Departments are the bodies in charge of coordinating the teaching of one or more areas of knowledge in accordance with the teaching programme of the University. In addition, they provide support for the teaching and research activities and also promote the initiatives of the teaching staff. The different Departments are made up of areas of scientific or technical knowledge. At our Faculty, 10 Departments currently have teaching assignments. Three of these Departments are based in the Faculty (Table 2.4) and the other seven are based in Badajoz. The professors who form part of the Departments in Badajoz may have assigned teaching in the Veterinary Faculty and/or in other Faculties found on the Campus in Cáceres (Table 2.5). Each Department elaborates its own Regulations which must be compatible with the UEX Statutes. The governing bodies defined by the Statutes of the University of Extremadura are: the Head of Department, the Department Secretary and the Department Council (*"Consejo de Departamento"*).

Table 2.4. Department based in the Veterinary Faculty

DEPARTMENT	ASSIGNED SUBJECTS	HEAD
Animal Medicine	Anatomy & Embryology (C)	A. Javier Masot Gómez Landero
	Cytology & Histology (C)	
	General Pathological Anatomy (C)	
	General Pathology (C)	
	Systemic Pathological Anatomy (C)	
	Medicine & Surgery (C)	
	Reproduction & Obstetrics (C)	
	Medical & Nutritional Pathology (C)	
	Propaedeutics (C)	
	Radiology (E)	
Applied Anatomy (E)		
Animal Health	Infectious Diseases (C)	Santiago Vadillo Machota
	Toxicology (C)	
	Parasitology (C)	
	Deontology, Legal Medicine & Veterinary Legislation (C)	



	Epidemiology (C)	
	Microbiology (C)	
	Parasitological Diseases (C)	
	Preventive medicine and sanitary police (C)	
	Diagnostics & clinical of parasitic diseases (E)	
	Environmental Toxicology (E)	
	Food Toxicology (E)	
	Infectious Exotic Diseases (E)	
	Special Microbiology (E)	
	<hr/>	
	Rural Economics (C)	
	Ethnology (C)	
	Animal Feeding & Nutrition(C)	
	Animal Husbandry (C)	
	Animal Health & Breeding	
	Genetics (C)	
	Agriculture (C)	
	Technical & Economical Management of Iberian Pigs (E)	
	Ethnology and Zootechnical Ethology C)	
Animal Production and Food Sciences	Food Hygiene (C)	Araceli Rabasco Mangas
	Animal Production & Veterinary Hygiene (C)	
	Food Technology (C)	
	Food Microbiology (E)	
	Applied Nutrition to Animal Productions (E)	
	Manufacturing Technology of Feed Animal (E)	
	Dairy Science (E)	
	External Aspect of Domestic Animal (E)	

C = Core subject; E = Elective Subject

Table 2.5. Department based in Badajoz

DEPARTMENT	ASSIGNED SUBJECTS	HEAD
Medicine and Surgical Therapeutic	Pharmacology, Pharmacy y Therapeutic (C)	José Carlos Millán Palomino
Physiology	Physiology (C) Immunology (C) Avian Physiology (E)	Jose A. Pariente Llanos
Anatomy, Cellular Biology & Zoology	Animal and Plant Biology (C) Ethology & Animal Protection (C)	Gervasio Martín Partido
Biochemistry, Molecular Biology & Genetics	Biochemistry (C)	Pedro Macías Laso
Organic and Inorganic Chemistry	Chemistry (C) General Advanced Chemistry (E) Environmental Chemistry (E)	Reyes Babiano Caballero
Applied Physical	Physic (C) Radioactive Isotopes: Diagnostic and Therapeutic Applications (E)	José Morales Bruque
Mathematics	Mathematics (C) Statistics Computational (E)	M <sup>a</sup> Ángeles Mulero Díaz

C = Core subject; E = Elective Subject

**Head of Department:** The Head of Department is in charge of its management and operation, and also acts as the Department's representative for any events on a University level.

**The Department Council:** The PhD-holding members of the Academic Staff belonging to that Department and a fluctuating number of representatives elected from within the following bodies: non PhD-holding members working full time in that department (13%), students enrolled in courses in the Department (27%) and Support staff (9%). This Council meets at least once every trimester.

### **Management of General Services in the Faculty**

The Dean and the Faculty Manager act as line managers of the General Services in the Faculty

**Academic Management:** The Dean, with the help of the Dean's Executive Team Secretary and the Vice-Dean for Teaching Affairs, is responsible for the Academic management of the Faculty. These duties include issuing Certificates as necessary, attending to the daily needs of the student body, and such. The Faculty Manager supervises any academic organisation as required by the Vice-Chancellor's Office and also for the coordination of the obligatory extramural fieldwork done by the students. In addition, the Dean may entrust other specific activities to the Faculty Manager.

**Financial Affairs Section:** The Dean, with the help of the Vice-Dean of Infrastructures, is responsible for administrating the budget for teaching and for research needs, for both the Faculty and the Departments. The Faculty Manager oversees the administrative organisation of this Service.

**Human Resources Management:** The Dean, with the help of Vice-Deans, has entrusted, among others, the following functions:

- To represent the Faculty and to be President of Faculty Board.
- To manage economic and administrative affairs of the Centre, identifying the needs of the service, according to the resolutions adopted by the Faculty Board.
- To guarantee the effective compliance of the obligations in the staff of the Faculty and guarantee the effectiveness of their rights.

On the other hand, the Administrator, among others, has entrusted the following function:

- To exert the leadership of administrative staff of the Faculty, delegated by the Executive Manager, without detriment of general higher leadership of the Dean, guaranteeing observance the application of the specific rules of his competence.

Finally, the Executive Manager, delegated by the Chancellor, is the highest authority in the University about economic and human resources affairs.

**Information and Commissionaire's Office:** Five staff members carry out the duties involved in this office which is in charge of providing general information for staff, students and visitors alike. They also supervise the University's Internal and parcel post Mail Services as well as oversee the correct operation of the basic services (water, electricity, gas, cleaning, classroom equipment, access to computer rooms, etc.)

**Elimination of residues Service:** One assistant is responsible for the collection, from farms, small animal clinics and the Veterinary Clinical Hospital, of the organs and/or dead bodies that are to be used in the practical classes (Anatomy, Pathological Anatomy, Infectious and Parasitic Diseases, etc). All the teaching and research material of animal origin must be remove of each lab and cooled stored until they are carried to incinerate in an authorized and specialized Company (*Tragsa*).

**The Veterinary Clinical Hospital:** The Veterinary Clinical Hospital is a General University Service and was founded to support teaching and research work done at the Faculty. A non-profit Foundation sponsored its creation in 2005. The *University-Society* Foundation receives financing from the Government of Extremadura among other Institutions.

The organisational and functional regime of the Veterinary Clinical Hospital is governed by its own General Regulations included in its letter of foundation. Its administrative and financial management is independent of the Faculty. The Veterinary Clinical Hospital government body is the *University-Society* Foundation Board.

**University-Society Foundation Board ("*Patronato de la Fundación*"):** It approves all the decisions affecting the Veterinary Clinical Hospital management, including the annual budget. This board is composed of 16 members, who include the **Chairman** (the President of the University of Extremadura's Social Development Council), and the **Vice-President** (the Chancellor of the University of Extremadura). This Board meets at least once every six months.

**Monitoring Committee** (*"Comisión de seguimiento"*): This committee (two or three annual meetings) seeks to promote and make possible the fulfilment of the Veterinary Clinical Hospital's mission statement, particularly as applies to teaching. It is in charge of the management of the academic staff and the research developed in the Veterinary Clinical Hospital, and transmits all the relevant needs to the Foundation Board. This Committee is composed of eight University members (the Chancellor or the Vice-Chancellor for Coordination and Institutional Relations, the Dean of the Faculty of Veterinary and six representatives of following organisms: *Consejería de Sanidad y Dependencia, Consejería de Agricultura y Desarrollo Rural, Diputación de Cáceres, Diputación de Badajoz, Ayuntamiento de Cáceres* and *Fundación Universidad-Empresa*).

**Management Committee** (*"Comisión de Dirección"*): This is a delegated Committee that meets to decide on the day-to-day operation of the Hospital, its Services, and its members (Interns, Scholarship holders, etc.) It is made up of the Vice-Chancellor for Coordination and Institutional Relations, the VCH Veterinary Director, and Executive Manager.

The Veterinary Clinical Hospital's Executive Team includes an Executive Manager that is in charge of all entrepreneurial aspects (administration, finances, facilities, equipment, admission, etc) and a Veterinary Director, who is elected from among those teachers doing clinical activities. His/her duties are to optimise the use of the clinical services not only with respect to the assistance provided for the general public, but also with respect to the services used in teaching, as well to perform a follow-up on all the teaching activities developed. In addition, the Veterinary Director is responsible for implementing the Faculty decisions affecting clinical teaching at the Veterinary Clinical Hospital. Thus, the Veterinary Director is the link between the hospital management and the teaching bodies of the Faculty. According to the Veterinary Clinical Hospital Regulations, the Executive Manager does not have to be associated with the University; however, it has been our experience that a connection to the University of Extremadura allows for greater understanding among all those implicated.

The Veterinary Clinical Hospital is structured into different three large areas, Large animals, Small animal and Mobile Clinic.

The academic and technical staff must belong to a clinical service into each area which corresponds to their field of knowledge. Currently, these services are: Parasitic Diseases Diagnostic Service, Pathological Anatomy Diagnostic Service, Toxicological Veterinary Attention Service, Infectious Diseases Diagnostic Service, Anaesthesiology, Diagnostic Imaging, Radiology: Radiography and Radioscopy, Ultrasound Scan Devices, Videoendoscopy, Magnetic Resonance Imaging.

For further information see chapter 6.

#### **Management of the General Services on a Inter-Faculty Level**

The remaining eight Centres of the University of Extremadura at the Campus of Cáceres share some Inter-Faculty General Services (the same General Services are located on the Badajoz Campus). They are briefly described as follows and summarised in Table 2.6.

**Library:** The Inter-Centre Library is endowed with twenty two support staff people. For details on its management, see Chapter 8.

**Service of Attention to Students:** This Inter-Faculty service including four offices: Office of Grants, Third Cycle and Own Degrees; Office of Access and Coordination of Centres; Unit of Attention to Students and Office of Relations with Companies and Employment. This service, with a staff of seventeen, supervises the administrative admission and enrolment of students. It is also in charge of granting all official University of Extremadura academic documents for undergraduates and postgraduates.

**Laboratory Animal Facility:** This service has four support staff member at Unit of Cáceres (One of them is a Veterinary specialist in laboratory animals). It offers proper housing and husbandry services for the laboratory animals (rats, mice, rabbits) and algae used in the research work carried out on all of the University of Extremadura's Campuses. The animals are also acquired for use by other public and/or private entities.

Table 2.6. Heads of Administrative &amp; Research General Service Offices

GENERAL SERVICES AT THE FACULTY	
Faculty Manager	Consolación Rodríguez Bernal
Financial Affairs Section	M <sup>a</sup> Antonia Pedraza Patrón
Information & Commissionaire's Office	Joaquin Corrales Carpallo
Elimination of Residues Service	Rodrigo Casillas Fernández
VETERINARY CLINICAL HOSPITAL	
Veterinary Director	Fernando J. Peña Vega
INTER-FACULTY GENERAL SERVICES, CACERES CAMPUS	
Library	Ángeles Ferrer Gutiérrez
Office of Grants, third cycle and own degrees	Carmen Masot Gómez-Landero
Office of Access and Coordination of Centres	Antonia Maestre Carralero
Unit of Attention to Students	Alberto Herrera Tejada
Office of Relations with Companies and Employment	Carlos Ongallo Chanclón
Laboratory Animal Facility	María Reyes Panadero

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

The **University of Extremadura's Social Development Council** ("*Consejo Social*") is the organ of participation of the society in the government and administration of the University.

Besides the concrete functions (Law 4/1998, of April 30<sup>th</sup>) and the laws of the University of Extremadura, the basic competition of the Social Council of the University of Extremadura, is the valuation of the functioning of the University Institution from the perspective of the society in the one that one agrees and to the one that serves, proposing goals and indicating limitations and deficiencies (faults) to him (her).

Likewise, the Social Council must be constituted in speaker before the society of the needs of the University and the way of remedying them.

The Social Development Council is composed of representatives of different social interest groups (political groups, trade unions representatives, companies) who do not have to be members of the University Community. More details can be found in the University of Extremadura website:

[http://www.unex.es/unex/gobierno/organos/consejo\\_social](http://www.unex.es/unex/gobierno/organos/consejo_social)

As for the Faculty of Veterinary, in order to gain feed-back from the Veterinary profession, the Governing Bodies of the Faculty have regular meetings with representatives of Veterinarian Practitioners to incorporate the interests and needs of these professionals into the teaching and research programmes being offered at the Veterinary Faculty.

Moreover, many of the Faculty's teaching staff members also are members of the Official College of Veterinarians in Cáceres ("*Ilustre Colegio Oficial de Veterinarios de Cáceres*") this situation provide their actuation as intermediary/link between both Institutions, in order to guarantee fluent collaboration and communication.

In addition, many of the Faculty's teaching staff members form part of the Governing Boards of various regional and national Professional Associations. This fact not only helps to guarantee a close working relationship between these associations and the Faculty, it also helps the Faculty members to have a better and more up-to-date understanding of the real world experience that these professionals can share with them.

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

The Dean is elected by the Faculty Board as *per* Article 109 of the *Statutes of the University of Extremadura* and as *per* Articles 46-51 of the *Regulations of the Faculty Veterinary*. He/she must be a tenured teacher with a full-time position and must be willing to hold this position for a four-year term. The Dean may be re-elected only once.



The Dean's Executive Team is proposed by the Dean and after the Dean is elected, they are appointed by the Chancellor (as Article 110 of the *Statutes* dictates of the University of Extremadura). They may be introduced by the Dean before the election, or the Dean may choose to make their names known after the election has taken place.

The Heads of Department are elected by the Department Council from among all the PhD-holding members of the Department as *per* Article 120 of the *Statutes of the University of Extremadura*. The Head of Department holds his/her position for a four-year term and may be re-elected only once.

The Executive Manager of the Veterinary Clinical Hospital is proposed by the President of the University-*Society* Foundation and then appointed by the Foundation Board.

The Veterinary Director of the Veterinary Clinical Hospital is nominated by the Chancellor from among the professors who participate in clinical casework at the Veterinary Clinical Hospital.

## 2.2. COMMENTS

Add any comments on the organisation and functioning of the establishment which you feel useful for completing the description.

### Brief Explanation on the Educational System in Spain

The University Organic Law 2001 (amended in 2007) was directed toward a complete reform of the educational system in Spain. Associated reforms include: obligatory basic general education for three to sixteen year-old students, elimination of rural/urban differences in educational opportunity, equal access to University education, University autonomy and creation of new Universities. Student financial aid is also to be better provided in a broad variety of scholarships, loans and other grants.

The University education proper may be undertaken in the Universities or in advanced Technical Education schools. A recent law (Modification Law of the

University Organic Law 4/2007, 12<sup>th</sup> April, comprising the modification of the University Organic Law 6/2001, of 21<sup>st</sup> December), establishes two stages in higher education: Undergraduate and Postgraduate level, in which graduate students may follow some type of specialization (Master Degree) and/or preparation for research work leading to the defence of their Doctoral Dissertation (PhD degree).

### 2.3. SUGGESTIONS

If you are not satisfied with the situation, please list your suggestions for change in order of importance.

#### 2.3.1. Foreseen and/or Desirable Changes

To a certain extent, problems in coordination may, and often do, arise due to the fact that teaching is organised in a parallel manner by both the Faculty and by the Departments. The Departments are responsible for the teaching and the Faculty organises and controls the teaching duties. Thus, when a problem arises, the mechanisms of change must be agreed upon with the Departments and, on occasion, it is this actual process of reaching an agreement that slows down its being solved.

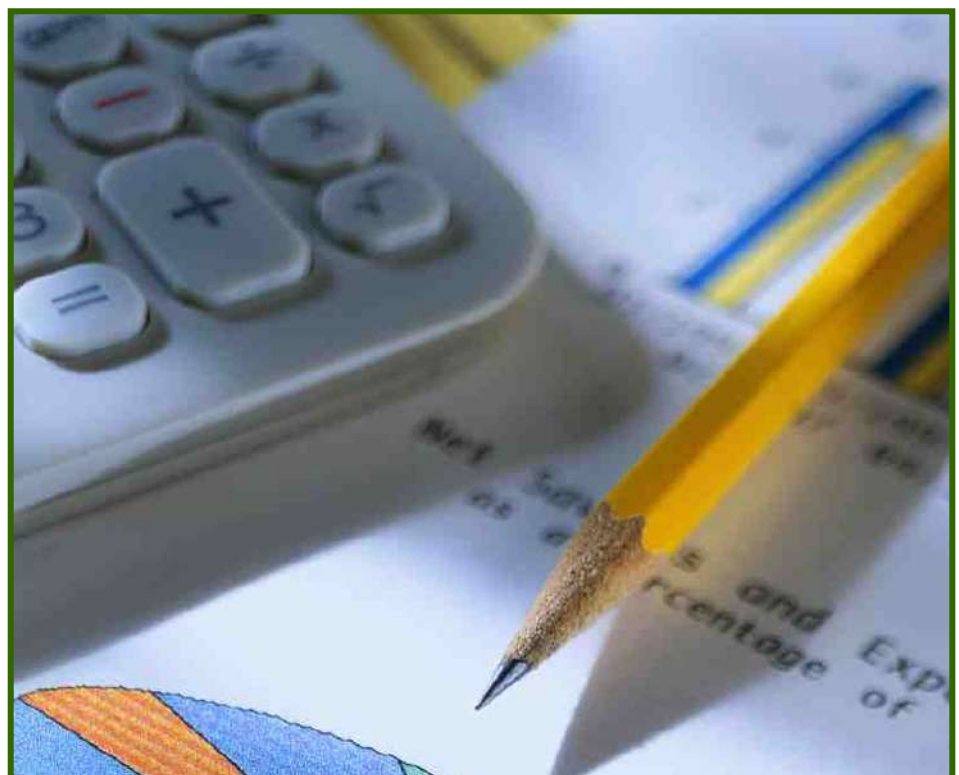
Moreover, it would be convenient to achieve a more homogeneous departmental structure within the areas of knowledge involved in the teaching at the Faculty.

There are no formal arrangements or provisions enabling the Faculty of Veterinary to gain feed-back from Veterinary professionals. We believe that this is a major short-coming that must be solved in the near future. One suggestion might be to create an "Advisory Council" formed by veterinary professionals that would regularly meet with the Governing Bodies of the Faculty in order to make the interaction between the academic and the professional communities more fluent.



Chapter III.

**FINANCES**





## CHAPTER III. FINANCES

### 3.1. FACTUAL INFORMATION

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

In addition, please specify:

How the allocation of funding (including public funding) to the Faculty is determined, and by what body.

If the allocation of funds, or any significant proportion of it, is linked to a particular factor (e.g. student numbers, research output), please describe this.

How the basis for funding the Faculty compares with those teaching other courses (e.g. whether veterinary training receives a higher budget weighting compared to other disciplines).

How the allocation of funds within the Faculty is decided.

What are the mechanisms for funding major equipment and its replacement?

The mechanism(s) for funding capital expenditure (e.g. building work, major items of equipment) and how decisions are taken in this matter.

The mechanism(s) to provide the necessary support for building maintenance and how decisions are taken in this matter.

The Faculty's current financial model is imposed by the University of Extremadura, which -as a public University- depends on the funding approved by the Autonomous Government of Extremadura in its annual budget. In addition to funds paid annually by the Regional Government, the University of Extremadura also obtains income from tuition and registration fees, fees for certificates and other official documents, and from external services provided by the University, such as publications, services and events. The University distributes the general budget within the Centres and Departments in proportion to their characteristics (number of students, staff, spaces, experimental degree, etc). Thus, most of the budget arrives through the Departments, whereas the Faculty only receives a small amount, basically intended for maintenance.

The Organic Law on Universities sets strong emphasis on the economic and financial autonomy of Universities; Article 2.2h of this law recognises, in principle, the right of each University to draw up, approve and manage its own budget, and to administer its assets. Like the other University faculties, the Faculty of Veterinary Science

operates a special system: most major items of expenditure (staff salaries and costs, services and work contracted out to external companies, maintenance, waste collection and other services) are managed and paid directly by the University's Central Services.

The University of Extremadura operates an annual budget, based on the calendar year (1 January - 31 December) rather than the academic year. Most of the University budget is financed by the Extremadura Regional Government, through the Finance Department (*Consejería de Economía, Comercio e Innovación*). As laid down in the University Statutes, the budget is drawn up by the Vice-Chancellor responsible for financial affairs (Art. 87.1 of the UEX Statutes), reviewed by the Governing Council (Art. 87.2d of the UEX Statutes) and submitted to the Social Council for its approval (Art. 80 c. of the UEX Statutes); this procedure complies with the provisions of Article 14.2 of the Spanish Universities Law.

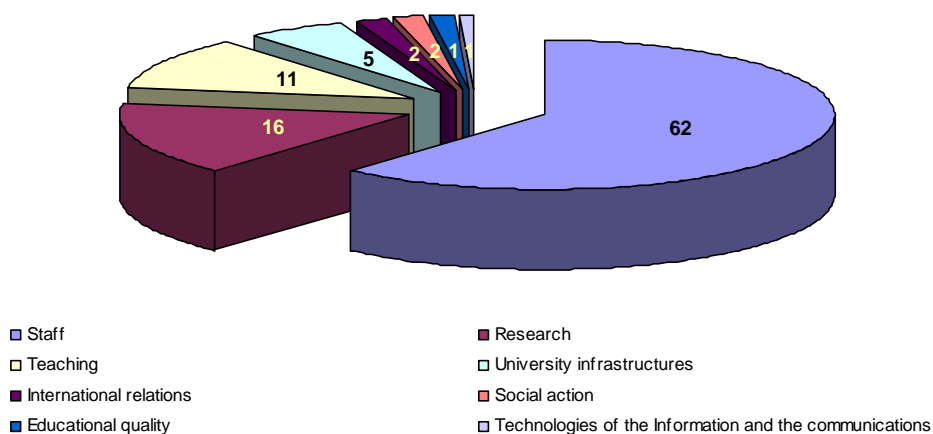


Figure 3.1. Distribution (percentage) of University budget.

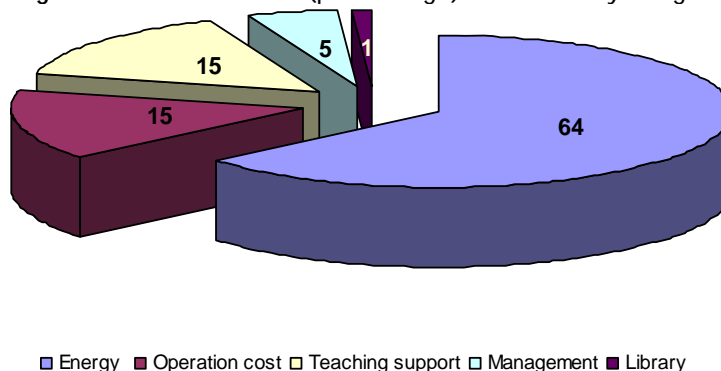


Figure 3.2. Distribution (percentage) of Faculty of Veterinary Sciences' budget

### 3.1.1. Information on extra income

What percentage of income from the following sources does the veterinary teaching Faculty have to give to other bodies (university, etc)?

- Clinical or diagnostic work
- Research grants
- Other (please explain)

A portion of the extra income, derived from the sources listed below, must be reinvested in the University, as follows:

- Clinical Services: The University Veterinary Clinical Hospital is run as a company whose profits are reinvested in the University.
- Diagnostic and External Services (Article 83 of the Spanish Universities Law): 15% of income must be reinvested in the University.
- Research grants / projects: 10 % of income from this source is reinvested in the University to cover indirect costs.
- Other income (Continuing Education, Diplomas, etc.): 15% of registration fees are reinvested in the University.

Please indicate whether students:

- Pay tuition/registration fees
- How much these are
- How they are decided
- How the funds are distributed

All students, regardless of any grants or bursaries they may be awarded to cover registration fees, are required to pay the fees established by the University. Fees for the academic year 2009/10 were 14.05 euros/credit. Students who have to retake a subject are required to pay a surcharge of between 22% and 76% of the initial fee, depending on whether it is their first, second, or third resit (average registration fee: 1000 euros/student/year). Registration and tuition fees for higher education



are established by the Regional Government of Extremadura, and must lie within the limits stipulated by the Spanish Ministry of Education.

### 3.1.1.1. Overview of income (revenue) and expenditure

Year	State (government)		Income generate by the Faculty	
	To University administered outside the Faculty	Direct to Faculty	Research	Tuition/Registration fees
2009	161944300	4994264	3519322,58	675852,60
2008	140874030	4733594	2946536,65	639389,36
2007	133682380	4562484	2861346,26	610301,64

Year	Pay (Salaries)			
	Teaching staff	Support staff	Research staff	VCH
2009	3773929	936597	1346800	242639,32
2008	3575319	931244	1144780	191583,62
2007	3491143	851525	1030302	149556,11

Year	Non Pay (Operating costs, equipment and maintenance)			
	Teaching support	Research support	Clinical support	Utilities and maintenance
2009	255267	1425900	230000	156000
2008	227031	1254210	260000	135000
2007	219816	1043720	160313	128000

Year	Total expenditure
2009	8367132,32
2008	7719167,62
2007	7074375,11

### 3.1.1.2. Costs of veterinary training

Year	Annual direct cost of training a student (euros)	Direct cost of training for a diploma (euros)
2009	7134	46371
2008	6762	43950
2007	6517	42360

### 3.2. COMMENTS

Teaching establishments never have enough finance. Please comment on any of the “Guidelines and requirements” that are particularly difficult to fulfil in the present financial situation. What is your number one priority for the use of any increased funding?

Comment on the degree of autonomy and flexibility available to the Faculty in financial matters.

Comment on the percentage of income from services that the Faculty is allowed to retain for its own use, and in particular on the extent to which loss of this income acts as a disincentive for the services concerned.

Please make any comments that you feel would help the experts concerning the Faculty’s finances.

The main difficulties concerning the present financial situation are:

#### Staff

The University’s current financial situation restricts the appointment of the new staff needed, particularly to fully cover teaching requirements.

At present, the new curriculum of Veterinary Degree to convergence with European Higher Education Space has been implanted and for this reason the University will have to look at the possibility of appointing additional staff.

#### Operating costs

The budget allocated to teaching needs to be increased. Aiming to providing quality practical classes to the students, quite often the teachers use money obtained for research purposes from various sources to cover the costs of their practical teaching.

#### Equipment

The Faculty has no financial autonomy in matters involving equipment; there is no budget provision for equipment specifically, and the Departments have very little autonomy. Investment in large and medium size equipment requires either specific funding from the University or external funding, in the form of a competitive application for a grant from the national or regional government for scientific infrastructure and/or research projects.

### Infrastructures (Buildings)

The level of autonomy of the Faculty to make investments in infrastructures (buildings, works and installations) is practically nonexistent. There are two reasons for this: economic and functional. On one hand, given the limited budget directly managed by the Faculty, it is not possible to allocate money to tasks of a certain magnitude. On the other hand, the University of Extremadura functioning rules force us to manage these needs through the Central Service of Works and Installations (*Unidad técnica de obras y mantenimiento*), which counts with a small number of staff, and must deal with the needs of all centres in the University of Extremadura.

### 3.3. SUGGESTIONS

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

Given that the University of Extremadura depends to a high percentage on public funds, and it is therefore subjected to the Contract-Programme signed with the Government of Extremadura, the possibilities of relevant change are limited. Nevertheless, our principal suggestions are:

1. A model budget which, within the University of Extremadura, prioritises to a greater extent the experimental character of a Veterinary Degree. In the current model, although it is taken into account, it is not sufficient to compensate for the limited incidental budget that, within the structural payment, has a reduced number of students of our Faculty.

2. A model budget which, within the University of Extremadura, provides for the features of Campus of our Faculty, the Teaching Farm and the Veterinary Clinical Hospital, which in our case is necessary to maintain various buildings with specific characteristics, as well as rectifying the problems derived from precariousness of some facilities.

## Chapter IV.

# CURRICULUM





## Chapter IV. CURRICULUM

### 4.1. FACTUAL INFORMATION

Indicate whether there is a defined national curriculum and (if applicable) how and by what body decisions are taken on this.

Describe the degree of freedom that the Faculty has to change the curriculum.

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

Outline how decisions are taken on the allocation of hours between the various subjects and on the balance between theoretical and practical teaching (Tables 4.1, 4.2 and 4.3).

Indicate the presence and disposition of an integrated curriculum. Describe the degree of integration present and amount of time devoted for EU- and non-EU-listed subjects (Table 4.4)

All Higher Education studies in Spain are regulated by the Organic Law on Universities and the Common General Guidelines on Curricula and official University Degrees valid throughout Spain, and by other laws applicable throughout the country. Following a decision by the Spanish Parliament, the centralised administration of education is gradually being devolved to the autonomous regional governments. However, the Ministry of Education and the Ministry of Science and Innovation retain the right to propose and implement Government policy with regard to universities, scientific research, technological development and innovation in all sectors, and are also responsible for coordinating the work of state-sponsored public research bodies. The autonomous regional governments, for example the Regional Government of Extremadura, are responsible for the specific policies required for funding public universities in the region, and also for minor legislation. Regional governments thus have a hand in the curriculum design.

At the present academic course 2009-2010 there are two simultaneous plans of studies leading to the Veterinary Degree, i.e., are being carried out in parallel. On one side, we have started to teach a new plan of studies at the present course, of which the first course is now given, and that will be implemented progressively all along the next four years.

On the other side, and according to the close to expire Plan of Studies of 1998, the courses from second to fifth continue to be carried out actually.

### 1. The 1998 Curriculum

The curriculum of 1998 leading to the award of the degree in Veterinary Medicine at the University of Extremadura was officially approved by the Spanish Parliament by virtue of a Resolution passed on 22<sup>nd</sup> October 1998 (published in BOE, 12<sup>th</sup> November 1998) and subsequent amendments published by Resolution of 4<sup>th</sup> December 2001 (BOE, 29<sup>th</sup> December 2001), Resolution of 8<sup>th</sup> June 2005 (BOE, 27<sup>th</sup> September 2005), Resolution of 22<sup>nd</sup> October 2007 (BOE, 8<sup>th</sup> November 2007) and Resolution of 12<sup>th</sup> March 2008 (BOE, 5<sup>th</sup> April 2008). This curriculum was designed in accordance with the provisions of Royal Decree 1497/1987, of 27<sup>th</sup> November (BOE, 14 December 1987), of the Ministry of Education, on “Common Guidelines on Curricula for official Degrees recognised throughout Spain”. Specifically, provisions are adapted to Royal Decree 1384/91, of 30<sup>th</sup> August, establishing the official University Degree in Veterinary Medicine and the specific general guidelines pertaining to the curricula to be completed in order to qualify for that degree, as laid down in Directive 78/1027/EEC, of 18<sup>th</sup> December 1978 (since replaced by Directive 2005/36/EU).

In accordance to the “Common General Guidelines on Curricula” (Royal Decree 1497/1987), the 1998 Curriculum is divided into two cycles. The first cycle (1st and 2nd year) covers the basic subjects and provides general training, whilst the second cycle (3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> years) is devoted to pre-specialisation and preparation for professional activity. The total study load, including practical sessions, ranges from 60 to 90 credits per academic year (1 credit equals 10 teaching hours). Course content, in both the first and second cycles, is divided into: core subjects (which must be included in all curricula leading to the same official degree), compulsory subjects (freely established by each university) and elective subjects (chosen by the student from those offered by the University, thus allowing the flexible configuration of the curriculum). The study load, in credits, devoted to core subjects must account for a minimum of 30% of the full study load in the first cycle, and a minimum of 25% in the second cycle. Credits for elective subjects must account for no less than 10% of the total study load. The General Guidelines on Veterinary Studies (Royal Decree 1384/1991, 30<sup>th</sup> August; BOE, 30<sup>th</sup> September 1991) state that the study load will

range from 20 to 30 hours per week, including practical sessions. A minimum of 300 credits must be obtained in order for the degree to be awarded.

## 2. The 2009 Curriculum

More recently, new regulations have been passed, such as Royal Decree 1393/2007, of 29<sup>th</sup> October (BOE, 30<sup>th</sup> October 2007), defining the new regulation for Official Spanish Higher Education Studies, and replacing Royal Decree 1497/1987, and Order ECI/333/2008 (13<sup>th</sup> February; BOE, 15<sup>th</sup> February 2008) defining the general requirements for official university degrees entitling the holder to work as a veterinarian. The new curriculum has been, therefore, reviewed to ensure its adaptation to the new regulatory framework.

Within this new regulatory framework, a new process has been launched for the creation, modification and standardisation of university degrees. At the University of Extremadura, the newly-established Curriculum Committee has been responsible for formulating a proposal to changes to the Curriculum. That proposal was submitted to the Faculty Board for approval, and thereafter, it was submitted to the National Agency for Quality Assessment and Accreditation that approved the proposed changes. The new Curriculum was submitted to the University Governing Council and to the relevant authorities of the Regional Government of Extremadura.

Subject syllabuses are structured in accordance to Directive 36/2005/EU, the Law 44/2003 (BOE 22<sup>nd</sup> November 2003) about planning of health professions. Moreover, it has been taken into account the proposal 2002/0061/COD of the European Parliament, relating to the recognition of the qualifications of the veterinary professionals (see Annex V.4), and the framework document of the European Veterinary Federation (FVE/00/011) about the professional structure.

In the preparation of this Plan of Studies, in addition to considering the guidelines directed by the BOE, we have taken into account the information contained in the “White Book of Veterinary” and the guidelines derived from EAEVE.



#### 4.1.1. Power of subjects and types of training

##### 4.1.1.1. Power of subject

“Core” subjects taken by every student.

“Electives” which each student must select from a list of permissible subjects.

Obligatory extramural fieldwork.

##### 1.- The 1998 Curriculum

The curriculum comprises a total study load of 398 credits (1 credit = 10 teaching hours, giving a total of 3980 hours). Core subjects (which all students must take) account for 83,8 % (333,5 credits = 3335 hours) of the total, electives (designed by each Faculty) account for 5,7 % (22,5 credits = 225 hours) and free elective subjects, chosen by the students from those offered by the university, account for 10,5 % (42 credits = 420 hours). The 333,5 credits for core subjects include obligatory extramural fieldwork. The latter is composed of 15 credits for external pre-professional internships (EPI).

##### 2.- The 2009 Curriculum

The curriculum comprises a total study load of 300 ECTS credits (European Credit Transfer System; 1 ECTS credit = 25 hours of learning of student, giving a total of 7500 hours). Core subjects (which all students must take) account for the 96 % (288 credits = 7200 hours) of the total and electives (designed by each Faculty) account for a 4 % (12 credits = 300 hours). The 288 credits for core subjects include obligatory extramural fieldwork. The latter is composed of 24 ECTS credits (600 hours) for obligatory extramural fieldwork.

##### 4.1.1.2. Types of training

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

The different types of training used are shown and explained in Tables 4.1 and 4.2, and their respective foot notes.

## 4.1.1.2.1. Undergraduate curriculum followed by all students.

## A. Curriculum hours

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

1998 Curriculum								
Hours of training								
Year	Theoretical training			Supervised practical training			Other	Total
	Lectures (A)	Seminars (B)	Self directed learning (C)	Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)	(G)	
First	374	11	-	209	81	-	-	675
Second	375	5	-	215	-	-	-	595
Third	420	-	-	210	10	75	-	715
Fourth	375	-	-	120	20	170	-	685
Fifth*	279	12	-	71	44	223	6	800
Total	1823 (52,53%)	28 (0,8%)	165 (4,76%)	825 (23,78%)	155 (4,47%)	468 (13,49%)	6 (0,17%)	3470 (100%)
	1851 (53,33)			1448 (41,74)				

\* The subject Food Hygiene, Inspection and Control (Fifth year) has been given as pilot subject as an adaptation to the new 2009 curriculum in the European Space if Higher Education. The structure of this subject is shown in the following table:

Subject	Theoretical training			Supervised practical training			Other	Total (presential work)
	Lectures (A)	Seminars (B)	Self directed learning (C)	Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)	(G)	
Food Hygiene, Inspection and Control	60	12	12	40	4	0	4	132

(B) Seminars: provide theoretical tuition together with more active student involvement, on specific matters relevant to the subject syllabus.

(C) Self-directed learning: includes individual tutorials and supervised group work (preparation of projects with the teacher).

(G) Other training hours include: examinations, outside field trips to farms, industries or other (non-clinical) plants, as well as unsupervised e-learning (teletuition and online learning), unsupervised self-learning, etc.

Table 4.1.1. Core subjects within the 1998 curriculum by year and taken by every student.

Year	Code	Subject (Abridge English translation)	Four-month period	Total hours	Theoretical hours	Practical hours
1	100309	Embryology and Anatomy	1 and 2	180	90	90
	100517	Animal and Plant Biology	1	70	40	30
	101974	Ethology and Animal Protection	2	45	30	15
	102116	Physics	1	55	30	25
	103850	Mathematics	1	60	30	30
	104770	Chemistry	1	55	40	15
	100061	Agronomy	2	45	30	15
	100563	Biochemistry	1 and 2	115	70	45
	101972	Ethnology and Zootechnic Ethology	2	50	35	15
	102197	Animal Physiology	1 and 2	135	85	50
2	100761	Cytology and Histology	1	95	60	35
	103060	Immunology	1	45	30	15
	104076	Microbiology	1	90	60	30
	101463	Agricultural economics	2	50	35	15
	101813	Epidemiology	2	35	25	10
	102396	Genetics	2	75	45	30
	104337	Parasitology	2	70	40	30
	3	102084	Pharmacology, Pharmacy and therapeutics	1 and 2	120	75
104182		Animal Nutrition	1 and 2	110	60	50
100955		Animal Breeding and Health	1	105	60	45
104346		General Pathology	1	60	45	15
100305		General Pathological Anatomy	1	60	45	15
100308		Special Pathological Anatomy	2	70	30	40
104616		Clinical Propaedeutics	2	60	30	30
104868		Radiology	2	45	30	15
105600		Toxicology	2	85	45	40

4	104350	Infectious Diseases	1 and 2	150	90	60
	103989	Anaesthesiology and Surgical Pathology	1 and 2	150	75	75
	104355	Medical and Nutritional Pathology	1 and 2	150	90	60
	105326	Food Technology	1 and 2	135	60	75
	101701	Parasitic Diseases	1	100	60	40
5	102576	Food Hygiene, Inspection and Control*	1 and 2	150	90	60
	104196	Obstetrics and Reproduction	1 and 2	150	90	60
	104592	Animal Production and Veterinary Hygiene	1 and 2	120	80	40
	100990	Professional Ethics, Legal Medicine and Veterinary Legislation	1	35	25	10
	103986	Preventive Medicine and Health Policy	1	60	30	30
	101889	Internships	1 and 2	150	0	150
<i>TOTAL</i>				3335	1885 (56,52%)	1450 (43,48%)

\* The subject Food Hygiene, Inspection and Control has been given as pilot subject as an adaptation to the new 2009 curriculum in the European Space of Higher Education. The structure of this subject is that shown in the next table:

Subject	Theoretical training		Supervised practical training				Other (G)	Total (presential work)
	Lectures (A)	Seminars (B)	Self directed learning (C)	Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)		
Food Hygiene, Inspection and Control	60	12	12	40	4	0	4	132

Table 4.1.2. Core subjects within the 2009 curriculum by year and taken by every student.

Year	Code	Subject (Abridge English translation)	Four-month period	Total hours (presential work)	Theoretical hours	Practical hours
1	501939	Biometry	1	60	37,5	22,5
	501942	Physics and Chemistry	1	60	48	12
	501938	Biology and Ethology	1	60	45	15
	501940	Biochemistry	1	60	45	15

501941	Embryology and Anatomy I	1	60	37,5	22,5
501943	Anatomy II	2	60	37,5	22,5
501944	Cytology and Histology	2	60	37,5	22,5
501946	Genetics	2	67,5	45	22,5
501945	Endocrinology and Metabolic Regulation	2	66	48	18
501947	Agronomy and Agricultural Economics	2	57,5	42,5	15

Table 4.2. Curriculum hours in EU-list subjects taken by each student. The hours allotted to the various subjects in the University of Extremadura veterinary curriculum have been adapted to the UE subject listing. Specifications are shown in the table foot notes.

Subject	Theoretical training		Supervised practical training				Other (G)	Total
	Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
<b>1.- BASIC SUBJECTS</b>								
a) Physics	30	0	0	25	0	0	0	55
b) Chemistry	30	0	0	25	0	0	0	55
c) Animal biology <sup>1</sup>	21	3	0	15	3	0	0	42
d) Plant biology <sup>2</sup>	13	3	0	12	0	0	0	28
e) Biomathematics	30	0	0	30	0	0	0	60
Total number of hours	124	16	0	97	3	0	0	240

1. Hours allotted to Animal Biology (A=21, B=3, D=18,) correspond to a breakdown of the subject Plant and Animal Biology, which has a total teaching load of 70 hours, divided into 40 hours of theoretical tuition and 30 hours of practical sessions.

2. Hours allotted to Plant Biology (A=13, B=3, D=12) correspond to a breakdown of the subject Plant and Animal Biology, which has a total teaching load of 70 hours, divided into 40 hours of theoretical tuition and 30 hours of practical sessions.

Subject	Theoretical training		Supervised practical training				Other	Total
	Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)	(G)		
<b>2.- BASIC SCIENCES</b>								
a) Anatomy (including histology and embryology) <sup>3</sup>	150	0	0	47	78	0	0	275
b) Physiology	85	0	0	50	0	0	0	135
c) Biochemistry, cellular and molecular biology	70	0	0	45	0	0	0	115
d) Genetics (including molecular genetics)	45	0	0	30	0	0	0	75
e) Pharmacology and pharmacy <sup>4</sup>	63	0	0	23	0	0	0	86
f) Toxicology (including environmental pollution)	45	0	0	40	0	0	0	85
g) Microbiology (including virology, bacteriology and mycology)	60	0	0	30	0	0	0	90
h) Immunology	25	5	0	15	0	0	0	45
<sup>i</sup> ) Epidemiology (including scientific and technical information and documentation methods)	25	0	0	10	0	0	0	35
j) Professional ethics <sup>5</sup>	5	0	0	2	0	0	0	7
Total number of hours	573	5	0	292	78	0	0	948

3. Includes hours allotted to Embryology and Anatomy (A=90, D=12, E=78, Total=180) and Cytology and Histology (A=60, D=35, Total=95).

4. Includes hours allotted to Pharmacology and Pharmacy (A=63, B=01 and D=23, Total=86) as part of the subject Pharmacology, Pharmacy and Therapeutics.

5. Only includes hours allotted to Professional Ethics, as part of the subject Professional Ethics, Legal Medicine and Veterinary Legislation (A= 5 and D=2, Total=7).

Subject	Theoretical training		Supervised practical training				Other (G)	Total
	Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
<b>3.- CLINICAL SCIENCES</b>								
a) Obstetrics <sup>6</sup>	42	0	0	0	0	15	0	57
b) Pathology (including pathological anatomy) <sup>7</sup>	120	0	0	30	10	30	0	190
c) Parasitology <sup>8</sup>	100	0	0	60	0	10	0	170
d) Clinical medicine <sup>9</sup>	90	0	0	15	0	42	0	147
e) Clinical lectures on various domestic animal, poultry and other animal species <sup>10</sup>	90	0	0	0	0	60	0	150
f) Surgery (including anaesthetics) <sup>11</sup>	75	0	0	0	20	55	0	150
g) Preventive Medicine <sup>12</sup>	22	0	0	10	0	0	2	34
h) Diagnostic imaging (including Radiology)	30	0	0	0	0	15	0	45
i) Field veterinary medicine (ambulatory clinics) <sup>13</sup>	0	0	0	0	0	21	0	21
j) Reproduction and reproductive disorders <sup>14</sup>	42	0	0	5	0	40	0	87
k) Veterinary state medicine and public health <sup>15</sup>	8	0	0	6	0	0	0	14
l) Veterinary legislation and forensic medicine <sup>16</sup>	20	0	0	8	0	0	0	28
m) Therapeutics <sup>17</sup>	12	0	0	22	0	0	0	34
n) Propaedeutics (including laboratory diagnostic methods)	30	0	0	0	0	30	0	60
Total number of hours	681	0	0	156	30	318	2	1187

6. Only includes hours allotted to Obstetrics as part of the subject Obstetrics and Reproduction, except for 3 hours included under Field Veterinary Medicine (ambulatory clinics).

7. Includes hours allotted to General Pathology (A=45 and D=15, Total=60), General Pathological Anatomy (A=45 and D=15, Total=60) and Special Pathological Anatomy (A=30, E=10 and F=30, Total=70).

8. Includes hours allotted to Parasitology (A=40 and D=30, Total=70) and Parasitic Diseases (A=60, D=30 and F=10, Total=100).

9. Includes hours allotted to Medical and Nutritional Pathology except for 3 hours included under ambulatory clinics.

10. Includes hours allotted to Infectious Diseases (A=90 and F=60, Total=150).

11. Includes hours allotted to Anaesthesiology and Surgical Pathology (A=75, E=20 and F=55, Total=150).

12. Only includes hours allotted to Preventive Medicine as part of the subject Preventive Medicine and Health Policy, except for 12 hours included under Field Veterinary Medicine (ambulatory clinics).

13. Includes hours allotted to ambulatory clinics under Preventive Medicine and Health Policy (F= 12), Obstetrics and Reproduction (F= 6), and Medical and Nutritional Pathology (F=3).

14. Only includes hours allotted to reproduction as part of the subject Obstetrics and Reproduction, except for 3 hours included under Field Veterinary Medicine (ambulatory clinics).

15. Only includes hours allotted to Health Policy as part of the subject Preventive Medicine and Health Policy.

16. Only includes hours allotted to Legal Medicine and Veterinary Legislation as part of the subject Professional Ethics, Legal Medicine and Veterinary Legislation.

17. Only includes hours allotted to Therapeutics (A=12, D=22) as part of the subject Pharmacology, Pharmacy and Therapeutics. However, treatment of the various diseases is studied as part of different subjects (Medical and Nutritional Pathology, Infectious and Parasitic Diseases, Obstetrics and Reproduction, etc.).

Subject	Theoretical training		Supervised practical training				Other (G)	Total
	Lectures (A)	Seminars (B)	Self directed learning (C)	Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)		
<b>4.- ANIMAL PRODUCTION</b>								
a) Animal Production <sup>19</sup>	140	3	0	58	30	0	0	231
b) Animal Nutrition	60	0	0	50	0	0	0	110
c) Agronomy	30	0	0	15	0	0	0	45
d) Rural economics	35	0	0	15	0	0	0	50
e) Animal husbandry <sup>20</sup>	13	2	0	6	0	0	0	21
f) Veterinary hygiene <sup>21</sup>	20	0	0	0	10	0	0	30
g) Animal Ethology and protection <sup>22</sup>	27	0	0	11	0	0	0	38
Total number of hours	325	5	0	155	40	0	0	525

19. Includes hours allotted to Animal Production as part of the subjects Animal Production and Veterinary Hygiene (A=60 and E=30, Total 90), Animal Breeding and Health (A=60 and D=45, Total=105) and Ethnology and Zootecnic Ethology (A=20, B=3 and D=13, Total=36).

20. Includes hours allotted to Animal husbandry as part of the subject Ethology and Animal Protection (A=8 and D=4, Total=12) and Ethnology and Zootecnic Ethology (A=5, B=2 and D=2, Total=9).

21. Only includes hours allotted to Veterinary Hygiene (A=20 and E=10, Total 30) as part of the subject Animal Production and Veterinary Hygiene.

22. Includes hours allotted to Ethology and Animal Protection as part of the subject Ethology, Animal Protection (A=22 and D=11, Total=33) and Ethnology and Zootecnic Ethology (A=5, Total=5).



Subject	Theoretical training		Supervised practical training				Other (G)	Total
	Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
<b>5.- FOOD HYGIENE/PUBLIC HEALTH</b>								
a) Inspection and control of animal foodstuffs of animal origin and the respective feedstuff production unit <sup>25</sup>	30	8	80	20	-	-	-	138
b) Food hygiene and technology <sup>26</sup>	55	2	55	55	-	-	-	167
c) Food science including legislation <sup>27</sup>	35	2	30	40	-	-	-	107
d) Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place) <sup>28</sup>	-	-	-	-	4	-	4	8
<b>Total number of hours</b>	<b>120</b>	<b>12</b>	<b>165</b>	<b>115</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>420</b>

25. Only includes hours allotted to Food Inspection and Control (A=30, B=8, C=80 and D=20, Total=138) as part of the subject Food Hygiene, Inspection and Control\*.

26. Includes hours allotted to Food Hygiene as part of the subject Food Hygiene, Inspection and Control\* (A=25, B=2, C=55 and D=20, Total=102), and hours allotted to Technology as part of the subject Food Technology (A= 30 and D=35, Total=65).

27. Includes hours allotted to Food Sciences as part of the subject Food Hygiene, Inspection and Control\* (A=5, B=2 and C=30, Total=37) and hours devoted to Food Sciences as part of the subject Food Technology (A=30 and D=40, Total=70).

28. Includes hours allotted to slaughterhouses and other food-processing establishments as part of the subject Food Hygiene, Inspection and Control\* (E=4 and G=4, Total=8).

\* The subject Food Hygiene, Inspection and Control has been given as pilot subject as an adaptation to the new 2009 curriculum in the European Space if Higher Education.

Subject	Theoretical training		Supervised practical training				Other (G)	Total
	Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
<b>6.- PROFESSIONAL KNOWLEDGE</b>								
a) Practice management <sup>29</sup>	0	0	0	0	0	150	0	150
b) Veterinary certification and report writing <sup>30</sup>	-	-	-	-	-	-	-	-
c) Career planning and opportunities <sup>31</sup>	-	-	-	-	-	-	-	-
Total number of hours	0	0	0	0	0	150	0	150

29. These hours are listed under Internships.

30. The contents of this subject are included in the following subjects: Professional Ethics, Legal Medicine and Veterinary Legislation, Preventive Medicine and Health Policy and Food Hygiene, Inspection and Control.

31. Although this subject is not included in the curriculum, it is developed by means of the PATT (tutorial action plan).

Hours devoted to self-learning and/or unsupervised group work are not included, since these are clearly very difficult to estimate at the 1998 curriculum. However, the new 2009 curriculum adapted to the European Space for Higher Education, that has started this 2009/2010 course, includes these types of training. A major component of this new curriculum is the adoption of a student-centred learning model and the formulation of proposals on modularity and transversal nature of university subjects. The introduction of the European Credits Transfer System has meant changes in teaching/learning systems; the student is required to adopt a new way of learning, becoming actively involved in his own training and developing skills adapted to future professional needs. The acquisition of these generic and specific skills should be stressed throughout the degree course, and requires coordination of the various subjects.

Table 4.3. Curriculum hours in EU-listed subjects offered and to be taken as electives. The hours allotted to the various subjects in the University of Extremadura veterinary curriculum have been adapted to the UE subject listing\*.

Subject	Theoretical training		Supervised practical training				Other (G)	Total	
	Lectures (A)	Seminars (B)	Self directed learning (C)	Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
<b>Code</b>	<b>FIRST CYCLE</b>								
	<b>Basic subjects</b>								
113746	Environmental chemistry	30	0	0	15	0	0	0	45
111446	Radioactive isotopes, diagnostic and therapeutic applications	30	0	0	15	0	0	0	45
108737	Computational statistics	15	0	0	30	0	0	0	45
113718	General advanced chemistry	60	0	0	30	0	0	0	90
	<b>Animal production</b>								
109005	Domestic animal morphology	28	2	0	3	7	0	5	45
114653	Technology of production of animal feed	30	0	0	15	0	0	0	45
	<b>Total number of hours</b>	<b>193</b>	<b>2</b>	<b>0</b>	<b>108</b>	<b>7</b>	<b>0</b>	<b>5</b>	<b>315</b>
	<b>SECOND CYCLE</b>								
	<b>Basic sciences</b>								
106274	Applied anatomy	30	0	0	0	15	0	0	45
109126	Avian physiology	27	3	0	7	8	0	0	45
112791	Special microbiology	45	0	0	15	0	0	0	60
117308	Bacterial pathogenicity	30	0	0	15	0	0	0	45
117309	Swine microbiology	30	0	0	15	0	0	0	45
	<b>Clinical sciences</b>								
117305	Oncological diagnostic	25	5	0	0	0	15	0	45
117233	Diagnostic and clinics of parasitic diseases	10	5	0	11	0	14	5	45
108552	Exotic infectious diseases	30	0	0	15	0	0	0	45
	<b>Animal production</b>								
105865	Feeding applied to animal production	30	0	0	15	0	0	0	45
109646	Technical and economical management of Iberian swine.	30	0	0	15	0	0	0	45
	<b>Food Hygiene/Public Health</b>								
111562	Dairy Science	26	4	0	15	0	0	0	45
117234	Alimentary toxicology	30	0	0	15	0	0	0	45

112787	Food microbiology	30	0	0	15	0	0	0	45
	Total number of hours	373	17	0	153	23	29	5	600
	TOTAL	566	19	0	261	30	29	10	915

\* In addition to the subjects shown in Table 4.3., offered for the academic year 2008/09, the curriculum includes other subjects offered in recent years (Physical and chemical food analysis, certification of alimentary establishments, Hunting management, Parasitological immunology applied to diagnostic and pathogeny, Production and management of the shepherding resources, Meat and fish technology, Environmental toxicology).

“The inherent nature of an elective is, that students make a distinction and select. However, the total number of hours to be taken by each student out of the various subject groups should be stated. Where a Faculty runs a “Tracking system” this should be indicated when completing Table 4.3. Separate tables should be provided for each track, e.g. Table 4.3a: Curriculum hours in EU-listed subjects to be taken in the “equine medicine track”.

The first cycle covers 38% of all core subjects (127 credits) and 20% of optional subjects (4.5 credits). The second cycle covers 80% of optional subjects (18 credits) and 62% of all cores subjects (206.5 credits). This includes 15 credits for practical internships, accounting for a study load of 150 hours (1 credit = 10 hours). To be able to take part in “Internship”, a core subject, students must have passed a minimum of 198,5 core credits (59.52% of the total core credits for the degree course). In many cases, students have taken the “Internship” subject during the University vacation in the 5th year, so that internship does not interfere with in-term theoretical tuition and practical training. The students have to complete their formation with 42 credits of free electives subjects that can be cursed in both cycles. These free electives subjects are listed in table 4.4.

In the case of optional subjects and free electives, the ratio of theoretical tuition to practical training depends on the type of subject involved; for example, the credits for the free elective “Extension of equine reproduction”, offered to last-year students, are mainly practical. Moreover, the students can develop several vacation trainings, in which all credits - recognised as free elective credits - are of practical type.

There is no defined “tracking system”, but electives are classified as first- or second-cycle subjects. Whilst there are no defined specialities, students often have a clear

orientation as to the various fields in which a veterinarian works. Students can choose freely from amongst the elective subjects on offer. In accordance with University rules, and with the provisions of the Rules on Academic Regimes, the Faculty must offer at least twice as many elective subjects, in terms of credits, as those which the student must match, nevertheless, actually, our faculty is offering almost the triple. In other words, for every elective credit that the student must complete, the Faculty is offering between 2 and 3 possibilities.

Free electives vary in nature, with a view to enabling the student to complete his studies in his/her chosen area of interest. The aim is to ensure flexible configuration of the curriculum. The student may complete his full complement of credits by choosing subjects from those made available each year by the University, on the advice of the various Faculties and centres. Electives may also include participation in activities organised by the University - cultural, sporting, union-related, voluntary, charitable or others - as long as they are recognised for this purpose by the University Governing Council. This recognition is granted to the following activities: university studies, pre-professional practical internships in companies or institutions, participation in transversal skills-related programmes and other activities organised by the University or outside bodies, in accordance with the Rules on Academic Regimes. The University has formulated its own rules in this respect.

[http://www.unex.es/unex/gobierno/direccion/viceplan/archivos/ficheros/documentos\\_oca/Norma\\_OCA.pdf](http://www.unex.es/unex/gobierno/direccion/viceplan/archivos/ficheros/documentos_oca/Norma_OCA.pdf)).

Table 4.4 lists the subjects offered by the Faculty of Veterinary and its Departments for the academic year 2008/2009.

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

Code	Subject	Theoretical training		Supervised practical training			Other (G)	Total	
		Lectures (A)	Seminars (B)	Self directed learning (C) Laboratory and desk based work (D)	Non-clinical animal work (E)	Clinical work (F)			
200860	Extension of equine reproduction	10	5	-	-	-	35	-	50
200888	Anatomical applicative bases of meat production in domestic and wild animals	30	-	-	-	11	-	4	45
200889	Anatomical bases of post-mortem sanitary inspection	30	-	-	-	15	-	-	45

\* In addition to the subjects listed in Table 4.4., considered Specific Free electives, others listed in Table 4.3 as optional subjects are also offered as Elective subjects Feeding applied to animal production, Technology of production of animal feed and Domestic animal morphology).

#### 4.1.2. Further information on the curriculum

Provide the visiting team with highlights and any unusual or innovative aspects of the teaching programme, e.g. tracking and orientation programmes.

From the Chancellor's Office downwards, all Faculty bodies are currently making a major effort to promote new teaching methods, providing greater scope for self-learning or learning based on problem-solving. For experimental classes, the maximum number of students is 15. Much is also being done to encourage the use of the University of Extremadura Virtual Campus (which is used as teaching and learning tool in the majority of the subjects for the Veterinary Medicine curriculum).

The University of Extremadura is working so hard in the training of the teachers and in the development of the quality of the teaching. With this aim, the University has created the Service of Training and Orientation in Teaching Methods, that every year offers a great program of activities in this field:

(<http://www.unex.es/unex/servicios/sofd/areas/fp>).

The steps that are being taken to enhance teaching quality are mainly: creations of Teacher Groups, annual Teaching Quality Improvement Projects, grants for Teaching Activities, and Academic Advisory Services.

The subject matter of each course is decided on by the staff responsible, but both courses content and timetabling are reviewed by the Faculty Board. The Teaching Committee is responsible for supervising all general academic matters, including teaching performance, reports on teaching quality, supervision of teacher quality; the Committee also submits proposals to the Faculty Board regarding recognition of free electives and other related matters. Although the Committee is not obliged to meet at stipulated intervals, it generally meets whenever there is a matter requiring its attention; meetings are usually held once per term.

Since 2009/10, the Veterinary Medicine degree is been adapted to the European Higher Education Area. In this year the 1<sup>st</sup> course has been included, and thereafter all the courses will be implanted gradually. The new teaching method is progressively being introduced for all subjects, placing special emphasis on the study load, the teaching load, and the need for both coordination and motivation when drawing up new teaching guidelines to reflect the newly-introduced teaching methods.

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

According to the University regulations, attendance to all academic activities is compulsory. However, attendance at theoretical lectures is not monitored or checked in most subjects. Some teachers voluntarily operate their own systems for checking attendance. Attendance at practical classes, by contrast, is also compulsory for almost all subjects, and is checked, usually by the student signing the register.

Finally, with a view to coordinating teaching, the Vice-Dean of Teaching Affairs is the responsible of this coordination.

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

- Are such rotations a structured part of the training given to all undergraduate students?
- The total number of days or weeks of such rotations;
- The year(s) in which they occur;
- The different areas covered and the time spent in each area;
- Whether attendance is full-time, for part of the day, and/or other (e.g. based on case needs);
- The activities and case responsibilities that students are expected to undertake.
- The group sizes in the clinical rotations.

The type of practical clinical training provided under the heading “Clinical Work”, in which student participation is strictly hands-on, may be classified as follows:

#### 4.1.2.1. Standard practical clinical training.

This includes working with live animals, with healthy animals for clinical purposes, with organs and various types of clinical material, with individual animals and herds/flocks for diagnostic purposes, and with organic systems and cadavers in order to learn methods of examination and surgical techniques (e.g. suturing, handling anaesthetic equipment, approaches to surgical techniques and laboratory work). The various kinds of standard practical training are shown in Table 4.5



Table 4.5. Standard practical training.

Subject	Year	Four month period	Content	N° of students/group	Hours per group
Propaedeutics	3rd	2	<ul style="list-style-type: none"> <li>• Taking the temperature of horses, dogs, small ruminants and pigs (1 hour).</li> <li>• Taking the pulse of horses, dogs and pigs (1 hour).</li> <li>• Heart sounds in horses, dogs, goats and pigs (1 hour).</li> <li>• Respiratory sounds in horses, dogs, goats and pigs (1 hour).</li> <li>• Electrocardiography in horses and dogs (1 hour).</li> </ul> <p>Small Animals:</p> <ul style="list-style-type: none"> <li>• Clinical record, history-taking, general examination (1.5 hours).</li> <li>• Examination of the digestive tract in small animals (1 hours).</li> <li>• Examination of the heart and lungs (2 hours).</li> <li>• Examination of the urinary tract (1.5 hours).</li> <li>• Neurological examination (2hours).</li> <li>• Eye examination (1 hours).</li> <li>• Blood sampling in various species: material, handling and techniques (2 hours).</li> <li>• Examination of skin and endocrine system (1 hour)</li> </ul> <p>Large Animals:</p> <ul style="list-style-type: none"> <li>• Pre-purchase examination of horses: Clinical history, identification, history taking (2 hours).</li> <li>• General examination of horses: assessment, external inspection by anatomical regions (1.5 hours).</li> <li>• Examination of the equine digestive tract and abdominal cavity (1.5 hours).</li> <li>• Examination of equine heart and lungs (1.5 hours).</li> <li>• Examination of equine locomotor apparatus (1.5 hours).</li> <li>• Examination of small ruminants and pigs (2.5 hours).</li> <li>• Examination of large ruminants: (2.5 hours).</li> </ul>	15	30
Radiology	3rd	2	<ul style="list-style-type: none"> <li>• Basic principles and techniques for producing high-quality radiographs, and regulations for radiation protection.</li> <li>• Operation of X-ray equipment and imageprocessing techniques. Principles of interpreting normal and pathologic radiographs in small animals, horses and exotic animals.</li> </ul>	15	15
Anaesthesiology and surgical pathology	4th	1 and 2	<p>Experimental surgery with cadavers and experimental models:</p> <ul style="list-style-type: none"> <li>• Surgery preparation (3 hours).</li> <li>• Equipment and monitoring (3 hours).</li> <li>• Anaesthesia (4 hours)</li> <li>• Suturing in models (3.5 hours)</li> <li>• Plastic surgery in cadavers (3.5 hours)</li> <li>• Ocular surgery (3 hours)</li> </ul>	15	20

Cont.

Subject	Year	Four month period	Content	N° of students/group	Hours per group
Obstetrics and reproduction	2 <sup>nd</sup> cycle	1	<p>Large Animals Unit. Equine reproduction: 10 hours.</p> <ul style="list-style-type: none"> <li>• Clinical evaluation of the male reproductive tract; sperm collection and assessment, dilution and frozen storage; artificial insemination (6 hours).</li> <li>• Diagnosis of gestation in mares by rectal palpation and ultrasonography. Foetal viability, identification of foetal structures, foetal stress signs and associated pathologies (4 hours).</li> </ul> <p>Small Animals Unit. Canine reproduction: 10 hours.</p> <ul style="list-style-type: none"> <li>• Clinical evaluation of the male reproductive tract; sperm collection and assessment, dilution and frozen storage; artificial insemination (vaginal and intrauterine) (6 hours).</li> <li>• Clinical evaluation of the female reproductive tract. Exfoliative vaginal cytology in the bitch. Diagnosis of gestation in dogs by ultrasonography. Foetal viability and number of embryos/foetuses, identification of foetal structures, foetal stress signs and associated pathologies (4 hours)</li> </ul> <p>Faculty Experimental Farm: 20 hours</p> <p>Reproduction in small ruminants (10 hours):</p> <ul style="list-style-type: none"> <li>• Control of heat, including induction and synchronisation, identification of signs of heat in goats and sheep, and of the ideal time for servicing or insemination</li> <li>• Diagnosis of gestation at 35 days by ultrasonography (5 hours).</li> </ul> <p>Reproduction in cattle (10 hours):</p> <ul style="list-style-type: none"> <li>• Clinical evaluation of the female reproductive tract (4 hours).</li> <li>• Diagnosis of gestation in cows by rectal palpation and ultrasonography (4 hours)</li> <li>• Identification of foetal structures (2 hours).</li> </ul>	15	14
Applied anatomy (elective)	2 <sup>nd</sup> cycle	1	<ul style="list-style-type: none"> <li>• Taking the temperature of horses, dogs, small ruminants and pigs.</li> <li>• Taking the pulse of horses, dogs and pigs</li> <li>• Heart sounds in horses, dogs, goats and pigs</li> <li>• Respiratory sounds in horses, dogs, goats and pigs.</li> <li>• Rectal examination in cows.</li> <li>• Basic principles and techniques for producing high-quality radiographs, and regulations for radiation protection.</li> <li>• Operation of X-ray equipment and image processing techniques. Principles of interpreting radiographs in horses and small animals.</li> </ul>	15	15
Extension of Equine reproduction (elective)	5th	2	<p>Clinical activity at the stallion station:</p> <ul style="list-style-type: none"> <li>• Collection, evaluation, preparation of semen doses, chilled and frozen, diagnosis and treatment of male infertility</li> </ul> <p>In mares:</p> <ul style="list-style-type: none"> <li>• Artificial insemination, evaluation of the mare genital tract, endometrial cytology, samples for bacteriology, biopsies, ultrasound examination, estrus induction, pregnancy diagnosis, female infertility, embryo transfer.</li> </ul>	5	35 (9am to 2pm every day of the week during the breeding season, February to June).

#### 4.1.2.2. Attendance at clinics.

Includes clinical work with individual patients at the Veterinary Clinical Hospital, where students are involved in real clinical cases.

Although strictly speaking the clinical training is not organised in rotations, student practical work is supervised at all times by the teaching staff responsible for the subject concerned, and takes place at the Veterinary Clinical Hospital, at the Faculty Experimental Farm and on other partner farms, with the help of veterinary residents, student interns or collaborator veterinarians.

At the Veterinary Clinical Hospital, hands-on clinical activity by the students includes dealing with small animals (dogs and cats), large animals (horses) and exotic species: students are actively involved in the examination, diagnosis and treatment of patients. As part of the subjects Anaesthesiology and Surgical Pathology, and in addition to the 20 hours of standard practical training described under Standard Practical Clinical Training, students are also involved in assistance clinical practical training at the Veterinary Clinical Hospital. These activities include clinical attention for small animals (dogs and cats), large animals (horses) and exotic species. Students are divided into groups of 15, receiving a fortnight's practical training; under the supervision of a lecturer in anaesthesiology and surgery. Student take part in the examination, diagnosis and surgical treatment of patients referred to the Veterinary Clinical Hospital (55 hours).

As part of the subject Medical and Nutritional Pathology, students take part in Medical Pathology consultations at the Veterinary Clinical Hospital with a total of 45 hours. The student helps the teacher to record the patient history and carry out all the procedures involved in basic physical examination and laboratory testing (e.g. diagnostic imaging, electrodiagnosis, laboratory diagnosis) of the animal in question. Once in possession of all the information on the patient, the student and the teacher discuss the case in order to arrive at a diagnosis, develop a prognosis and decide on the most suitable treatment. Similarly, in those clinical cases where hospitalisation is recommended, the student is involved in the daily monitoring of vital signs, additional in-patient diagnostic procedures, and the administration of hygiene/diet-based treatment as well as any medical treatment.

In Obstetrics and Reproduction, clinical assistance at the Veterinary Clinical Hospital is part of the Breeding Service, which comprises of two separate units:

1. Large Animal Unit: This unit is attended by the students of the subject Extension of Equine Reproduction. During these sessions, students complete their training in equine reproduction with clinical care including:

- Evaluation of reproductive status in mares and stallions (sick and healthy animals): rectal palpation and ultrasonography.
- Reproductive Pathology.

2. Small Animal Unit: During these sessions, students complete their training in canine reproduction with clinical care: (15 hours) including evaluation of the prostate and testicles (sick and healthy animals) by digital palpation and ultrasonography, evaluation of uterus and ovaries (sick and healthy animals) by ultrasonography, and attendance at parturition.

In summary, students take 115 hours of attendance at clinics activities. In these hours are not included those of Extension of Equine Reproduction.

Describe clinical exercises in which students are involved prior to the commencement of clinical rotations

Prior to the commencement of clinical practices at the Veterinary Clinical Hospital and at consultations, where they are involved in hands-on clinical activity, the students have taken part in practical sessions as part of the following subjects: Animal Physiology, Applied Anatomy, General Pathological Anatomy, Radiology, Pharmacology, Pharmacy and Therapeutics, General Pathology and Propaedeutics. In these subjects, students learn how to handle animals, how to perform a clinical examination, how to administer medication, how to identify and describe tissues and lesions associated with various diseases. Also, they acquire familiarity with radiographic techniques, and learn how to perform and interpret laboratory tests results and the results of other diagnostic techniques (electrocardiography, ultrasonography, etc). However, some students may not have completed all the

subjects before starting their clinical training at the Veterinary Clinical Hospital. As a result, there may be certain incompatible elements in the current curriculum. This situation has been corrected in the new 2009 curriculum.

Outline student involvement in the emergency and hospitalisation activities of the clinics.

Generally speaking, students enrolled in core subjects are not involved in any specific emergency and hospitalisation activities, although they take part in emergency care of hospitalised patients. Emergency and hospitalisation activities at the Veterinary Clinical Hospital are carried out by Veterinary Residents (VR). There are 11 VR, 2 for horses, 2 for large animals and diagnostic services and 7 for small animals. The work of the residents is coordinated by the teaching staff and the hospital management board.

Student interns of the subjects that have clinical activity work at the Veterinary Clinical Hospital on a voluntary basis, even at weekends and during vacations; their work is coordinated by the hospital itself. Around 90 student interns (3th, 4th and 5th year students) undertake emergency and hospitalisation activities, under the supervision of the veterinary residents and teaching staff. Since interns are chosen every year, almost all students wishing to receive practical clinical training at the Veterinary Clinical Hospital can participate in this activity.

Student intern work is influenced by the requirements of the specific subjects. Students that are interested in be intern can choose the subject where they will be ascribed, so they can reach an important degree of specialization.

#### 4.1.2.3. Mobile clinic.

This includes wholly in-the-field practical training on individual patients and herds/flocks.

Veterinary students take 21 hours of mobile clinic activities as part of the subjects Preventive Medicine and Health Policy, Obstetrics and Reproduction and Medical and Nutritional Pathology. Nevertheless these activities have also a strong relationship

with the following subjects: Infectious diseases, parasitic diseases, pathological anatomy and Anaesthesiology and Surgical Pathology.

Specify student participation in the activities of the mobile clinic and indicate whether or not the hours spent in the mobile (ambulatory) clinic are included in those in Table 4.2.

Clinical training sessions forming part of the core subjects Preventive Medicine and Health Policy, Obstetrics and Reproduction and Medical and Nutritional Pathology. These activities place on livestock farms of goats, sheep, pigs, cows and horses, and are aimed at giving the student first-hand experience of the daily working life of a veterinarian, and a clear idea of the practical implications of diagnosing and controlling diseases. Visits are in groups of 5 students, and last 5-6 hours per farm; students are accompanied by lecturers and clinical practitioner veterinarians that work in those farms. Student activities on farms include assessment of farm sanitary status, description of the main infectious and parasitic diseases, the study of actual outbreaks, the treatment applied for each disease, control measures (prevention of tuberculosis, brucellosis y leukosis in cattle, vaccination programmes, etc.) and sample collection (blood, milk, etc.). Students also, learn about the main aspects of a biosafety protocols (general biosafety measures, cleansing and disinfection protocols, control of rodents and other domestic and peridomestic animals, protocols controlling the use of veterinary medicines, vaccination and deparasitation programmes, and good hygienic practice). Students are asked to note any deficiencies observed with regard to all these matters. At the end of the practical session, students work together to establish the corrective measures required to improve biosafety.

Clinical training as part of the core subject Obstetrics and Reproduction takes place on partner farms. Students take part in a reproduction related activity. This practical session involves rectal palpation and ultrasonography to identify anatomical structures in the ruminants reproductive tract, in cyclic animals and at various stages of gestation, learning about the material and methods used in artificial insemination, castrations of pigs (male and female), reproductive control (sponges and implants of melatonin).

Students also play an active part in the next clinical activities: anaesthetic protocols, surgery, etc. During the academic year 2008-09, a total of 19 farms were visited, 493 case histories were processed, some individually - for a patient involved in a specific clinical procedure - and others collectively, when a whole herd was to undergo the same clinical procedure. A total of 42 cadavers, 19 samples of milk, 39 faecal samples, 10 samples of vaginal exudates and several fetuses were remitted to diagnostic services of the Veterinary Clinical Hospital.

#### 4.1.3. Obligatory extramural fieldwork

These are training periods that are an integral part of the curriculum, but which are taken outside the Faculty, for instance with practitioners, on farms, or in Food Hygiene/Public Health with commercial or government organisations.

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

As indicated earlier, students are required to take training periods outside the Faculty; these are included as a core subject of 150 hours in the curriculum, under the generic title “External Pre-Professional Internships” (Estancias), and include all the areas of knowledge covered by the syllabus. The aim of these training periods is to enable the student to gain first-hand knowledge of veterinary working practice, thus completing the basic theoretical tuition and practical training received at the Faculty.

In order to be eligible for practical internships, students must have passed 198,5 core credits (59.52% of the total core credits for the degree). “Internship” is a one-year subject; once enrolled, therefore, the students have to carry out internships in one period.

Students are required to obtain 15 credits (150 hours) through either one “internship” of 15 days each (75 hours/internship) or one 1-month internship (150 hours). The companies, institutions, services or official centres involved suggest the periods best fitted to their requirements, either a fortnight or one month. Since the aim of practical training is to give the student a firsthand idea of the various sectors in which a veterinarian might work, 15-day sessions are considered more useful, in that they provide the student with more varied practical training. The timetable for

internships is worked out in conjunction with the company/organisation concerned, but must add up to a total of at least 75 hours for each two week-period internship.

The development of this practical activity is covered by the terms established in the respective coordination agreements approved between the University of Extremadura and the Institutions. Additionally, the Faculty of Veterinary has its own internal regulations for these practical activities, in which all details of the practices are analysed.

Assignment of internships is based on the student's interest. In some circumstances (Zoological and Wild Fauna Parks and Zoological Centres), the academic record of the student is used to the assignment of the internship.

Prior to starting the internship in the allotted company/organisation, the student is required to complete an Activity Log (available from the Secretary's Office), which he/she will use throughout the internship (1 log per student). The student is also provided with guidelines regarding the drafting and the format of the final report.

Each student is assigned an Academic Tutor - one of the Faculty lecturers - whose job is to supervise and evaluate student internship reports and to assess the experience acquired, by means of a personal interview. The student is also assigned a Workplace Tutor, who acts as an honorary assistant to the Faculty; this tutor is a professional, employed by the company or organisation at which the internship takes place.

The Dean of the Faculty and the Internship Coordinator are also responsible for academic aspects of the internship.

Internships can take place at any company or organisation approved by the Faculty - under the supervision of the Internship Coordinator - for a given academic year. Proposals for internships submitted by the students themselves are not accepted.

Available internship venues include public and private centres all over Extremadura and, more rarely, elsewhere in Spain. They can be divided into nine main blocks (Table 4.5.1.):

1. Hospitals and clinics of Small Animals.



2. Clinic of Large Animals.
3. Equine clinic.
4. Practitioner Veterinarians.
5. Zoological and Wild Fauna Parks and Zoological Centres.
6. Food and Food Safety Companies.
7. Integral management of livestock.
8. Animal Production.
9. Research centres, official Institutions, Universities.

Table 4.5.1. Type and number of Establishments where students can take the “External Pre-Professional Internships” core subject.

Nature of work	Nº of establishments
Hospitals and clinics of Small Animals	100
Clinic of Large Animals	14
Equine clinic	10
Practitioner Veterinarians	29
Zoological and Wild Fauna Parks and Zoological Centres	14
Food and Food Safety Companies	19
Integral management of livestock	34
Animal Production	9
Research centres, official Institutions, Universities	7
<i>TOTAL</i>	236

To guarantee the smooth functioning of the internships, the Coordinator holds tutorials during the internship periods. Before the list of available internship placements is published, informative meetings are held.

Once internship placements have been allotted, the Academic Tutor assigned to the company/organisation in question - who is responsible for all contacts with the Workplace Tutor at each centre - provides information on all aspects likely to be of interest to the students (location, timetable, type of practical work involved, writing the report, etc.).

Evaluation of the Internship subject is based on the following criteria:

- The student is evaluated by the Workplace Tutor during the Internship, and is given a mark which appears in the Internship Log.
- The student hands in a report on the internship to the Academic Tutor, using for this purpose the sheets provided in the Internship Log, which also offers guidelines on how to write the report.

The Academic Tutor proposes an overall mark for the internship.

Full information on the Internship subject is available at the Faculty site (<http://veterinaria.unex.es/veterinaria/General/ReglamentoPracticasExternas250909.pdf>). All the information is also placed on notice boards at the Faculty Secretariat.

In addition to External Pre-Professional Internships, veterinary students perform obligatory extramural fieldwork within different subjects as shown in table 4.5.2.

Table 4.5.2. Obligatory extramural work that students must undertake as part of their course.

Nature of work	Period		Year in which work is carried out
	Hours	% of total study time	
Extramural Preprofessional Internships	150	4,3% (150/3470)	5th
Animal Production	40	1,15% (40/3470)	1 <sup>st</sup> and 5th
Food Hygiene	8	0,23% (8/3470)	5th
<i>TOTAL</i>	198	5,7% (198/3470)	

#### 4.1.4. Specific information on practical training in food hygiene/public health

Describe arrangements for teaching in a slaughterhouse and/or in premises for the production, processing, distribution/sale or consumption of food of animal origin. Indicate the distance to slaughterhouses where students undergo training, and the species covered. Outline the structure and the frequency of these visits (group size, number of trainers, duration, etc.).

Practical training of veterinary students in slaughterhouses and/or premises for the production of food of animal origin can be undertaken by three ways:

##### 4.1.5.1. Food Hygiene, Inspection, and Control subject

As a part of the compulsory training programme in Food Hygiene, Inspection, and Control, every student takes part in a series of supervised practical activities on both slaughterhouse and food processing premises.

##### Slaughterhouse training

Students receive 4 hours' training (from 7:30 to 11:30) on veterinary inspections at the slaughterhouse ACICAR slaughterhouse in Cáceres (3 km from Faculty). Groups from 6 to 12 students are guided by a teacher of the Faculty, and instructed by the Official Veterinarian employed by the regional government.

Practical training at the slaughterhouse includes the following activities related to obtaining fresh meat, mainly beef, pork, lamb, and less commonly goat:

- Checking food chain information, animal identification, and official paperwork.
- Ante-mortem inspection.
- Supervision of animal welfare from reception to stunning.
- Inspection of slaughterhouse hygiene; inspection of animal health status, monitoring of animals during slaughter.
- HACCP monitoring and verification for slaughtering.
- Post-mortem inspection of carcasses and offal.
- Handling of specified hazardous material and other animal by-products. Monitoring of removal, separation and, where appropriate, labelling of products in batches already inspected ante-mortem.
- Collection and referral of samples to the laboratory for the surveillance programme for transmissible spongiform encephalopathies (TSEs).

- Laboratory diagnosis and monitoring for trichinellosis in pigs.
- Monitoring cold chain for fresh meats.
- Recording activities in slaughterhouse logbook.
- Issuing reports, control sheets, and veterinary certificates.

#### Food Industries and official veterinary inspections

Students enrolled in Food Hygiene, Inspection, and Control receive 4 hours practical training in veterinary inspections and HACCP control at food industries.

The practical activities include visits to food processing premises guided by a teacher from the Faculty, followed by explanations and demonstrations from the Official Veterinarian. Every student has to attend at least one visit to a food processing industry among the following: dry-cured meat (Encinar de Cabezón), dairy (Quesería Ganadera), and fish (VIGOCA elaborados S.L.) products, or catering (San Jorge).

Visits in groups of 8-12 students take typically 4 hours. Students, accompanied by an official inspector, take part in relevant official inspection activities and verification of HACCP system, including:

- Inspection of sanitary conditions foods and food premises.
- Traceability and product labelling.
- Supervision of Good Hygienic Practices and prerequisites
- Control of monitoring at Critical Control Points and registers.
- Sample collection for official analysis
- Sample collection for verification of HACCP system
- Sample analysis at the Faculty laboratory
- Each student submits a report with a critical evaluation of the HACCP system. All reports are explained individually and discussed in groups of 7 students under the supervision of a teacher.

#### 4.1.5.2. Practical extramural training program

Students interested in an in-depth knowledge of the professional activity at slaughterhouses or food industries are invited to enrol the general agreement for training of Veterinary students signed between the University of Extremadura and the Health Department of the Regional Government of Extremadura. This agreement allows students (typically from 4 to 12) to take part in veterinary inspections and controls at different food premises, including slaughterhouses. Students receive individually 15-60 hours' training in Food Hygiene, Inspection and Control, in 5-15

sessions. Students are trained directly by the Health Officer responsible for veterinary inspection. Virtually all slaughterhouses and food premises in Extremadura are available for this agreement. Activities undertaken by the students includes all those assigned to Veterinary and Food Inspectors.

#### 4.1.5.3. Voluntary extramural program for HACCP training

There is an additional voluntary programme funded by the Health Service of Extremadura, specific for HACCP training of veterinary students in food establishments. The agreement in place for the first time in 2009 acknowledged ten students for various meat industries. The project for 2010 is being designed for up to twelve students and limited to slaughterhouses.

The aim is to provide an in-depth training on the verification of HACCP systems, including supervision of prerequisites, hazard analysis, critical control point identification, monitoring, corrective actions, record keeping and verification.

#### 4.1.5. Ratios

These must be delineated from Table 4.1, 4.2 and 4.3.

For explanations about ratios, see the section 'Main Indicators' of Annex I.

The indicator derived from the ratios established is the denominator when the numerator is set at 1.

#### 4.1.5.1. General indicators for types of training.

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

Figure	Total no teaching hours
A	Lectures
B	Seminars
C	Self directed learning
D	Laboratory and desk based work
E	Non-clinical animal work
F	Clinical work
G	Other

Please give the following values:

$$\begin{array}{l}
 \text{R6: } \frac{\text{Theoretical training (A+B+C)}}{\text{Supervised practical training (D+E+F)}} = \frac{1851}{1448} = \frac{1}{0.78} \\
 \\
 \text{R7: } \frac{\text{Clinical work (F)}}{\text{Laboratory and desk based work} \\ \text{+ non-clinical animal work (D+E)}} = \frac{468}{980} = \frac{1}{2.09} \\
 \\
 \text{R8: } \frac{\text{Self directed learning (C)}}{\text{Teaching load (A+B+C+D+E+F+G)}} = \frac{165}{3470} = \frac{1}{21.03}
 \end{array}$$

4.1.5.2. Special indicators of training in food/hygiene/public health.

$$\begin{array}{l}
 \text{R9: } \frac{\text{Total No. curriculum hours} \\ \text{Food Hygiene/Public Health}^2}{\text{Total No. hours vet. Curriculum}^1} = \frac{420}{3470} = \frac{1}{8.26} \\
 \\
 \text{R10: } \frac{\text{Total No. curriculum hours} \\ \text{Food Hygiene/Public Health}^2}{\text{Hours obligatory extramural} \\ \text{work in Veterinary inspection}^3} = \frac{420}{8} = \frac{1}{0.02}
 \end{array}$$

Origin numerators, denominators

- (1) Total as derived in Table 4.1
- (2) Total as derived in Table 4.1, Subject 5
- (3) Figures to be taken from Table 4.5

#### 4.2. COMMENTS

Please comment on:

- The way in which the veterinary curriculum prepares the graduate for the various parts of the veterinary profession, especially under the specific conditions prevailing in your country/region.
- The way the curriculum is structured and reviewed.
- The major developments in the curriculum, now and in the near future.
- The local conditions or circumstances that might influence the ratios in 4.1.5.

As shown in the data provided in Table 4.2, the current curriculum at the Faculty of Veterinary Science assigns 34.24% of total course content to basic subjects (6.92% to Basic Subjects + 27.32% to Basic Sciences), 38.53% to clinical sciences (including pre-professional training), 15.13% to Animal Production and 12.10% to Food Hygiene and Public Health. This syllabus provides the students with a basic general training which is both flexible and balanced, and produces graduates who are skilled in many areas. This versatility means that they can rapidly enter the labour market, since they are able to adapt to the various professional profiles which society currently demands (Veterinary Medicine, Animal Production and Animal Health, and Food Science and Technology). Nonetheless, the wide scope of the veterinary profession and the fact that, by law, the veterinary curriculum in Spain is a five-year Degree programme, gives rise to an undesirable restriction on curriculum development. Moreover, the rate at which knowledge is advancing in all these areas, and the growing need for specialisation, make continuing lifelong education essential for all students, even those holding Postgraduate Degrees.

Assuming that Veterinary Professionals must currently be prepared to deal with more areas than just the classical clinical field, our Syllabus is designed to combine the acquisition of basic knowledge in all fields of Veterinary Science (through core subjects) with more advanced training in one given field (through electives and optional subjects). Since we ensure that an adequate level in the essential veterinary disciplines is attained through core subjects, our students can design their own study programme (Minor) by choosing certain electives in order to develop a deeper understanding of their own specific areas of interest.

In recent years, many changes have occurred. At international level, food crises such as BSE, dioxins and others, as well as the emergence or re-emergence of animal pathogens (Classical Swine Fever, Foot and Mouth Disease, Blue tongue, etc.) and Zoonoses (West Nile Virus, etc.) suggest the need for greater emphasis on food safety for the whole food chain, public health issues and epidemiology. In addition, the small animal and exotic pet sector is becoming increasingly important and this must be reflected in the curriculum. Moreover, the level of awareness that the general public has about environmental issues and animal welfare suggest that concepts such as sustainable livestock production, waste management and welfare in animal production clearly need to be promoted.

Aside from traditional and emerging areas of responsibility, the Veterinary Profession must diversify into new fields such as the Handling and Management of Zoological centres, Wild and Hunting Fauna, Natural Reserves and Animal Parks, Business Management, Research, Diagnostic Laboratories, and others. These fields have not always been clearly included in the profile of the Veterinarian and will have to be reflected in the curriculum.

Evidently, all these objectives cannot be met without a substantial reorganisation of the curriculum. Future developments will focus on the implementation of the Bologna Declaration and the European Space for Higher Education. This process of European convergence is also likely to lead to major structural changes. The most significant improvements that can be made at this time are to reduce the number of in class (mainly theoretical) hours and increase self-learning, supervised work and practical/clinical activities.

The implementation of the Bologna Declaration also helps to alleviate a severe problem affecting student performance. With the current curriculum, students are supposed to be present 3470 hours in five years. With this figure in mind, if students dedicate a similar number of hours of work to studying for exams, presentations, etc., the total work load for a year could be too high. The intensity of this workload must be decreased. This can be done by promoting self-learning and autonomous work and also by reducing the number of theoretical lectures.



In this context, it is difficult to choose a satisfactory model which allows for the acquisition of both basic and specific professional knowledge that is structured and orientated towards facilitating the student's integration into the labour market. In February 2005, the Spanish Agency for Quality Assurance and Accreditation published the so-called "Libro Blanco" for the Veterinary Profession with the aim of providing studies and potential practical models for the future design of a degree adapted to the European Space for Higher Education. Eleven Spanish Universities (nine public and two private) have taken part in the drafting of this report, which takes into account the opinions of the Conference of Deans of the Veterinary Faculties in Spain and the General Council of Spanish Veterinary Colleges. This project brings together many key aspects regarding the design of an undergraduate course model: analyses of corresponding or related studies, studies of employment opportunities, professional profiles and competences, etc.

The essential recommendation of the project is to establish a five and-a-half-year University degree comprising 300 ECTS credits + 30 additional ECTS credits for practical fieldwork.

All these changes imply an adjustment in teaching methods, which should become learning-based rather than content-based and should establish objectives in accordance with professional competences. The teaching staff has adapted to the new updated standards which place greater stress on student workload; the aim is to enable students to acquire greater knowledge and at the same time ensure that they are better prepared for the professional market.

#### 4.3. SUGGESTIONS

If the denominators in 4.1.5 for your Faculty are not meeting the range as indicated in Annex I, Supplement A, what can be done to improve the ratios?

The reduction of theoretical hours on the curriculum is one of the consequences of adaptation to the European Space for Higher Education. In designing the new study plans, which has begun this year (2009-2010), it would be wise to reduce theoretical tuition, using traditional methods only when learning objectives are best achieved by those methods.



Chapter V.

**TEACHING: QUALITY AND  
EVALUATION**





## CHAPTER V. TEACHING: QUALITY AND EVALUATION

## 5.1. FACTUAL INFORMATION

## 5.1.1 The Teaching Programme Coordination

Describe the measures taken to ensure co-ordination in the teaching between different departments, sections, institutes and services.

Teaching co-ordination is a responsibility of the Quality Committee of the Veterinary Degree and of the Vice-Dean of Teaching Affairs. According to the University of Extremadura regulations, and appointed by the Faculty Council, the following staff members form part of the Quality Committee of the Veterinary Degree:

- A coordination teacher
- Seven teachers representing the permanent Academic Staff
- Representatives of Undergraduates students
- One representative of Support Staff

Every year, the Departments, which are the responsible for the development of teaching, must approve the Teaching Organisation Plan which includes, for every subject, the theoretical and practical credits and the teachers in charge. The teaching project is elaborated by the teacher/s in charge and includes following information: Objectives of Teaching, Syllabus, Methods of Teaching, Assessment of Learning and References. Moreover the teaching project of the timetables for lectures practical classes and exams for subsequent academic courses. This information is provided every year and approved by the Quality Committee during the year before. Therefore there is same degree of freedom to introduce changes in the way of teaching the subjects, but not the total of credits.

The Quality Committee of the Veterinary Degree is in charge of the coordination of the programmes for different subjects, in order to avoid undesirable repetitions and/or gaps in the five year curriculum. This committee also assesses teaching quality and supervises, modifies and analyses all aspects related to the teaching activity in the Faculty. The Committee meets at least once every trimester.

The Vice-Dean for Teaching Affairs is responsible for organising the teaching activity for each semester. Every year the syllabus and teaching programme of each subject

(theoretical and practical classes) are sent to the Vice-Dean by the teacher in charge for each subject, containing any modifications and/or suggestions with respect to the preceding year. He reviews the information received to ensure that it matches the curriculum requirements and the Centre's possibilities (classrooms and other facilities, transport, audiovisual resources). And during spring term, the Vice-Dean draws up a draft with the complete teaching programme and proceeds to hold meetings with all the coordinators of the subjects in the different years in order to discuss and approve the entire teaching plan for the next academic year (teaching calendar, timetable of theoretical and practical classes, exam schedule etc.).

This plan has to be ratified by the Faculty Board. The Vice-Dean for Teaching Affairs has to be informed about any proposed modification or change in the syllabus or programming of the various subjects.

Describe the philosophy of the pedagogical approach of the institution. In particular, describe the use of newer approaches, such as problem-based learning, interactive computer-assisted learning, etc.

The pedagogic policy of the Faculty of Veterinary and the University of Extremadura is to implement and impulse learning-oriented student-centred approaches, as well as to apply and develop some contents of the Bologna Declaration (stimulating self learning, problem solving, team working etc.). To achieve this, the types of academic activities of the Veterinary Faculty adapted to the European Space of Higher Education are as follows:

### 5.1.1.1. Theoretical Classes:

a. **Lectures:** The teacher-talks directly to the students. The sessions can be expositions, explanations and/or demonstrative in content (the presentations can be chosen by the teacher, or students' work, etc). The size-of the group depends on the type of subject (core o elective) and is a single group.

b. **Seminary-Workshop:** So called because in this activity knowledge is built up through interaction and activity. They are monographic sessions supervised with

shared participation (students, teachers, experts, etc.) The group size is variable from whole to smaller groups.

### 5.1.1.2. Practical Classes:

The practical classes are so called because-they show the students how to act. The practical classes are-classified as follows:

a. **Practices in the Classroom:** These practices include work with documents and the formulation of ideas without handling animals, organs, objects, products or documents, areas covered include problems in Physics, Chemistry, Genetic, etc. The size of the group corresponds to the whole class.

b. **Practices in computer rooms:** The size of the group is defined by the capacity of the room, usually 20 to 25 students per group.

c. **Laboratory Practices:** These practices include sessions where the students develop by themselves laboratory experiments (for example in the field of Bacteriology, biochemistry, genetic or technology) and sessions where the students, use microscopes to study samples (histological, histopathological, parasitological samples, etc). The size of the group varies between 12 and 15 students.

d. **Clinical Practices** are defined as clinical practical work carried out in the Veterinary Clinical Hospital, as well as clinical practical visits, developed mainly with ruminants, horses, pigs and poultry. These trainings provide the student with hand-on experience using living animals and they include work with healthy animals (propaedeutic), clinical cases (individual or collective patients) which includes a protocol or work plan, supervision by a teacher and offering services and necropsies. The size of the group varies ranging from two students in the visit to 20 students in necropsies.

e. **External Practices (extramural fieldwork):** These practices are carried-out in companies and entities outside the University, it includes extramural practices or visits to-companies, entities or organisms (e.g. slaughterhouses, food factories, farms -non-clinical practices- and expositions of livestock and food industries. The size of the group is variable, from individual in the case of company practices (i.e.



Obligatory/voluntary extramural fieldwork) up to large groups, according-to the nature of the activity.

5.1.1.3. Other face to face activities:

a. **Evaluation** includes official exam sittings (Ordinary, Extraordinary and Special), as well as all activities which intend to evaluate knowledge acquired by the students.

b. **Tutorials**. They are personalised help sessions in which help, guidance and support is offered to one or various students. Although the majority of these sessions are individual, they can take place in larger groups also.

5.1.1.4. Non face to face activities:

1. **Tutored Work**. Also called "study and group work". It consists of learning together through the preparation of seminaries, lectures, obtaining and analysing data etc., to present or hand in class as a work of the students in group. The group size is variable.

2. **Independent Activity**. This is defined as self study by the individual. This activity intends to develop the capacity for self-learning through the same methods as the previous category, but carried out individually, including also personal study (preparing for exams, library studies, complementary lectures, problem solving and exercises, etc.) which are fundamental for autonomous learning. It includes work in the virtual campus.

5.1.1.5. E-Learning

Important pedagogical advances have also been made with the implementation of new technologies applied to teaching, mainly with the use of Virtual Campus, based on Moodle platform. Moodle is designed to help educators create online courses with opportunities for interaction. This platform has been adapted and included in the University of Extremadura website (<http://campusvirtual.unex.es/portal/>), almost all subjects use the Virtual Campus as a work tool to help students with documents for study, and many also use it to interact with the students through constructing activities, which allow them to build up knowledge. At present, 50 of the 59 subjects in the Veterinary Medicine Degree are to be found in the Virtual Campus of the University of Extremadura.

Both in the theoretical classes and in the practices, power-point presentations and other materials in electronic format are used, and they are made available to the students in the Virtual Campus as a way to facilitate them to follow the course as well as their own self-learning.

In order to provide the students for full access to computer resources and Internet, the Faculty has 2 computer rooms (some 50 computers all together), and 3 small additional classes with 5-9 computers each. During the present course, the ratio of the number of computers available for the students in the Faculty is 1 computer/11 students; in addition, all the rooms and spaces in the Faculty are equipped with wireless connections to Internet and the Virtual Campus.

The students also benefit from the special economical prices which the Extremadura Government and the University of Extremadura offer in a programme seeking to provide students with affordable laptops.

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

In addition to the textbooks available in the library for many subjects, the students need a varied range of teaching material. This material varies depending on the subject, and can include summaries of theoretical programme content, practical manuals, problems, website links, etc. Student can access this material either in the form of original texts deposited at Photocopying Service or via the Virtual Classroom.

As stated before, there is a Virtual Campus that serves as an intranet, where the teachers place notes and other resources for the students. In addition, some subjects have their own web sites.

In the teaching plans of the subjects, there is a basic bibliography (the books that the teachers consider fundamental to the course study) as well as a recommendation of books, which sometimes due to its excessive length is not

consulted by students. This makes it necessary in occasions to compile the information in easy to read documents, prepared for students to study.

The teachers strongly warn the students not to use their course notes as a substitute for the specialised books and Journals. Despite these warnings, course notes continue to be the most common information source used by our students.

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

Briefly describe how these arrangements work out in practice in terms of the contact this provides for all students or for selected students.

At present, the University of Extremadura has signed Official Collaboration Agreements with outside bodies to specifically develop practices with undergraduate Veterinary students, in order to complete their extramural fieldwork. These agreements allow practical activities to be carried out in various professional sectors within the veterinary world, such as small animal veterinary clinics, professionals from the large animal clinic, research centres and food control, among others. No economic compensation is required for these agreements but a Diploma recognising the collaboration with the University of Extremadura in the training of Veterinary undergraduates is given for every academic course. It is important to mention that all our students are covered by the University Insurance plan during their extramural fieldwork activities.

These agreements allow, in one way, that all students carry out the practical activities corresponding to the core subject Obligatory extramural fieldwork ("Estancias"); and, on the other side, that the students carry out practical hours in external Centres as a voluntary activity, which can be recognised as free chosen credits, at the equivalence of 50 hours per 1 credit.

The establishments where students can take their extramural fieldwork activities classified for type of activity and location are listed in the following tables.

**Table 5.1.** Hospitals and clinics which the Faculty has arranged student pre-professional internships for clinic of Small Animals.

NAME	LOCATION (Autonomous Community of Spain / Country)
Clinica Veterinaria Dovet	Extremadura
Clínica Veterinaria Araceli	Extremadura
Mi Can	Extremadura
Clínica Veterinaria Don Can	Extremadura
Guadiavet Clínica Veterinaria	Extremadura
Clínica Veterinaria Emérita, S.L.	Extremadura
Emérita Servicios Veterinarios - ADS Augusta Emerita	Extremadura
Clínica Veterinaria Medea	Extremadura
Clínica Veterinaria Don Can	Extremadura
Clínica Veterinaria Vía De La Plata	Extremadura
Clínica Veterinaria Arca De Noé	Extremadura
Gavetex	Extremadura
Clínica Veterinaria Sta Eulalia	Extremadura
Gesclivet Sc	Extremadura
Hospital Veterinario San Martín	Extremadura
Clínica Veterinaria San Francisco De Asís	Extremadura
Provega S.L.	Extremadura
Clínica Veterinaria Aaben	Extremadura
Clínica Márquez	Extremadura
Clínica Veterinaria San Jorge	Extremadura
Policlino Veterinario Albeco	Extremadura
Centro Veterinario Cruz	Extremadura
Clínica Veterinaria Dr. Can	Extremadura
Verazoo	Extremadura
Clínica Veterinaria Selva	Extremadura
Clínica Veterinaria Gevet SI	Extremadura
Clínica Veterinaria Mediterráneo	Madrid
Centro Veterinario Ciudad de los Ángeles	Madrid
Centro Veterinario Algete	Madrid
Centro Veterinario "Los Madrazos"	Madrid
Clínica Veterinaria Los Sauces	Madrid
Clínica Veterinaria el Casar	Madrid

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Clínica Veterinaria Saconia	Madrid
Clínica Veterinaria Ezcurdia	Asturias
Centro Clínico Veterinario Ribadesella	Asturias
Clínica Veterinaria EL CAUDAL	Asturias
Clínica Veterinaria Ramos	Asturias
Centro Veterinario Tineo	Asturias
Centro Médico Veterinario Benicarló	Pais valenciano
Clínica Veterinaria Sant Antoni S.L.	Pais valenciano
Centro Policlínico Veterinario Raspeig S.L	Pais valenciano
Centro Veterinario JG MUTXAMEL	Pais valenciano
Clínica Veterinaria la Cala	Pais valenciano
Aitana Clínica Veterinaria S.L.	Pais valenciano
Hospital Veterinario Constitución	Pais valenciano
Clínica Veterinaria Sorben	Pais valenciano
Clínica Veterinaria San Antonio	Baleares
Clínica Veterinaria Tartessos	Andalucía
Clínica Veterinaria Colovet	Andalucía
Hospital Clínico Veterinario Bahía de Cádiz	Andalucía
Centro Clínico Veterinario Guadamar	Andalucía
Centro Veterinario Llandes	Andalucía
Centro Veterinario Chapin	Andalucía
Godovet Clínica Veterinaria	Andalucía
Centro Veterinario Isla Chica	Andalucía
Clínica Veterinaria Plaza de España	Andalucía
Sobreino e Illescas, S.L.	Andalucía
Clínica Veterinaria Albatros	Andalucía
Clínica Veterinaria Carlos III	Andalucía
Clínica Veterinaria Felipe II	Andalucía
C. V. Pino Montano	Andalucía
Clinicos Veterinarios Ávila Fornell S.L.	Andalucía
Clínica Veterinaria Miguel Cabello Guzmán	Andalucía
Centro Veterinario Sandoval	Castilla y León
Kinditin	Castilla y León
Clínica Veterinaria Cadenas	Castilla y León
Consultorio Veterinaria El Barco	Castilla y León
Sersa Veterinarios, S.L.	Castilla y León
Clínica Veterinaria Albéitar	Castilla y León

Clínica Veterinaria Los Alamos	Castilla y León
Clínica Veterinaria Bichos s.l	Castilla y León
Clínica Veterinaria La Flecha	Castilla y León
Vicente Calama Puerto	Castilla y León
Análisis Clínicos Veterinarios S.L.	Castilla y León
Diprovesa	Castilla y León
Centro Veterinario Insular	Canarias
Clínicas Veterinarias Pedreña y Astillero	Cantabria
Clínica Veterinaria Don Perro	Castilla La Mancha
Hospital Clínico Veterinario (HOSCLIVET)	Castilla La Mancha
Clínica Veterinaria Rogocan S.L.	Castilla La Mancha
Clínica Veterinaria Alfa	Castilla La Mancha
Clínica Colón	Castilla La Mancha
Clínica Veterinaria Tucán	Castilla La Mancha
Rogocan, S.L	Castilla La Mancha
Clínica Veterinaria Albeitar	Castilla La Mancha
Clínica Veterinariaf Veterinarios S.L.	Castilla La Mancha
Clínica Veterinaria Gomar	Castilla La Mancha
Consultorio Ignacio Angulo	Castilla La Mancha
Clínica Veterinaria Dr. Patino	Cataluña
Hospital Veterinari del Maresme	Cataluña
Hospital Veterinario Canis	Cataluña
Clínica Veterinaria Dr. Patino	Cataluña
Centro Veterinario VETA S.C.	Galicia
Clínica Veterinaria Karmelo	País vasco
Clínica Veterinaria Bris	País vasco
Clínica Veterinaria Avenida	País vasco
3 Animal	País vasco
Clínica Veterinaria Da Guia	Portugal
Joao Manuel Quirino Serejo Proenca	Portugal
José Da Conceição Fernandes Guerra	Portugal

**Table 5.2.** Establishments which the Faculty has arranged student pre-professional internships for clinic of Large animals.

NAME	LOCATION (Autonomous Community of Spain )
Pablo Castillo Usero	Castilla y León
Servet Ledesma S.A.	Castilla y León
Sani-Lidia, S.L.	Castilla La Mancha
Salvador Gallardo González	Castilla La Mancha
Agescan	Castilla La Mancha
Servicios Veterinarios Integrales Lares/ Clínica	Extremadura
Veterinaria Lares	Extremadura
Juan José González López	Extremadura
Centro Veterinario Salud Animal	Extremadura
Claudio Cintero Cuadrado	Extremadura
Adolfo Mestre Herrero-Fontana ADS Cáceres-Valdesalor	Extremadura
Jose Luís Cortés Sánchez	Extremadura
Ana María Mejías Valencia	Extremadura
Veterinarios Da Chaira	Galicia

**Table 5.3.** Establishments which the Faculty has arranged student pre-professional internships for practices in Equine clinic.

NAME	LOCATION (Autonomous Community of Spain )
Cedevet Veterinaria S.L. (Aznalcollar Hospital Equino)	Andalucía
Fundación Real de Escuela Andaluza del Arte Ecuestre	Andalucía
Alfonso Fernández de Peñaranda Serrano	Andalucía
Expasa Agricultura y Ganadería Andaluzas S.A.	Andalucía
Hospital Veterinario Equino Mallorca	Baleares
Juan Ignacio Moralejo Valle	Castilla y León
Manuel González Vicente	Castilla y León
Alberto Gil Adrados	Castilla La Mancha
Romeral de Cáceres	Extremadura
H.V. Sierra de Madrid	Madrid

Table 5.4. Veterinarians which the Faculty has arranged student pre-professional internships.

NAME	LOCATION (Autonomous Community of Spain )
José Carlos González Fuertes	Andalucía
Francisco Javier Vázquez González	Andalucía
Rosario Torres Sánchez	Andalucía
Juan Carlos González Fernández	Asturias
Luis Miguel Suárez Menéndez	Asturias
Arturo Ramos García	Baleares
Juan Antonio Portilla Diez	Cantabria
Bonifacio García Rodríguez	Castilla y León
Norberto González Alonso	Castilla y León
José Antonio Solís Rincón	Extremadura
José Chacón Hidalgo	Extremadura
Juan Ángel Domingo Mateos	Extremadura
Antonio Manuel Moya Carreño	Extremadura
Alfonso Gragera Jareño	Extremadura
Marco Jesús Moruno García	Extremadura
José León Gómez	Extremadura
Javier Rosado Conejero	Extremadura
Jonás Hernández Martín	Extremadura
Andrea Álvarez Sánchez	Extremadura
Rafael Suita Arroyo	Extremadura
Miguel Martínez Pereda-Soto	Extremadura
Francisco Javier Rodríguez Armijo	Extremadura
Cirilo Ruiz Gil	Extremadura
José Carlos Álvarez Rey	Extremadura
Ángel de Vicente Báez	Extremadura
Jerónimo Pareja-Obregón Ruano	Extremadura
Antonia Candelario Hernández	Extremadura
Manuel Hernández Barreto	Extremadura
Alejandro Vivas Talavera	Extremadura



**Table 5.5.** Zoological and Wild Fauna Parks and Zoological Centres which the Faculty has arranged student pre-professional internships, for training with exotic and wild animals.

NAME	LOCATION (Autonomous Community of Spain )
Rain Forest S.L.	Andalucía
COFIB-Centro de Recuperación de Fauna	Baleares
Parque de la Naturaleza Valwo	Castilla y León
Cabildo de Gran Canaria (Centro de Recuperación de Fauna Silvestre)	Canarias
Loro Parque Fundación	Canarias
Fundación Zoo Santillana	Cantabria
Cantur S.A	Cantabria
Fundación CRAM	Cataluña
Centro de Recuperación de Fauna y Educación Ambiental "Los Hornos"	Extremadura
Roza Cabera, S.L.	Extremadura
Centro de Recuperación de Fauna AMUS	Extremadura
Jerte Natura Parque Faunístico/ Gestion Parques Natura	Extremadura
"Parque los Pinos", Ayuntamiento de Plasencia	Extremadura
Zoos Ibéricos S.A.	Madrid

**Table 5.6.** Establishments which the Faculty has arranged student pre-professional internships in Food and Food Safety Companies.

NAME	LOCATION (Autonomous Community of Spain )
COVAP	Andalucía
Inpralsa S.A.	Extremadura
Nutrición Especial	Extremadura
Dehesa Serrana, S.A.	Extremadura
Corderex	Extremadura
Soc. Coop. Ltda. Chacinera Sierra del Santo	Extremadura
Monte Porrino S.C.L.	Extremadura
Marcos Salamanca, S.I.U.	Extremadura
Servicios Veterinarios LAJARA	Extremadura
Domingo Regodón Regodón	Extremadura
Olmos Seguridad Alimentaria	Extremadura
José Luis García Santana	Extremadura

La Jara ®	Extremadura
Calidad Alimentaria del Oeste, S.L.	Extremadura
SERIDA (Servicio Regional de Investigación y Desarrollo Agroalimentario)	Asturias
Cooperativa del Bajo Duero (COBADU)	Castilla y León
Alta Moraña Sociedad Cooperativa	Castilla y León
Sociedad Cooperativa Interprovincial de Ovino	Castilla y León
Cooperativa Ganadera de Lácteos y Derivados	Castilla y León

**Table 5.7.** Establishments which the Faculty has arranged student pre-professional internships in Integral management of livestock.

NAME	LOCATION (Autonomous Community of Spain )
ADS Ntra. Sra. GUADITOCA	Andalucía
Miguel Fernando Ruiz Martín	Andalucía
OVIPOR Sociedad Cooperativa Andaluza	Andalucía
Vicente Manuel González López	Andalucía
ADS Novés	Castilla La Mancha
ADS Vacuno de Leche de Talavera de la Reina	Castilla La Mancha
ADS San Francisco de Asís	Castilla La Mancha
ADS El Maguillo	Extremadura
ADS Galana	Extremadura
ADS San Agustín	Extremadura
Servetmon	Extremadura
ADS La Encina	Extremadura
ADSLlerena	Extremadura
ADS Miramontes	Extremadura
ADS Ahigal	Extremadura
ADS Zarza Capilla	Extremadura
ADS Garlitos	Extremadura
ADS Peñalsordo	Extremadura
ADS Cabeza del Buey I	Extremadura
ADS Cabeza del Buey II	Extremadura
ADS Nrta. Sra. De los Ángeles	Extremadura
ADS San Isidro	Extremadura
ADS Ginés de Villanueva del Fresno	Extremadura

ADS Don Benito	Extremadura
Luis Suero Naharro	Extremadura
ADS Jerez	Extremadura
ADS Rio Almonte	Extremadura
ADS El Encinar	Extremadura
Antonio Hernández Trancoso	Extremadura
Manuel Jesús García Izquierdo	Extremadura
Exaga Técnica S.A.L.	Extremadura
FOTEX (Fomento de Técnicas Extremeñas)	Extremadura
VESANEX	Extremadura
Avescal	Castilla y León

**Table 5.8.** Establishments which the Faculty has arranged student pre-professional internships in Animal Production.

NAME	LOCATION (Autonomous Community of Spain )
Cantalgallo S.A.	Castilla y León
Agropecuaria Turra S.A.	Castilla y León
S.A.T. Vallehermoso	Castilla La Mancha
Saprogal	Castilla La Mancha
La Lancha de Feria S.L.	Extremadura
Ibergenética Extremeña S.A.	Extremadura
ASAJA	Extremadura
TRAGSEGA	Extremadura
TRAGSA	Madrid

**Table 5.9.** Research centres, official Institutions, Universities with which the Faculty has arranged student pre-professional internships.

NAME	LOCATION (Autonomous Community of Spain / Country)
Centro de Cirugía de Mínima Invasión Jesús Usón (CCMIJU)	Extremadura
Hospital Clínico Veterinario. Universidad Complutense	Madrid
Consejería de Sanidad y Dependencia de la Junta de Extremadura Students gain experience in matters related to public health by accompanying the official veterinarians in charge of food inspection to markets, industries, warehouses, restaurants,	Extremadura

slaughterhouses, etc.

It includes 8 health areas in Cáceres and Badajoz Provinces.

Consejería Agricultura y Desarrollo Rural de la Junta de Extremadura

Extremadura

Activity: to acquire experience with the official state veterinarians in charge of identification and control of movements, diseases and hygiene in those animals living in the Extremadura autonomy

It includes the following centres

- 15 Zone veterinary offices OVZ
- 54 District Agricultural Offices (OCAs),
- CENSYRA (Regional animal breeding Centre)
- Laboratory Agro-food

Consejería de Medio Rural y pesca Asturias

Asturias

Ayuntamiento de Andratx

Baleares

Universita Degli Studi di Parma

Italia

Describe the general learning objectives underlying the veterinary curriculum and how this is ensured.

The Faculty of Veterinary of the University of Extremadura, together with all the Veterinary Faculties in Spain, participated in the so-called *Libro Blanco* on the Veterinary Degree; in this document the learning objectives of the curriculum were listed with the marks graded as competences. The degree of Veterinary studies has its own European Union directive. The directive describes the recognition of the degree and qualifications of Veterinary graduates, and outlines that during the total period of their training a veterinary student must have acquired:

a) Sufficient knowledge of the sciences upon which veterinary activities are based.

b) Sufficient knowledge of the structure and functions of healthy animals, their rearing, reproduction, general hygiene, as well as feeding, including technology applied in the production and conservation of the food they need.

c) Sufficient knowledge of the behaviour and protection of animals.

d) Sufficient knowledge of the causes, the nature, the development, the effects, the diagnosis and the treatment of animal diseases, both individually

and as a group and especially diseases transferable to humans.

e) Sufficient knowledge of preventive medicine.

f) Sufficient knowledge of hygiene and technology in obtaining, processing and putting into circulation animal food, or food derived from animals destined for human consumption.

g) Sufficient knowledge of legal and administrative conditions, rules and regulations, relative to the previously cited areas.

h) Sufficient clinical and practical experience carried out under adequate supervision.

### **Specific Competences of disciplinary and professional training**

For the general characteristics that a graduate in veterinary studies in Spain legally possesses, the majority of competences are those in common with all professional graduates, although, in some cases, there should be a greater depth for some of them. As stated in a previous chapter, this could be carried out in the non-core part of the structure of the course. In practical effect, we have divided the competences into those which refer mainly to the acquisition of knowledge, and those which require the development of handling ability and those which require the development of attitudes which in general can be defined as:

**Disciplinary Competences (to know):** are those which make up the knowledge and comprehension of the theoretical knowledge which sustain the various disciplines involved in the training of a veterinary.

**Professional Competences (to know how to do):** a collection of intellectual abilities and manual dexterity which a vet must possess, and must acquire during their training for them to be considered to be able to join the profession.

**Academic Competences (to know how to be):** are those which make up the collection of attitudes and values which a veterinary should have, and the student should incorporate into their daily life as a part of the professional group they are

going to join.

The development of this set of competences should be the main aim of any new structure of veterinary studies, in order to provide the work market with graduates who meet society's expectations.

According to the *Libro Blanco* on Veterinary studies and the National legislation about veterinary studies (ORDER ECI/333/2008, of 13<sup>TH</sup> February) graduates should reach the following specific competences:

**A. Disciplinary competences (to know):**

- A1. Generic knowledge of animals, their behaviour, and notions of their identification.
- A2. Structure and function of healthy animals.
- A3. Rearing, caring, handling and well being of animals.
- A4. Basics of chemical and molecular physics of the principal processes which take place in an animal's organism
- A5. Basic and applied principles of the immune response.
- A6. To know the basic fundamentals of different biological agents of veterinary interest.
- A7. Knowledge of the alterations in structure and function of the animal's body.
- A8. Knowledge and diagnosis of different animal diseases, both individual and collective, and of the preventive measures available, with special emphasis on zoonoses and notifiable diseases.
- A9. General basics of medical-surgical treatment.
- A10. Knowledge of the basics of the functioning and optimisation of the reproductive system of animals and its repercussions for the environment.
- A11. The principles of food science and technology. Quality control of produced food and Food security.
- A12. To know the organisational, economic and management aspects of all fields of the veterinary profession.
- A13. To know the rules and laws of the veterinary world and regulations about animals and the commercial use.
- A14. To know the rights and responsibilities of a Veterinary, making special reference to ethical principles.

**B. Professional Competences (to know how to do):**

- B1. Carry out the history and clinical exploration of animals.
- B2. Collect and send all types of samples with their corresponding report.
- B3. Carry out basic analytical techniques and interpret the clinical, biological and chemical results.
- B4. Diagnose the most common diseases by using different general techniques and instruments, including necropsy.
- B5. Identify, control and eradicate animal diseases, with special attention to zoonoses and diseases of obligatory declaration.
- B6. Attend to emergencies, and carry out veterinary first aid.
- B7. Carry out the most common medical-surgical treatments of animals
- B8. Apply basic care which guarantees the correct functioning of the reproductive cycle and solves obstetric problems.
- B9. Assess and carry out epidemiological studies and therapeutic and preventative programmes according to the norms of animal care, animal health and public health.
- B10. Evaluate and interpret the productive and health parameters of an animal collective, considering economic and welfare aspects.
- B11. Manage protocols and concrete technologies destined to modify and improve the different systems of animal production.
- B12. Carry out an inspection of the animal ante and post mortem and of food destined for human consumption.
- B13. Carry out sanitary control of the different types of businesses and restaurant and food establishments. Quality management systems: Implantation and supervision
- B14. Carry out risk analysis, including environmental and biosecurity, and its evaluation and management.
- B15. Apply food technology to the production of food for human consumption.
- B16. Technical and economic assessment and management of companies in the veterinary area in terms of sustainability.

**C. Academic Competences (to know how to be):**

- C1. Analyse, synthesise, resolve problems, and take decisions in the professional environment of a veterinary
- C2. Work in a team, unit or multidisciplinary, and show respect, evaluation and sensitivity towards the work of others.
- C3. Maintain ethical behaviour towards the profession and to society when exercising their

responsibilities.

C4. Relate information obtained during their professional work in a fluent way, spoken and written, to other colleagues, to the authorities and to society in general.

C5. Write and present professional reports, whilst maintaining the necessary confidentiality.

C6. Look for and process information related veterinary work.

C7. Know and apply scientific methods in professional practice including evidence based medicine.

C8. Know how to obtain professional assessment and help.

C9. Demonstrate a desire to know how to use basic computer tools.

C10. Have basic knowledge of a second language, especially in technical aspects related to Veterinary Sciences.

C11. Be conscious of the need to maintain up to date knowledge, skills and attitudes of professional competences through a process of continuous training

Moreover a graduate must acquire the following **transversal competences** (Libro Blanco on Veterinary studies and the Directives of the University of Extremadura):

T1. Knowledge the most relevant intellectual traditions for the scientific thought and the work as future professional.

T2. Knowledge of the social and professional context in which they will should to be unfolded and Capacity to plan and to evaluate strategies of action

T3. Knowledge of the professional reality. Capacity for criticism and self-criticism and permanent updating of knowledge

T4. Ability to seek and to manage the information. To know as to use the bibliographical searches and the bibliography of scientific interest.

T5. Improvement s of the student capacity for the synthesis, and the draft.

T6: Promotion of the habits of investigation, observation, reflection and self-assessment, for the purpose of learning of the own errors and to deepen in the certain knowledge.

T7. Capacity to generate new ideas.

T8. Planning and time management.

T9. Concern for quality

T10. Ability to use the Information and communication technologies (ICT)

T11. Promoting the equality of opportunities among different collective with special incident in the people with disability.

To be able to reach these learning objectives, each subject in the field must, in turn, describe



in the teaching project or guide that should be written each year and that should be approved by the Quality Committee of the Veterinary Degree, the learning objectives of the subject. In addition, should relate each one of these objectives to the general and specific competences of the Veterinary degree.

Each subject develops an evaluation system that ends with the verification that the learning objectives which were proposed have been attained. Therefore each subject must make sure that the objectives are reached and, to ensure this, an evaluation system has been devised in which evaluation criteria are defined and finally a classification system is developed. All this information must be included in the teaching projects or guides of the subjects.

At the time of writing this self-evaluation document the Faculty Veterinary had designed an Quality Guarantee System, which is being evaluated by the Spanish Agency for Quality Assurance and Accreditation, to which the system has to be incorporated to guarantee the acquisition of day one competences by the students.

### 5.1.2. The Teaching Environment

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

The University of Extremadura has developed a programme of Formation and Innovation in learning, organised by the Service for Guidance and Teaching Training (*Servicio de Orientación y Formación Docente*). The basic function of this Office is a pedagogical and professional service for the training of the teaching staff of the University of Extremadura. To meet its objectives, it programmes various courses yearly, which aim to satisfy the demands of the teaching staff and academic authorities, to prepare new teaching staff or to improve teaching skills of senior professors.

During the 2008/2009 term, eighty courses were organised on the Cáceres and Badajoz campuses. Attendance to the courses offered is voluntary and free of tuition fee, and they are divided into three main areas:

- Didactic, quality and Management of the studies in the European Space of Higher Education
- Information and communication technologies applied to Higher Education,
- Quantitative and qualitative techniques applied to the research and the university teaching.

The Faculty of Veterinary has a lecturer attendance to these courses of about 108 in the 2008-09 academic year. The University of Extremadura also offers general training courses for support staff.

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

The Reward for Excellence in teaching is based on systems of additional economic retribution. The teacher can receive two types of economic complements, one at autonomic level and other at national level. To receive these complements the teaching activity is evaluated by University of Extremadura following a procedure based on the DOCENTIA model, which was developed by the Spanish National Agency for Quality Assessment and Accreditation.

For these evaluations, the teacher must prepare a self-evaluation report, to show his/her merits in teaching. Additional reports are made by the Faculty Board and the Department Council. Moreover the opinion of students is taken into consideration through questionnaires of satisfaction. The questionnaires of satisfaction are carried out by the Vice-Chancellor of Quality Assurance and Continuing Education, in accordance to the approved models in the corresponding evaluation protocols, which includes the objective criteria of the application.

Additionally, every year the University of Extremadura rewards the eight teachers of the University of Extremadura with the higher score in the questionnaires of satisfaction of the students, for their excellence in teaching with an Excellence Mention (*Excelencia docente*), and an economic prize too.

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

### Projects on Innovative Learning

Every year, the University of Extremadura offers awards for Projects on Innovative Learning in a contest open to the entire teaching staff of the University. These projects may include the use of new technologies, as Virtual Campus, Problem Based Learning methodology and other actions or activities to adapt the teaching to European Space of Higher Education.

The projects developed by the Faculty staff and approved by University of Extremadura in the three last courses, include the activities reflected in the table 5.10 (the subjects involved in each activity are shown).

Table 5.10. Projects on innovative learning developed at the Faculty of Veterinary.

	2006/2007	2007/2008	2008/2009
Adaptation and improvement of teaching laboratory		New common laboratory (All subjects)	<ul style="list-style-type: none"> <li>• Computer room (all subjects)</li> <li>• Chemistry</li> <li>• Biochemistry</li> <li>• Genetics</li> <li>• Physiology</li> </ul>
Material for Teaching innovation: Provision of digital blackboards		All subjects	
Problem Based Learning	<ul style="list-style-type: none"> <li>•Computational Statistics</li> <li>•Mathematics</li> </ul>		<ul style="list-style-type: none"> <li>• Parasitic Diseases</li> <li>• Diagnosis and clinic of the parasitic diseases</li> <li>• Immunology</li> <li>• Biometry</li> </ul>
Teaching Coordination	All subjects		
Publication of teaching manuals			<ul style="list-style-type: none"> <li>• Parasitology</li> <li>• Parasitic Diseases</li> <li>• Diagnosis and clinic of the parasitic diseases</li> </ul>

Development of materials for tutorial and face to face teaching			<ul style="list-style-type: none"> <li>• Diagnosis and clinic of the parasitic disease</li> <li>• Parasitology</li> <li>• Parasitic Diseases</li> </ul>
Design of extramural fieldwork and its evaluation		All subjects	All subjects
Development of materials and applications for the Quality Guarantee System			All subjects
Design and introduction of the Plan for student's reception and tutorship	All subjects	All subjects	All subjects

### Mobility

The University of Extremadura participates in different national and international mobility programmes such as Erasmus; this program allows the teachers to perform teaching visits to 22 European Universities (almost two hundred destinations, of which 21 are veterinary establishments). The aim of these visit plans is to enhance the quality and reinforce the European dimension. The program also helps support staff movement between European Universities. The minimum time allowed for the visit is one week.

### Grants

Every year the Autonomous Government of Extremadura awards grants for the accomplishment of practices out of the Faculty, as for example visits to farms, livestock expositions, etc.

### Academic Advisor

The Academic Advisor is a lecturer responsible for a given number of students, to whom he gives assistance and advice throughout their time at the University. The activity regards to academic matters and the organization and structure of the Faculty of Veterinary and the University of Extremadura; the Advisor thus provides permanent, efficient monitoring geared to ensuring an optimised learning process. At the present, in the Faculty of Veterinary there are 34 Academic Advisers.

### 5.1.3 The Examination System

Describe the examination system of the establishment, particularly in relation to:

- Is there a central examination policy for the establishment as a whole? If 'yes', by whom is it decided?
- Are there special periods (without teaching) during the year for examinations?

With regard to the type of examinations, there is no central policy and each teacher can decide how he/she will examine his/her students.

Periods for examinations are determined by the Government Board of the University of Extremadura. Usually, three periods are allowed: (1) three weeks in January-February for subjects taught during the first semester, (2) three weeks in June-July for second semester and year-long subjects and (3) two weeks in September for re-examination of students who did not pass their examinations in February or June.

The examination calendar has to be adapted to these periods, approved each year by the Faculty Board, and published far in advance on the Faculty web page. During these examination periods neither lectures nor practical classes are held.

Moreover, there is a fourth period, regarded to as "extraordinary", during the month of December. It is directed only to students with a maximum of 27 credits or three subjects left to finish their studies. The students must further comply with a previous matriculation in the subjects or credits concerned.

Finally, the students have the right to two examination sittings per subject, in each academic year.

What form(s) of examination are used (written papers, multiple-choice questions, oral, practical, clinical examination, continuous assessment, etc.)?

Is use made of external examiners?

Various methods for evaluation are used in the different subjects depending on what is being evaluated. There are no common regulations, as each subject determines their own evaluation procedure and the criteria of evaluation. Among the procedures, we should highlight the written examination in the form of questions to

develop, short questions, test type examinations, as well as oral examinations, tutored work and presentations. Most subjects assess theoretical knowledge and practical skills separately. More details about the type of examination are shown in the table 5.11.

Table 5.11. Type of examination.

Evaluation of theory				
		Short and large question	Multiple choice question	Problem resolution
Written examination (94,6%)	36,8	x		
	14,0		x	
	22,8	x	x	
	10,5		x	x
	7,0	x		x
	3,5	x	x	x
Oral examination (5,4%)				
Evaluation of practices				
Percentage of subjects	Only attendance	Report of practice	Exam of practical activities	
33,0%	x			
35,0%		x		
26,3%			x	
5,6%		x	x	

The only external examiners are those practitioners carrying out tutorial work with students in the core subject *Obligatory extramural fieldwork "Estancias"*.

How many retakes of an examination are allowed?

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

Do students have to pass an examination before they can start other courses?

As determined by Spanish law, a student is allowed a maximum of six retakes. Students failing to pass a course after the sixth examination are not further allowed to continue their study in the University. Nevertheless, under special circumstances, a student may ask the Chancellor for permission to sit his/her seventh final retake. However, this total count only takes into account the number of times that the

student has attended the examination. Thus, if a student is not physically present on the day of the examination it does not enter into the total count.

In general there are also no restrictions between courses to enter or to be able to matriculate, only for students finishing their first year, if they have not passed one year-long subject or two semester subjects are dismissed. On the other hand, to be enrolled in the core subject *Obligatory extramural fieldwork* (“*Estancias*”) students must have passed 198,5 core credits.

#### 5.1.4 Evaluation of Teaching

Describe the method(s) to assess the quality of teaching used in the establishment. Indicate whether the evaluation is an establishment procedure, or one set up by individual departments, by students or by individuals.

Describe the role of students in the evaluation of teaching and teachers. Describe the follow-up given to the evaluation

At the University of Extremadura, the Vice-Chancellor for Quality Assurance and Continuing Education is responsible for the development of a program to evaluate teaching quality, approved by the Council of the University of Extremadura. The aim is to ensure the achievement of the quality goals stipulated by the Organic Law on Universities and the University Statutes, and with a view to enhancing the University's prestige, credibility and competitive position. For that purpose, the University of Extremadura has developed its own teaching quality Plan, whose major goal is to highlight the role of teaching as one of the fundamental basis of the University of Extremadura.

The University has recently implemented the DOCENTIA model for evaluating teaching quality. The model was developed by the Spanish National Agency for Quality Assessment and Accreditation.

There are four levels in the analysis of the teaching activity demanded for the European Space of Higher Education, and marked by the own university legislation and for the requirements established both the national (National Agency for Quality Assessment and Accreditation) and the international (European Association for Quality Assurance in Higher Education) agencies of evaluation:

A) Evaluation of the new teacher during the first three years of contract.

B) Obligatory Evaluation of the teacher. This evaluation is performed every five years by The Unit of Evaluation and Quality of the University of Extremadura.

C) Voluntary Evaluation of the teacher, for the assignment of the educational complements approved by the Autonomous Community (Decree 114/2007, of 22<sup>nd</sup> May and Order 1<sup>st</sup> August 2007, modified by the order of 8<sup>th</sup> November 2007). This evaluation can also be undertaken every five years.

D) Annual evaluation for reward for excellence in teaching.

Evaluation procedures require input from various agents involved in staff teaching evaluation, including:

- The teacher, who must prepare a self-evaluation report to show his/her merits in teaching.
- Students, who complete a questionnaires of satisfaction for each of their teachers.
- Academic officials (Evaluation Committees of Faculty and of Department), who are required to file a report on each of the teachers.
- The Vice-Chancellor for Quality Assurance and Continuing Education, who ensures that the procedures are carried out correctly, and who authorises and monitors each evaluation.
- The Unit of Evaluation and Quality responsible for quality and/or evaluation, which provides the institutional data required for evaluation of staff teaching quality

As mentioned above, the evaluation implies a system of satisfaction questionnaires for the students. This system has the aim to serve as a guide for teachers to know the perception their students have about their teaching activities, and thus to recognize the positive aspects and to identify the teaching aspects subject to improvement. All the students present in the class are surveyed to evaluate their teacher. The questionnaire of satisfaction has 20 items, 5 preliminary items that help to assure the profiles of the students and another 15 questions referred to the



teaching performance. The students have to award marks for each phrase from 1 (Very deficient), 2 (Deficient), 3 (Acceptable), 4 (Good) to 5 (Excellent).

The Preliminary items are:

P1. Order of priority demonstrated with regard to the qualifications, when the students ask for the access to the University.

P2. Assistance to class of the student.

P3. Number of matriculations of every student in the evaluated subject.

P4. Difficulty of the subject evaluated for the student.

P5. Formative interest of the subject evaluated for the student.

According to the information registered, the prevailing profile of the student who has answered the questionnaires belongs to a type of student who chooses the Degree in Veterinary as the first option, has been registered for a single time in the evaluated subject, counts with an attendance to classes higher than 80 %, shows enough or a lot of interest on the matter and considers it of enough difficulty, although only the 27% of the students complete the questionnaire.

The table 5.12 summarizes the information gathered in the evaluation of the Veterinary Faculty for the academic year 2007-2008, indicating the total number of answers to every question, as well as its percentages.

**Table 5.12.** Summary of the information gathered in the evaluation of the Veterinary Faculty for the academic year 2007-2008.

	Very deficient	Deficient	Acceptable	Good	Excellent	Average $\pm$ sd
r1. Presentation and organization of the program of the subject that the professor has planned for the course	2,75 %	8,6 %	30,81 %	41,06%	12,7 %	6,36 $\pm$ 2,32
r2. Anticipation and clarity of the criteria and instruments of evaluation	3,5 %	11,23 %	31,71	36,63	12,65	6,14 $\pm$ 2,46
r3. Preparation of the teaching activity	4,13	9,2	27,76	39,78	15,63	6,39 $\pm$ 2,52

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(theoretical, practical classes, seminars)						
r4. Update of the scientific knowledge	1,98	7,05	28,13	42,71	15,58	6,65±2,27
R5. Clarity in the explanation of the theoretical contents	6,8	12,68	23,96	33,63	18,38	6,16±2,88
r6. Rigor in the explanation of the theoretical contents	5,3	11,15	26,63	35,28	16,85	6,24±2,71
r7. Development of the practical activities (solution of problems, design of projects, study of cases, analysis of texts ...)	5,03	12,18	27,73	31,08	15,7	6,1±2,72
r8. Material and help provided by the professor in the practical activities	5,15	12,03	26,68	31,08	16,1	6,12±2,74
r9. Orientation of the personal work out of class (offering materials and help)	4,6	10,28	28,76	24,53	11,38	5,87±2,64
R10. Resolution of questions and help obtained from the professor in the tutorship	3,43	8,05	26,73	23,78	12,33	6,13±2,59
r11. Punctuality in the schedule of class	1,6	4,6	19,75	38,36	31,86	7,45±2,34
r12. Fulfilment of the schedule of tutorship	1,75	3,2	23,31	28,76	16,33	6,86±2,33
r13. Treat towards the student body (polite, respectful)	3,55	5,25	19,15	34,11	34,31	7,34±2,62
r14. Contribution of the professor to which the student body is interested for the subject	6,75	13,13	28,06	32,81	16,3	6±2,81
r15. Global valuation of the work realized by the professor	3	8,95	27,58	39,31	18,2	6,57±2,47
	Satisfaction of the student with the teaching performance (r1, r2, r3, r4, r5, r6, r7, r8, r9, r10, r14, r15)			Fulfilment of the teaching obligations (r11, r12, r13)		
Degree of Veterinary	6,29 ± 2,11			7,31 ± 2,04		
University of Extremadura	6,30 ± 2,14			7,24 ± 2,17		

With regard to the satisfaction of the students about the teaching performance, the Graduate in Veterinary locates within the average of the University of Extremadura, whereas the fulfilment of the teaching obligations overcomes the average of the University of Extremadura.

After the analysis of data, the Vice-Chancellor sends an individual report to each lecturer. This report is also available for the Dean and the Head of the Department. Results affecting the subjects, Departments, Faculty and University are published on the web.

All data about teaching evaluation is reviewed as a follow-up by participants on many levels (Vice-Chancellor for Quality Assurance and Continuing Education, Departments, Subjects, Professors) so as to improve the quality of teaching at the Faculty.

### 5.1.5 Student Welfare

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

The University has a Service for Risks Prevention, which performs risk assessments and provides solutions to avoid them. This service does not depend of the Faculty, but is a Centralised Service of the University of Extremadura.

Describe the facilities (not related to the teaching programme) which the establishment provides for students (accommodation, sports, recreation, canteen, restaurant, etc.).

The sports facilities of the University of Extremadura offer the entire University Community different kinds of possibilities to enjoying sports, competition, and free time leisure activities. These facilities are located in Cáceres and in Badajoz Campuses, and are available to the entire University Community.

In the campus of Cáceres there are two conditioned swimming-pools (an outdoor and other indoor), a multisport pavilion, a football-7 pitch, 4 tennis courts, 5 paddle courts and 2 front-tennis courts and an outdoor multisport track.

Additionally, the Service of Physical activity and Sports (*Servicio de actividad física y deporte*) of the University of Extremadura organizes some sport activities for the staff in general (teachers, support staff and students), like physical adapted activity, therapeutic gymnastics, school of back, postural control, judo and self-defence, aqua-aerobic, "pilates", school of tennis, paddle's school, courses of swimming, school of basketball, dances, trekking, bicycle tourism, hiking, etc.

On the other hand, the University of Extremadura has agreements with some private companies that offer discount in its services to the staff of the University. These companies include SPA Aquacheck, gyms (Fratres Gym), restaurants, etc.

The Vice-Chancellor for Culture and Sport of the University of Extremadura is responsible for the organization of numerous cultural activities about cinema, video, theatre, photography, concerts. These activities take place in different internal or external centres. A complete list is published on the web pages <http://www.unex.es/unex/gobierno/direccion/viceext>. Other facilities for recreation also depend of the Vice-Chancellor for Culture and Sport as Multimedia Language Lab.

The Halls of Residence provide accommodation for the University Community, and contribute to their social, cultural and scientific development. In addition to the Halls - "Colegio Mayor Universitario Francisco de Sande", the Residencias Universitarias "Muñoz Torrero", "Mario Roso de Luna", "San José" and "COCEMFE" (This last adapted for persons with disabilities) - the University also provides student with apartments at the Campus and a program to housings shared between major persons and student (more information can be found on the web page [http://www.unex.es/unex/gobierno/direccion/vicealumn/enlaces\\_interes/progvc](http://www.unex.es/unex/gobierno/direccion/vicealumn/enlaces_interes/progvc)).

The Campus of Cáceres has a large cafeteria (seating for 200) with restaurant service. The Faculty of Veterinary also has a cafeteria, and in the Classroom Pavilion and in Departments building there are also vending machines.

### Guidance

Students with financial difficulties may be granted fellowships from the Spanish Ministry of Education and from the Government of Extremadura Autonomous Community, which are directed to “general purposes and transport costs”, and are awarded depending on personal and family incomes and academic performance (more information can be found on the web page [http://www.unex.es/unex/servicios/servicio\\_becas](http://www.unex.es/unex/servicios/servicio_becas)).

The Unit of attention to the student of the University of Extremadura (<http://www.unex.es/unex/unidades/estudias/>) provides direct attention to all those students of the University of Extremadura community with disabilities, with psychosocial or psychopedagogical problems. This University Unit organises programs for sensitizing, as an attempt to make the University Community more aware and help in as a volunteer working with disabled people or people with problems related to social integration.

For students with learning difficulties, tutorials are perhaps the best way to offer them direct personalised help. The lecturer offers orientation and assessment for the students on all teaching aspects which may improve their teaching/learning process. The entire teaching staff has a specific timetable for tutorials which must be fulfilled (minimum six hours per week).

Apart from the Spanish general health insurance coverage, all the students have the health insurance coverage under the “Scholar Insurance”, which is included in their enrolment fees. This student insurance provides medical assistance in a wide range of circumstances described in the enrolment information, which can be obtained at different collaborating centres (hospitals, diagnostic centres, rehabilitation centres etc.).

The Office for Job Orientation of the University of Extremadura promotes the orientation of graduates on job finding, and assists the university students in finding their place as professionals in the labour market (more information on <http://www.unex.es/unex/oficinas/orientacionlaboral>). They provide information and orientation on the possibility of carrying out paid placements in private companies, provide a link between students or graduates and companies or official

bodies, prepare and actualize a job offers registry, offer orientation sessions on employment and job seeking, and facilitate Agreements on the Job Training.

Moreover the University of Extremadura has an Office for Gender Equality (<http://www.unex.es/unex/gobierno/direccion/vicedoc/estructura/igualdad>) that has as basic aim the consolidation of the concept of equal opportunities for men and women in the entire University community.

Finally, the UEX has agreements to offer special awards to the University Community in private Residence Halls, Hotels, insurance companies and shops.

## 5.2. COMMENTS

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

The quality of teaching in the Faculty of Veterinary can be considered satisfactory; it meets the regulatory standards set out by the University, and is consistent with the University's overall system. The Quality Committee of the Veterinary Degree makes a major contribution to the effective coordination of teaching. The Adaptation to the European Space of Higher Education is progressing gradually, and in a satisfactory manner, both in the University of Extremadura and in the Faculty of Veterinary, which is currently implementing its structural, economic and training related support.

In the Spanish educational system, external examiners are not a common figure for undergraduate studies, despite the fact that their contributions might be valuable since they could render a good perspective of which skills are needed for the day-to-day work of a veterinarian. However, under the existing regulations, these external examiners can only act as consultants, and in no case are they allowed to decide whether or not a given student can pass a course. We have introduced external examiners for the evaluation of the students enrolled in the core subject *Obligatory extramural fieldwork ("Estancias")*.

As stated above, students are implicated in the monitoring of courses since there are student representatives in all the Faculty Committees, and they have a large number

of representatives in the Faculty Board (23%). In addition, they also take part in the evaluation of the academic staff every year. Nevertheless, their participation should increase in order to get more feed-back to be included in changes. Moreover, by law, any curriculum changes must include student participation. However, because the student population changes annually, it is difficult for them to be dynamically involved.

### 5.3. SUGGESTIONS

A series of actions should be undertaken in order to improve the examination system:

- The accumulation of exams in three separate periods tires the students and leads to them to envision the exams as an end instead of a mean in their learning process. To avoid this and to obtain a more balanced assessment of the students' overall performance, the use of continuous evaluation activities should be increased, or to fit in all their academic activities within an academic year.
- The number of oral examinations, presentations and hands-on examination should be increased.
- It would be very worthwhile to introduce a system of final evaluation by external examiners, for example from professional associations, who could ensure that students displayed all the required basic knowledge and skills; this assessment would be a prerequisite for graduation and thus for entering the profession. However, the introduction of such a system is not feasible under current Spanish legislation.

The quality of teaching should be improved with several steps directed both at professors and at the teaching system:

- The process of adapting to the European Space of Higher Education implies a reduction in the number of hour face to face, by this is necessary to promote the active participation of students through autonomous work.
- The introduction of new teaching methods in a University with a very high number of students poses a real challenge in both human and material terms. Nevertheless, we would like to focus on the implementation of teaching methods which shift the

emphasis away from memorising and towards managing information, didactic teaching to small groups and problem-oriented learning. To achieve this goal is necessary to increase the number of academic and support staff, and to reduce the excessively large number of students. More funding will be necessary in order to solve these issues adequately.

- Finally, teaching quality could usefully be improved by encouraging teachers to attend the teacher training courses run by the University, in order to become familiar with the new methods required for adaptation to the European Space of Higher Education, and by a system of teacher's evaluation based on objective results and not only on the degree of student satisfaction.





## Chapter VI.

# FACILITIES AND EQUIPMENT





## CHAPTER VI. FACILITIES AND EQUIPMENT

## 6.1. FACTUAL INFORMATION

## 6.1.1. Premises in general

Please give a general description of the site(s) and buildings occupied by the establishment. Include a map if available.

The Faculty of Veterinary is located on the Campus of the University of Extremadura in Cáceres. It is situated on the eastern side of the city of Cáceres, 4.5 km away from the city centre. This zone is well connected with the city by public transport, and the vehicular access is easy, both from outside the city (the Faculty is nearby the Cáceres-Madrid highway), as well as from the city centre (Figure 6.1).



Figure 6.1. Location of the University of Extremadura Campus respecting to the city of Cáceres.

The Faculty area comprises 420,000 m<sup>2</sup>, of which 110,000 m<sup>2</sup> have been developed and a total extension of about 30,000 m<sup>2</sup> has been built on in order to accommodate the Faculty's structural units. The facilities are constituted by the following units: the Class Room and Administration building, three Department Pavilions, Farm Facilities, the Surgery Area, and the Veterinary Clinical Hospital. The plan of all the Faculty's facilities is shown in Figure 6.2, indicating the location of the buildings, which are described in detail below. All the facilities have Wi-Fi covering for computers, and the buildings have air conditioning.



Figure 6.2. Map of the Faculty of Veterinary facilities. 1: Administration and Class Room Building. 2: Department Pavilion I. 3: Department Pavilion II. 4: Department Pavilion III. 5: Surgery area. 6: Veterinary Clinical Hospital. 7: Teaching farm.

**Administration and Class Room Building.** The Administration and Classroom Building



Figure 6.3. Hall of the administration and classroom building.

(Figure 6.3) has a total area of 4,700 m<sup>2</sup>, which is divided into two stories: the ground floor (2,500 m<sup>2</sup>) and the first floor (2,200 m<sup>2</sup>). The administration area houses the various management offices (Dean’s office, Vice-Dean’s offices, Secretary’s office), administrative and financial affairs offices, meeting room, assembly hall, janitor’s office, and two halls.

This area is completed by the cafeteria.

The 363 m<sup>2</sup> assembly hall “Ignacio Navarrete” has an ample foyer and a conference hall with 325 seats which are distributed on various levels in the lecture theatre



(Figure 6.4). It is equipped with computerized projection systems, a full-size screen, and a professional sound system that includes wire-free microphones.



Figure 6.4. Assembly hall “Ignacio Navarrete”.

Six large classrooms are available in the Faculty for theoretical teaching and seminars. The classroom area extends over 3,500 m<sup>2</sup>. Four classrooms have a graded lecture theatre layout with the desks organized in tiers. The classrooms can hold between 110 and 270 people (Table 2). Every classroom is equipped with a computer, internet, digital projector with remote control, and full-size screen (Figure 6.5).



Figure 6.5. Classroom 2 (left) and classroom 5 (right) at the Administration Building.

Apart from the rooms destined to lectures and theoretical teaching, the Classroom Area also provides space for a computer room with 27 computers (Figure 6.6), 5 small computer rooms (with 5 to 9 computers each), and a library and study room (Figure 6.7). The Classroom Area has 4 restrooms for the students.

## FACILITIES AND EQUIPMENT



Figure 6.6. Computer room at the Administration and Class room Building.



Figure 6.7. Library and study room at the Administration and Class room Building.

Department Pavilions. The three Pavilions destined to the Departments and Teaching Units extend over 11,712 m<sup>2</sup>. They house the different teaching branches of the Faculty except Clinics matters, which are located in the Surgery area and Veterinary Clinical Hospital. The different services and units housed by these Pavilions are the following:

Pavilion I. With a total extension of 10,200 m<sup>2</sup> (Figure 6.8), it is divided into three floors: basement floor, (200 m<sup>2</sup>), ground floor (5,000 m<sup>2</sup>) and first floor (5,000 m<sup>2</sup>).



Figure 6.8. Department Pavilion I.

- Basement floor: Environmental Radiology and Chemical Waste Storage.
- Ground floor: Veterinary Anatomy and Embryology (405 m<sup>2</sup>), Parasitology and Parasitic Diseases (331 m<sup>2</sup>), Mathematics (107 m<sup>2</sup>), Microbiology (334 m<sup>2</sup>), Food Science and Technology, and Food Hygiene and Inspection (547 m<sup>2</sup>). This floor also provides space for a Computer Room with 20 computers (43.9 m<sup>2</sup>), and two common purpose teaching laboratories of 61 and 33 m<sup>2</sup> and a maintenance area of 154 m<sup>2</sup>.

- First floor: Animal Production (265 m<sup>2</sup>), Animal Nutrition (250 m<sup>2</sup>), Biology (281 m<sup>2</sup>), Genetic Science (327 m<sup>2</sup>), Physiology (308 m<sup>2</sup>), Toxicology (310 m<sup>2</sup>), Agronomy and Agrarian Economy (297 m<sup>2</sup>), Physical Science (317 m<sup>2</sup>), Pharmacology (163 m<sup>2</sup>), Immunology (130 m<sup>2</sup>). This floor also provides space for two rooms for group work with an area of 40 m<sup>2</sup> each.

Pavilion II (Figure 6.9). Comprising a total extension of 900 m<sup>2</sup>, in a floor and it houses Biochemistry and Molecular Biology Department (434 m<sup>2</sup>).

Pavilion III. With a total extension of 800 m<sup>2</sup>, it houses Chemistry (328 m<sup>2</sup>) and Cellular Biology (171 m<sup>2</sup>) Departments (Figure 6.10). This pavilion also provides space for two classrooms of 91 m<sup>2</sup> each



Figure 6.9. Department Pavilion II.



Figure 6.10. Department Pavilion III.

Surgery area. This area comprises a surface of 1,900 m<sup>2</sup>. It houses the offices of teachers of Surgery unit (103 m<sup>2</sup>), two clinical classrooms (Figure 6.11) for Propaedeutics (247 m<sup>2</sup>), six operating rooms (196 m<sup>2</sup>): three for clinical practice teaching (one for large animals and two for small animals -Figure 6.12), and three for experimental and practice surgery teaching, four exam and diagnosis rooms (96 m<sup>2</sup>), diagnostic imaging area (66 m<sup>2</sup>), and a subsidiary library for students (28 m<sup>2</sup>). The surgical room area has three properly equipped operating rooms destined for different uses, an area for animal preparation and a small hospitalization room dedicated to the awakening of surgical patients. In the same zone there is a small store, the laundry room and the sterilization room.





Figure 6.11. Propaedeutics classroom.



Figure 6.12. Operating room for small animals.

The Veterinary Clinical Hospital. The whole Veterinary Clinical Hospital (Figure 6.13) comprises a total surface of 6,900 m<sup>2</sup>, and it is divided into three floors of about 2,300 m<sup>2</sup> each: basement floor, ground floor and first floor.

- Basement floor: It includes an area dedicated to large animal consultation, boxes and hospitalization rooms for small and large animals, the Necropsy room, and a cooling room for carcasses, organs and cadavers coming from the hospital, dissection and surgery laboratories, necropsy room, etc, as well as those coming from research laboratories. The boxes are communicated with an exercise ground (Figure 6.14).
  - Ground floor: It houses the reception of Veterinary Clinical Hospital, clinical laboratories and exam and diagnosis rooms of Pathology, Reproduction, Parasitic Diseases, Infectious Diseases, and Pathological Anatomy Units.
  - First floor: It comprises microscopy rooms, offices, and subsidiary libraries of the teaching units of Pathology, Obstetrics, Reproduction Pathology and Artificial Insemination, Infectious Diseases, and Pathological Anatomy Units.
- Moreover, next of Veterinary Clinical Hospital building there is a lazaretto for isolation of animals suspected of suffering from infectious diseases.



Figure 6.13. Veterinary Clinical Hospital.



Figure 6.14. Exercise ground of Veterinary Clinical Hospital.

The Veterinary Clinical Hospital of the University of Extremadura has modern facilities and the necessary equipment to carry out the clinical teaching sessions. This equipment has been recently improved. Two major equipments, a Nuclear Magnetic Resonance Imaging system, and a flow cytometer with a sorting unity to sex sperm, makes the Veterinary Clinical Hospital as one of the best equipped in Spain for the teaching of equine clinical sciences. It also provides Veterinary Medical Services for veterinarians and the citizens of Extremadura. The Hospital is committed to excellence in the diagnosis, treatment and management of companion, equine, farm, exotic and wildlife species through specialty services in internal medicine, soft tissue surgery, traumatology and reproduction.

In addition to Nuclear Magnetic Resonance system, the area of diagnostic imaging has a room for ultrasound scan in which two Doppler colour ultrasound scanners are located, a radiograph visualising room with light boxes, and an exposition room with automatic equipment. There are two X-ray machines—one for large animals and another for small animals correctly separated and thus, allow for simultaneous use.

The Veterinary Clinical Hospital also provides service of hospitalization, pathology, haematology and clinical chemistry laboratories, diagnosis of infectious and parasitic diseases and ambulatory clinic. Moreover, reproduction unit has a stallion station during the breeding season.

Teaching and experimental Farm. The farm has a total area of about 300,000 m<sup>2</sup> (Figure 6.15). It comprises facilities for housing cows, sheeps, goats, birds and

rabbits, store building, a mixed feed plant (Figure 6.16), food processing pilot plants, and teaching laboratories of Food Technology.



Figure 6.15. Teaching farm facilities.



Figure 6.16. Mixed feed plant.

The Meat Products Pilot Plant (Figure 6.17) has a total surface area of 360 m<sup>2</sup>, including a cold room, a freezing room and two temperature and humidity controlled chambers for meat product ripening. It has four rooms with equipment for manufacturing a large diversity of meat products. It has hot and cold water points and easy access to work at, and also for draining and cleaning, industrial oven, mixer, slicer, kneading machine, four tables of work of stainless steel, and scales. In the first floor there are two laboratories of Food Science equipped for the basic compositional analysis of foods.



Figure 6.17. Meat Products Pilot Plant.

The Dairy Pilot Plant has a surface of about 250 m<sup>2</sup>, including a temperature and humidity controlled chamber for cheese ripening. It has equipment for manufacturing a diversity of dairy products. It has hot and cold water points and easy access to work at, and also for draining and cleaning, a thermal exchange, steel tables, cheese vats, cold brine, etc.

Development, communication, gardens and remaining areas: The various buildings of the Faculty are connected to each other by means of pedestrian walkways. The remaining developed area includes parking, pavement and sidewalks and some green areas, as well as a gardened area (Figure 6.18). All the Faculty buildings and communication passages and walkways have ramps and/or elevating devices for the physically disabled.



Figure 6.18. Parking, sidewalks and green areas.

The remaining area of the Faculty is occupied by the maintenance services (30 m<sup>2</sup>), the air conditioner system (100 m<sup>2</sup>), and the Communications Service and Telecommunications Area (25 m<sup>2</sup>). Thus, all of this represents the entire constructed area of the Faculty of Veterinary, a total of 30,000 m<sup>2</sup> devoted to teaching, research and the services it provides.

## 6.2. PREMISES USED FOR CLINICS AND HOSPITALISATION

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

Table 6.1. Premises available for animal hospitalisation and isolation.

	Species	Number of places
Regular hospitalisation	Cattle, horses, small ruminants or pigs.	Total = 18 boxes (Figure 6.19). Located on ground floor of the hospital.



	Dogs and cats	Total = 21 cages (Figure 6.20), and 4 boxes. Located on ground floor of the hospital.
Isolation	Small or large animals	Total = 3 boxes. Located on ground floor of the hospital.



Figure 6.19. Boxes for large animals.



Figure 6.20. Cages for dogs.

### 6.3. PREMISES FOR ANIMALS

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

The Teaching and experimental Farm comprises various buildings:

1. Pig shed: The pig shed is divided into pens for intensive rearing.
2. Cows facilities: it comprises a semiintensive rearing zone, exercise area, scale, a cattle crush, store and office.
3. Goat facilities: it has semiintensive rearing zone, grower premises, exercise area, milking room, store, offices, and wardrobes.
4. Sheep facilities: it contains grower premises, exercise area, a room with metabolic cages, laboratory, store, offices, and bathroom.
5. Rabbits or birds shed: it is provided with cages that can be used for rabbits or birds, a laboratory, office, store and bathroom.

In the Veterinary Clinical Hospital building and surrounding facilities several animals are kept for teaching purposes.

**Laboratory Animal Facility:** This Service belongs to the University of Extremadura, and it is located near to the Faculty of Veterinary. This facility fulfils the recommendations and requirements established by current Spanish and EU legislation on animal protection and welfare (RD 1201/2005). Thus, it is officially approved and registered by the corresponding Spanish authorities. This facility has specific pathogen free rooms, an operating room, and laboratories. The Faculty is the main user of the service. This service is prepared to housing rats, mice, rabbits, guinea pigs, fishes, dogs, mini-pigs, sheep, and goats. At this moment, there are some genetically modified organisms too. The access system is controlled by personal codified cards.

#### 6.4. PREMISES USED FOR THEORETICAL, PRACTICAL AND SUPERVISED TEACHING

Table 6.2. Premises for Lecturing.

Premise	Location	No. places	Equipment
Classroom 1	Admin. and Class Room Building.	270	Black board, PC, digital projector, and internet.
Classroom 2 (Figure 6.5)	Admin. and Class Room Building.	270	Black board, PC, digital projector, and internet.
Classroom 3	Admin. and Class Room Building.	224	Black board, PC, digital projector, and internet.
Classroom 4	Admin. and Class Room Building.	224	Black board, PC, digital projector, and internet.
Classroom 5 (Figure 6.5)	Admin. and Class Room Building.	110	Black board, PC, digital projector, and internet.
Classroom 6	Admin. and Class Room Building.	110	Black board, PC, digital projector, and internet.
Classroom 1 BQ	Department Pavilion 3 (Chemistry)	56	Black board, PC, digital projector, and internet.
Classroom 1 BQ	Department Pavilion 3 (Chemistry)	63	Black board, PC, digital projector, and internet.
Clinic classroom 1	Surgery Area	72	Black board, Service crate.
Clinic classroom 1	Surgery Area	146	Black board, Service crate.

Table 6.2. Premises for Computer-assisted Teaching.

Premise	Location	No. places	Equipment
Aula informática 1	Admin. and Class Room Building.	27	27 PC, Internet, digital projector.
Aula informática 2	Department Pavillion 1	20	20 PC, Internet, digital projector.

Table 6.3. Premises for Group work.

Premise	Location	No. places	Equipment
Small Computer room 1	Admin. and Class Room Building.	5	5 PC
Small Computer room 2	Admin. and Class Room Building.	5	5 PC
Small Computer room 3	Admin. and Class Room Building.	9	9 PC
Small Computer room 4	Admin. and Class Room Building.	5	5 PC
Seminary Room 1	Department Pavilion 1 (Anatomy)	10	*
Seminary Room 2	Department Pavilion 1 (Anatomy)	20	*
Seminary Room 3	Department Pavilion 1 (Parasitology)	15+15	*
Seminary Room 4	Department Pavilion 1 (Food Science)	15	*
Seminary Room 5	Department Pavilion 1 (Animal Production)	20	*
Seminary Room 6	Department Pavilion 1 (Animal Production)	20	*
Seminary Room 7	Department Pavilion 1 (Animal Production)	20	*
Seminary Room 8	Department Pavilion 1 (Animal Production)	20	*
Seminary Room 9	Department Pavilion 1 (Toxicology)	15	*
Seminary Room 10	Department Pavilion 2 (Biochemistry)	15	*
Seminary Room 11	Department Pavilion 3 (Chemistry)	10	*

\*The Faculty has several portable PCs and digital projectors to be used in these seminary rooms when are necessary.

Table 6.4. Premises for practical work.

Laboratory	Location	No. places	Area (m <sup>2</sup> )
Multiple purpose Lab	Department Pavilion 1	20	62
Dissection room (Figure 6.21)	Department Pavilion 1	30	138
Parasitology 1	Department Pavilion 1	15	34
Food Hygiene 1 (Figure 6.22)	Department Pavilion 1	16	33
Food Hygiene 2	Department Pavilion 1	16	39

## FACILITIES AND EQUIPMENT

Genetics 1	Department Pavilion 1	15	40
Genetics 2	Department Pavilion 1	15	40
Biology	Department Pavilion 1	15	45
Physiology	Department Pavilion 1	15	37
Toxicology	Department Pavilion 1	15	42
Physics	Department Pavilion 1	15	40
Agronomy 1	Department Pavilion 1	20	49
Agronomy 2	Department Pavilion 1	20	36
Immunology	Department Pavilion 1	15	40
Pharmacology	Department Pavilion 1	15	60
Microbiology 1	Department Pavilion 1	20	59
Animal Production	Department Pavilion 1	15	30
Animal Nutrition	Department Pavilion 1	15	40
Food Technology 1	Farm	15	60
Food Technology 2	Farm	15	60
Biochemistry	Department Pavilion 3	15	33
Histology 1	Veterinary Clinical Hospital	15	40
Histology 2	Veterinary Clinical Hospital	15	25
Necropsy room	Veterinary Clinical Hospital	15	100
Infectious Diseases 1	Veterinary Clinical Hospital	15	30
Infectious Diseases 2	Veterinary Clinical Hospital	10	40
Obstetrics	Veterinary Clinical Hospital	15	30
Medical Pathology 1	Veterinary Clinical Hospital	15	30
Medical Pathology 2	Veterinary Clinical Hospital	15	30
Operating room for large animals	Surgical area	15	92
Operating room 2	Surgical area	15	37
Operating room 3	Surgical area	15	37
Operating room 4	Surgical area	15	10
Operating room 5	Surgical area	15	10
Operating room 6	Surgical area	15	10





Figure 6.21. Dissection room.



Figure 6.22. Food Hygiene teaching laboratory

### Health and Safety Measures in Place

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

The Service for Prevention of Risks at Work of the University of Extremadura identifies possible risks, makes regular inspections of buildings and activities, analyses the circumstances of possible accidents and proposes preventive measures. This Service manages the facilities for protection, evacuation and indications against fires. It makes self-protection plans, evacuation plans and fire drills among others.

The main corridors are all equipped with fire alarm, extinguishers and emergency doors. Moreover, there are several emergency showers close to the laboratory doors.

The secondary corridors are equipped with fire extinguishers next to laboratory doors, biological and chemical waste and sharps collectors, which are periodically revised and replaced, as well as disposable paper devices. In the Microbiology and Infectious Diseases laboratories level 2 bio-safety measures are applied and when needed, work is done in a flow hood. Inside the laboratories, eyewash emergency units are also available. When needed, gloves, protection glasses and masks are provided for the students. Before practical work within the laboratories, students are

always given basic recommendations and guidelines to carry out their work under good laboratorial practice protocols, in order to ensure their safety. Use of working clothes is mandatory in the laboratories, dissection room, farms, etc. Inside the necropsy room, standard measures of bio-safety are compulsory: the working clothes that are available for the students in the necropsy room are washed in the Veterinary Clinical Hospital. Boots must be cleaned before leaving the necropsy room.

Safety is a priority in all the practical classes carried out in the Veterinary Clinical Hospital. When managing small or large animals, students always handle them under the supervision of a teacher, and those animals which can be problematic are usually directly handled by the teacher. If necessary, sedation protocols and/or other restraint procedures are used.

The students are instructed how to manage dangerous substances in the Veterinary Clinical Hospital. Concerning the use of medicines, these are always prepared by the teacher following the general recommendations of use and management.

The X-ray room and the scanner room are equipped with the necessary protection facilities and all the students are instructed about the risks that the exposure to this type of radiation implies. The teachers watch carefully to make sure that the safety measures are correctly followed.

In the case of an accident on the Faculty premises, the University of Extremadura medical service can intervene. Injured people can be evacuated to the nearest hospital (located about 3 km away).

### 6.5. DIAGNOSTIC LABORATORIES AND CLINICAL SUPPORT SERVICES

#### 6.5.1. Diagnostic laboratories

Briefly describe the facilities available for clinical pathology, diagnostic pathology.

Innovation in Food Products of Animal Origin Service. It deals with everything related to Hygiene and Food Security and Quality. The work done is divided into two differentiated parts. On one hand it offers services in analysis to outside bodies of the university, Research and Development services, as well as specialised and technical advice for companies and institutions. On the other side, it serves as a

research centre for the personnel that carry out projects, doctoral theses, etc. The service includes the following units:

- **Antioxidants Laboratory:** it works in the study of natural antioxidants.
- **Instrumental Analysis Laboratory:** Food lipid, protein and volatile analysis.
- **Sensory Laboratory:** Sensorial evaluation of foods.
- **Experimental kitchen:** It is oriented to the development and optimization of methods and processes of cooking for restaurants, the ready for eat food establishments and caterings. This service offers to the food companies the most avant-gardes techniques for the culinary preparation and the optimization of the most traditional processes.
- **Food Safety Laboratory:** It offers the challenge test for pathogens, detection and control of food borne pathogens, toxins, and food spoiling microorganisms, evaluation of starter cultures, and advising about Hazard Analysis and Critical Control Points.

**Genetic Diagnostic Service:** This service affords support in the fields of parentage testing in domestic animals, analysis of disease-associated DNA polymorphism in the genes of domestic animals, analysis of disease associated to chromosomal abnormalities, evaluation of genetic resources autochthones or on the verge of extinction, advice for the management and conservation of species, and analysis of information in evolutionary genetics.

**Parasitic Diseases Diagnostic Service:** The service is integrated in the Veterinary Clinical Hospital and it is open to health workers (practitioners and veterinarians) and animal owners. It offers a personalized attention in the Parasitological consultation by the accomplishment of anamnesis, exam, diagnosis, treatment, as well as control and prevention of parasitic diseases. This service also provides the laboratorial analysis and diagnostic of organic samples (organs, tissues, faeces, blood, skin, urine and organic secretions) that coming from the consultation or that are sent by veterinarians or practitioners.

**Pathological Anatomy Diagnostic Service:** This service offers a pathological diagnostic for both animals and samples sent by veterinarians. For animals, a full systematic necropsy and a macroscopic study of the found lesions are done. Samples

for the histopathologic study are processed and observed under microscope. The organ samples that come to the service are processed in the same way, except for the microscopically study that must be done before the samples were sent.

**Toxicological Veterinary Attention Service:** This service offers toxicological information and diagnostic for samples from the Veterinary Clinical Hospital and those sent by governmental entities.

**Infectious Diseases Diagnostic Service:** Devoted to diagnose infectious diseases that affect livestock, pets and wild animals. Samples from ill or dead animals that are collected by field working vets from the whole Extremadura region and outside or by practitioners working at the Veterinary Clinical Hospital facilities are processed for detecting microbial agents, their specific antibody responses or their specific DNA sequences. Results and control recommendations are provided to practitioners.

### 6.5.2. Central clinical support services

Indicate the nature of these services and how they are organised (e.g. diagnostic imaging, anaesthesia, etc.).

The services listed below are included in the Veterinary Clinical Hospital structure so as to support the correct functioning of the clinical services:

#### **ANAESTHESIOLOGY**

This service carries out sedations and anaesthetic procedures required by the Veterinary Clinical Hospital patients (including exotic, small and large animals) for surgical procedures as well as ambulatory procedures (radiology, MRI, clinical examination, diagnostic testing, wound management, etc). It is well-equipped with five devices for gas anaesthesia with their corresponding monitoring systems (capnography, anesthetic gas concentrations, ECG, non-invasive and invasive pressures, cardiac output and pulsioximetry). The anaesthesiology service is integrated into the surgery service and provides assistance in the Veterinary Clinical Hospital from 9 a.m. to 5 p.m. (when the consultation service is open), as well as upon request in an emergency.

### DIAGNOSTIC IMAGING

This service works to provide ultrasound and radiological diagnostics for Veterinary Clinical Hospital patients, but it also receives referrals from other Veterinary practices. It is open all day, and fully staffed during the time that the Veterinary Clinical Hospital is open for consultation 9 a.m. to 5 p.m. Cases programmed by appointment, hospitalised patients and emergency cases may use the service at any time, as the Residents are here all day doing assistant labouring and training.

### RADIOLOGY: RADIOGRAPHY and RADIOSCOPY

The service has Radiology Rooms completely isolated to comply with current legislation. There is a digital system automatic X-ray film developer. It is remarkable that this service was approved by the Nuclear Security Council (Consejo de Seguridad Nuclear), which is the organism that regulates the activity of diagnostic imaging devices and services in Spain, and dictates the guidelines to follow, including the obligatory appointment of a licensed Director of Radiodiagnostic Devices. All staff members are certified as Radiodiagnostic Device Operators. When these rooms are used, the owners and/or other potential users are warned about the effects of the radiation.

### ULTRASOUND SCAN DEVICES

Ultrasound scanner, echo-doppler color, PHILLIPS HDI 5000 Sono CT. One curved array multi-frequency probe of 2-5 MHz, one lineal array multi-frequency probe of 5-12 MHz and two phase array multi-frequency probes of 2-4 MHz and 4-7 MHz.

### VIDEOENDOSCOPY

There are two video endoscopes one OLYMPUS, and one ST ENDOSCOPIA with different accessories that allow a variety of diagnostic and therapeutic endoscopies, arthroscopies and laparoscopies.

### MAGNETIC RESONANCE IMAGING

Recently a Magnetic Resonance Imaging machine has been incorporated to the Hospital.

## 6.6. SLAUGHTERHOUSE FACILITIES

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

The Faculty of Veterinary has agreements with several slaughterhouses in Extremadura (Almaraz, Plasencia, etc.) and with Cáceres Slaughterhouse to perform practical classes in food safety.

The Slaughterhouse located in Cáceres is the main one where *Food Hygiene and Inspection* practice sessions are done. It is a general slaughterhouse with three complete line of sacrifice for bovine, pigs, and small ruminant, refrigerating rooms for carcasses, and rooms for Veterinary Services. Rooms are adequate in terms of size and services. It is about 6 km away from the Veterinary Faculty. Daily sacrifice activity is at around 20 per day of adult bovines and calves, 40 pigs, and 20 lambs.

As the conditions of the agreements with these slaughterhouses indicate, they allow for the students' attendance during the entire sacrifice and inspection process. Students visit the slaughterhouse premises in small groups, supervised by teachers and the Official Veterinary Inspectors. These are mandatory practical classes for the subject Food Hygiene and Inspection.

In addition to this *in situ* practical class for the students, the slaughterhouses also provides materials (meat pieces, offal, parts of animals) for the practical teaching in *Parasitology and Parasitic Diseases, Pathological Anatomy, Anatomy* and other subjects taught at the Faculty.

Furthermore, the Faculty has also signed agreements with the above mentioned slaughterhouses and establishments to allow students to carry out work in the core subject *Obligatory extramural fieldwork (Estancias)*.

### 6.7. FOODSTUFF PROCESSING UNIT

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

*Food technology* practical sessions with raw and heat-treated milk and milk products (yogurt, cheeses, butter, and cream) are performed in the Dairy Room and Pilot Plant located on the Farm facilities. It is equipped with the machinery commonly used in the dairy industry including a pasteurizer, facilities to produce cheese, etc.

*Food technology* practical sessions with raw and meat products (sausages, cooked hams, pates, etc.) are performed in the Meat Room and Pilot Plant located on the Farm facilities. It is very completely equipped with the machinery commonly used in the meat industry including a vacuum packer, mincer, meat band saw, meat slicer, sausage filler, oven, burger moulder, bread slicer, kneader machine, scales, butchers block.

A certified sensory evaluation room is available in the Food Science and Technology facilities.

The subject *Food Hygiene and Inspection* has access to the following foodstuff processing units: Catering San Jorge, Meat Products plant Encinar del Cabezón, Cheese plant Quesería Ganadera, Frozen Fish Factory VIGOCA.

The special characteristics of the region favour good relations with a numerous food factories, and several food organizations (IGP indication, producer associations, etc) for docent and research cooperation.

### 6.8. WASTE MANAGEMENT

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

The carcasses, organs and cadavers coming from the hospital, dissection and surgery laboratories, necropsy room, etc, as well as those coming from research laboratories, are stored in a refrigerated room, available for this purpose in the Veterinary Clinical Hospital, and collected by a certified company for their destruction (TRAGSA).

Sharp and contaminated instruments like pipette tips, blades, needles or syringes are introduced in special sharps collector containers that are sealed, temporarily stored in each Department, and periodically collected by a certified company for their destruction (Interlun S.A.).

Chemical toxic and hazardous waste produced by research, diagnostic and teaching laboratories are collected separately in appropriately labelled containers (acid and alkaline substances, halogenated solvents, non-halogenated solvents, ethidium bromide, and others). They are also temporarily stored in each Department, and in a special room located in the basement floor of the Department Pavilion 1. In addition, there are special containers for the collection and recycling of batteries and paper. The computer related waste is periodically removed by an external service.

### 6.9. FUTURE CHANGES

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

Regarding facilities, the following strengths and weaknesses are recognised:

#### Strengths

- Variety of services and facilities in the Faculty building or close to it.
- Sufficient number of lecture rooms with large capacity.
- Sufficient number of laboratories for practical work.
- Enough space and equipment available at the Veterinary Clinical Hospital.

#### Weaknesses

- Some laboratories need remodelling and/or the improvement of certain work conditions (air conditioning, fume hoods).
- Not enough well-equipped rooms in which students can carry out unsupervised work.

Another goal of our Faculty is the project to improve the teaching farm; this will ensure accessibility for all students and guarantee state-of-art production methods with the highest bio-security measures. This is still in a project-phase and will have to be proposed to the corresponding authorities.



Finally, other improvements should be:

- The refurbishment of the new seminar rooms.
- Installation of a portable digital videoconference connection between the Veterinary Clinical Hospital facilities and the classroom Pavilion so that clinical cases may be used during lectures.

### 6.10. COMMENTS

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

The Faculty of Veterinary and the Veterinary Clinical Hospital buildings and the laboratories are very adequate for undergraduate teaching, as well as for all research and medical assistance undertaken by the teaching staff and the students attending the Faculty. The budget that the Faculty gets for building and equipment maintenance is very meagre. In the last years most of this budget has been spent in facilities maintenance.

#### Faculty

The equipment of the Veterinary Faculty could be considered of high-quality, but there is a significant difference in the equipment used specifically for teaching and the equipment used for research. In most cases, the latter has been obtained with much painstaking effort on part of the teaching staff according to the needs of their own research projects, and in many cases, due to their personal requests for supplies and installations. In this sense, the research equipment can be termed excellent. On the other hand, the equipment devoted to practical teaching is not so complete and does not have the high standards of that used for research. Funding for practical teaching is scarce and although the University establishes an annual financial support programme for replacing old practical material, the amount of these grants is usually very limited. Therefore, part of the research equipment is normally used for teaching purposes.

### 6.11. SUGGESTIONS

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

#### Buildings and facilities

- Remodelling of some lecture rooms to allow for more unsupervised autonomous work in small groups.
- More offices and research laboratories are necessary for teaching and research staff.

#### Equipment

Regarding the improvements on equipment that may directly or indirectly influence the quality of teaching, the renewal and increase of basic equipment in teaching laboratories is necessary.



## Chapter VII.

# AMIMALS AND TEACHING MATERIAL OF ANIMAL ORIGEN





## CHAPTER VII. ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

## 7.1. FACTUAL INFORMATION

## 7.1.1. Anatomy

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

Bones, viscera, cadavers and live animals of different domestic animals species (dogs, cats, equines, bovines, caprine, ovine, porcine, poultry and exotics) are used for the practical anatomy training of the students. The cadavers used come from animals that have died from non-infectious diseases. The viscera of different species are obtained from the slaughterhouse. All the materials are stored using different conservation methods, depending on their future use: refrigeration, freezing, or other specific fixation techniques. Some specimens may be stored in containers with preserving solution for several years. The Anatomy Unit already has a complete collection of bones and skeletons of the different domestic species. This collection is stored next to the dissection room.

## 7.1.2. Pathology (Pathological Anatomy)

Indicate the nature and extent of any additional sources of material for the teaching of necropsies and pathological anatomy, including slaughterhouses material. Indicate the nature of any other animal use in teaching other basic subjects.

The cadavers for necropsy are sent to the Anatomopathological Diagnostic Service and come principally from the VCH and the Faculty Farm, private clinics, large farms (pigs and poultry) and zoological centres.

Table 7.1. Number of necropsies over the last three years

Species	2007	2008	2009
Cattle	5	4	5
Small Ruminants	50	47	34
Equine	-	2	-
Pigs	11	15	17
Dog	36	34	48
Cat	2	-	-

## ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

Poultry/Rabbits	30	49	29
Others	40	35	12

### 7.1.3. Animal Production

Indicate the availability of food-producing animals for the practical teaching of students

- a) on the site of the institution
- b) on other sites to which the institution

#### a) On the site of the institution

At the Farm of the Faculty of Veterinary are maintained:

- 20 beef calves
- 10 beef cows
- 40 ewes

The flocks provide students with the opportunity to work with livestock management of our region.

With the calves, the growth rate, morphological changes, morphological evaluation, feedlot management and economics are studied.

With the beef cows herd principles and techniques of beef herd management including feed requirements, reproduction, breeding, performance testing, diseases and costs and returns are studied.

Extremadura has 4.1 millions of sheep and 0.3 millions of goats, so the study of the management sheep flock is very important.

These two livestock together with 426.000 cattle and 134.000 Iberian pigs are the base of the Extremadura livestock.

This facility is used for teaching of the following subjects:

- Ethnology
- Ethology
- External morphology

## ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

- Animal Production
- Animal Nutrition
- Parasitology

This facility also maintains other temporarily animals for classroom instruction of the following subjects:

- Animal Reproduction
- Animal Breeding

### b) On other sites to which the institution has access:

“Animal Production”:

In order to increase knowledge and experience with production animals, Animal Production and Veterinary Hygiene and Ethnology subjects of the Department of Animal Production and Food Science have access to production animal facilities that are visited by our students (Table 7.2).

Table 7.2. Production animal facilities

SITE	ACTIVITY	SPECIES AND NUMBER OR ANIMALS/YEAR
COPRECA Trujillo	Copreca is an association of cow and sheep producers in Extremadura. Learning of beef cattle and lamb management.	5.500 beef cattle/year 200.000 lamb/year
CANTOS BLANCOS Almendralejo	Laying hen farm. Knowledge of not only animal also farm business management.	One million dairy egg production
Provincial Government of Cáceres´ farm EL CUARTILLO Cáceres	Centre to Merino Precoz promotion and selection. Sheep breeding, reproduction and morphological evaluation.	Ewes:358 Rams:26
Regional Government of Extremadura´s farm VALDESEQUERA Badajoz	Beef cattle, sheep, goat and swine extensive herds. Knowledge of researcher activities with native breeds.	Retinto cattle: 110 Merino Sheep: 450 Verata Goat: 80 Iberian Swine: 300 Native hens: 1.500
Agricultural and Animal Expo FERIA AGROGANADERA Trujillo	Exhibits of cattle, sheep, goat and horse breeds. Ethnology and morphological evaluation.	Cattle: 300 Ovines: 1.200 Hens: 1.000 Horses: 70



## ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

Additionally students have the opportunity to visit other private farms (Table 7.3).

Table 7.3. Private farms.

SITE	ACTIVITY	SPECIES AND NUMBER OR ANIMALS/YEAR
ACERAS Casar de Cáceres	Dairy cattle farm Milk production and farm management.	Frisian cows: 150
GOMEZNUÑO Casar de Cáceres	Cow extensive herd. Learning how cow/calf farms operate.	Cows: 48 Bulls: 2
MOCHUELO Casar de Cáceres	Beef cattle feedlot. Learning how feedlots operate.	Beef cattle: 90/ year
EL CASTUO Cáceres	Dairy sheep farm Milk production and farm management.	Sheep: 3.000

"Technical and economic management of the Iberian pig":

The Iberian pig is an autochthonous pig breed that grows primarily in the southwest of the Iberian Peninsula. In Extremadura, the Iberian pig is the most important type of livestock, representing almost 40% of the livestock final production. Therefore, to acquire the skills necessary to work in Iberian pig farms is considered indispensable for students of Veterinary Medicine of the University of Extremadura, whose professional orientation is Animal Production. In this sense, we have offered for many years an optional second cycle subject Veterinary degree entitled "Technical and economic management of the Iberian pig".

Veterinary students who study this subject acquire knowledge about the breed, farming systems, animal welfare, etc., of the Iberian pig. But also, during the course visits to commercial farms are made, where they receive direct information from reproductive management, health, market conditions, etc. These visits serve to students to know the reality of such holdings and to establish contacts with the professional world that may be needed in the future.

In recent years, there have been study visits to the south of Extremadura, where the largest number of free ranging farms of Iberian pigs can be seen. Specifically, we visited four farms, thanks to the veterinarians Daniel Ambrona and David Cubero:

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- Los Jarales farm, located in Calera de León (Badajoz), in which we could see the difference between ultra-modern breeding facilities and other obsolete breeding facilities. In addition, the iberian pig are fattened with concentrate feeds, but in out door system.
- El Chaparral farm, located in Calera de León (Badajoz) too, in which the farrowin crates and reproductive management in this type of facility were explained.
- The Romeral farm, located in Monesterio (Badajoz). The iberian pigs are reared in free range system in all their phases. Breeding takes place in camping type systems, weaning and post-weaning in large fences in freedom, and fattening based on acorns and natural resources freely.
- The Taramona farm is located also in Monesterio (Badajoz). It is an intensive farm in which the facilities have been adapted: in some older facilities have been introduced farrowing crates, areas of weaning, etc., typical of current intensive exploitation.

Veterinary graduates who made these visits when they were students said as that it was one of the activities in which more learned and that has been most useful in their work as veterinarians.

### 7.1.4 Food Hygiene / Public Health

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

#### 7.1.4.1. Food Hygiene and Inspection.

Farm animals for practical teaching of food hygiene and inspection to all students are available mainly at the ACICAR slaughterhouse in Cáceres. Animals available include cattle (beef and veal), sheep (lamb and mutton) and pigs. Occasionally, farm animals are also available at other slaughterhouses around Cáceres, such as Arroyo de la Luz (for pork) and Trujillo (for lamb).

Products of animal origin are available both in-site at food-processing facilities and from the market. Similarly to slaughterhouses, various food processing factories in Cáceres joined the training programme for the supervised work on food hygiene and inspection, including those for meat (Encinar de Cabezón), dairy (Quesería Ganadera), and fish (VIGOCA elaborados S.L.) products, or catering (San Jorge).

Additionally, both farm animals and products of animal origin are available virtually at all slaughterhouses and food processing facilities in Extremadura throughout the extramural training accord with the regional government (Junta de Extremadura). Students gain access to slaughterhouses in towns (e.g. Plasencia, Navalmoral de la Mata, Mérida, and Villanueva de la Serena), as well as to Health Centres, responsible for hygiene and quality inspection in food-processing facilities, in Cáceres (e.g. Manuel Encinas, Plaza de Argel) towns or small villages (e.g. Hoyos, Santa Marta de los Barros, Fregenal). Other establishments bearing a general training accord that make food products available to the students include the Public Health Laboratory of Cáceres, as well as food consultant companies (e.g. Gavetex S.C., Olmos Seguridad Alimentaria, La Jara, Exaga Técnica).

In addition to these general agreements, specific accords with the Health Department of the regional government for training of the students of Veterinary Sciences in Hazard Analysis and Critical Control Points have been signed, such as the one in place during 2009 for meat industries, or the one expected for 2010 focused on slaughterhouses. Similarly, the permanent collaboration of research groups with meat industries (e.g. Resti Sánchez S.A., Herlusa S.L., COVAP) facilitates further access of students to farm animals and food products of animal origin.

#### 7.1.4.2. Food Technology

The practical work of technology includes handling of products of animal origin like raw meat (pork, beef, chicken), meat products (ham, cured sausages, cooked products), milk and Dairy products (yogurt, cheeses, butter and cream). All these products come from slaughterhouses, cattle cooperatives or food stores.

### 7.1.5. Consultations and Patient flow services

#### 7.1.5.1. Consultations

State the number of weeks, in the course of the year, during which the clinics are open.

State the number of consultation days each week.

State the consultation hours.

#### Small Animal Hospital

The Small Animal section of the Veterinary Clinical Hospital is opened all year long, with the only exception of the month of August. Consultations are based mainly on appointment from Monday to Friday. Patients are attended both in general consultations and on special clinical services from 10:00 to 17:00. The hospital has a hospitalization service and intensive care 24 hours.

Table 7.4. Timetable for the small animal hospital services for appointments

<b>Internal Medicine</b>	
Cardiology	Monday and Thursday from 11am to 2 pm
Hematology	Monday to Friday from 10 am to 2 pm
Gastroenterology	Monday to Friday from 10 am to 2 pm
Nephrology and Urology	Monday to Friday from 10 am to 2 pm
Endocrinology	Tuesday and Thursday from 10 am to 2 pm
Clinical Parasitology	Monday to Friday from 10 am to 2 pm
Neurology	Monday and Friday from 10 am to 2 pm
<b>Surgery</b>	
Traumatology	Monday to Friday from 10 am to 5 pm
Soft tissue surgery	Monday to Friday from 10 am to 5 pm
Ophthalmology	Monday to Friday from 10 am to 5 pm
Endoscopy and laparoscopy	Monday to Friday from 10 am to 5 pm
Microsurgery	Monday to Friday from 10 am to 5 pm
Surgical oncology	Monday to Friday from 10 am to 5 pm
Exotics	Monday to Friday from 10 am to 5 pm
<b>Reproduction</b>	
Semen Freezing and semen banking	Upon request
Reproductive medicine and surgery	Monday to Friday from 10 am to 3 pm
Spaying and neutering for local shelters	Every Thursday from 9 am to 3 pm
<b>Clinical laboratory</b>	
Parasitology, Infectious Diseases and Pathology laboratories	Monday to Friday from 12 am to 2 pm

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In addition to regular services the service of Reproduction of the Veterinary Clinical Hospital provides services of spaying and neutering for local shelters. In 2008 the section of Reproduction of the Veterinary Clinical Hospital started this service. For this, dogs planned be adopted are sent every Thursday to the Veterinary Clinical Hospital. The animals are evaluated, blood samples are taken to check for infectious and parasitic diseases and spayed. The internal students of reproduction and two students of the regular course are involved in all the process. Along this year, the service is expected to be expanded to the regional association for animal charity (FEPAEX; [www.fepaex.org](http://www.fepaex.org)).

### Large Animal Hospital

The Large Animal Section of the Veterinary Clinical Hospital opens all year long, with the only exception of the month of August. Consultations are based mainly on appointment from Monday to Friday. Patients are attended both in general consultations and on special clinical services from 10:00 to 17:00. The hospital has a hospitalization service and intensive care 24 hours. Also a 24 hours emergency service is offered on call. The phone number for emergencies is 661-316698.

The equine hospital has a **stallion station**, thanks to an agreement with the **services of equine breeding (cría caballar) of the Spanish Army**. From February to June 10-12 stallions are located in the Veterinary Clinical Hospital as breeding stallions. These animals serve as stud stallions for the local breeders, as semen donors to prepare seminal doses to be sent to the whole country, and also serve as material for practical work for undergraduate students, residents and Ph.D. students. During the breeding season the students have the possibility to spend at least one whole week, from Monday to Sunday, of work at the breeding station. The agreement with the services of Equine breeding of the Spanish Army (Cría Caballar) has been expanded in this year. Cría caballar is sending semen samples from all their stallions to be evaluated at the hospital. This material will expand largely the number of cases of stallion breeding soundness evaluation seen at the Veterinary Clinical Hospital. Also an agreement is in progress with the "Real Escuela Andaluza del Arte Ecuestre". In addition to provide reproductive services, the Veterinary Clinical Hospital is in the process to be the reference service for providing Magnetic Resonance Image Services for both institutions.

## ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

**Table 7.5.** Timetable and services offered by the equine hospital.

<b>Internal Medicine</b>	Monday to Friday from 10 am to 5 pm
<b>Surgery</b>	
Orthopedic surgery	Monday to Friday from 10 am to 5 pm
Soft tissue	Monday to Friday from 10 am to 5 pm
Colic Surgery*	Monday to Friday from 10 am to 5 pm and emergencies
Laser surgery	Monday to Friday from 10 am to 5 pm
Endoscopy	Monday to Friday from 10 am to 5 pm
Anesthesia	Monday to Friday from 10 am to 5 pm
Rehabilitation Service	Monday to Friday from 10 am to 5 pm
<b>Reproduction</b>	
Semen freezing and banking	Monday to Friday from 10 am to 2pm
Embryo transfer	Monday to Friday from 10 am to 5 pm
Semen sexing	Monday to Friday from 10 am to 5 pm
Reproductive technologies and Medicine	Monday to Friday from 10 am to 5 pm
<b>Diagnosis Imaging*</b>	
Nuclear magnetic resonance (RMN)	Monday to Friday from 10 am to 5 pm
X-rays	Monday to Friday from 10 am to 5 pm
Echography	Monday to Friday from 10 am to 5 pm

\*Along this year a new service of gammagraphy will be opened at the Veterinary Clinical Hospital.

### 7.1.5.2. Patient flow

The number of animals to be stated is for all disciplines combined (medicine, surgery reproduction etc...). In table 7.6 only animals coming into the faculty should be included. Animals studied in practical teaching outside the Faculty should be entered in the section entitled "Ambulatory clinic" (Table 7.7)

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

## ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

**Table 7.6.** Number of cases presented in the Veterinary Clinical Hospital in the past three years.

Species	2007	2008	2009*
Canine	2183	2840	2859
Feline	232	301	289
Others (birds, rabbits, reptile)	73	79	66
Equine	316	531	510

\* For 2009 data at December 10<sup>th</sup> There is not accurate data on the number of hospitalizations, for small animals is estimated to be around a 30-40% of the cases, the equine hospital hospitalizes most of the animals attended.

Due to the special characteristics of the livestock industry in this region (large open ranches, a highly extensive animal breeding, and an almost inexistent dairy cattle industry) most of the ruminant and porcine consultations are seen in the ambulatory clinic, and thus these data are given in Table 7.7.

### 7.1.6. Vehicles for Animal Transport

The Veterinary Clinical Hospital has a vehicle and a trailer for the ambulatory clinic, and also offers a service of transportation of sick animals (horses mainly) to the Veterinary Clinical Hospital. Clients are charged for this service. The Faculty has two additional vehicles.

### 7.1.7. Emergency Service

As described before there is an Emergency Service in The Equine Hospital. The staff on duty receives the phone call and if necessary the rest of the clinical team is called in. In occasions if the owner of the house has not his own transport, the Veterinary Clinical Hospital trailer is sent to bring the sick horse to the hospital.

### 7.1.8. Mobile Clinic

Students do mobile clinic services in their 4<sup>th</sup> and 5<sup>th</sup> years. The hospital has one vehicle Mercedes with 7 seats. Only one Professor of the department of Animal Medicine is involved in the ambulatory clinic with the help of some collaborating veterinarians. The ambulatory clinic works all year long except August, from 7 am to 4pm.

Table 7.7. Animals and Farms visited by the ambulatory clinic both individual treatments and herd health procedures are included in this table.

Species	2007	2008		2009	
Equine	4	2		1	
Cattle	1741	29 <sup>a</sup>	1.200 <sup>b</sup>	36 <sup>a</sup>	1.860 <sup>b</sup>
Small Ruminants	21.038	89 <sup>a</sup>	12.218 <sup>b</sup>	175 <sup>a</sup>	23.210 <sup>b</sup>
Porcine	2665	371 <sup>a</sup>	400 <sup>b</sup>	1172 <sup>a</sup>	1200 <sup>b</sup>

<sup>a</sup> individual clinical cases

<sup>b</sup> Herd health cases (vaccinations, dewormings, estrus induction, pregnancy diagnosis on a herd basis)

#### 7.1.9. Other Information

Indicate any notable additional outside sources of material for clinical training purposes, such as animal charities, animal awaiting slaughter etc...

The Veterinary Clinical Hospital has agreements with regional Animal Charity Associations. Within this frame animals abandoned are sent to the Veterinary Clinical Hospital for care and neutering before being adopted.

Students are involved in these activities, which provide them with additional surgery; anesthesiology and general veterinary care training. This program is performed every Thursday from 9 am to 3 pm.

Thanks to an agreement with the Equine Breeding Services of the Spanish Army (Cría Caballar), The equine hospital hosts a stallion station, that during the breeding season provides reproductive services for local breeders and also for the whole country, since the Hospital has an European approval as center to export equine semen and embryos (authorization number ES 14-01-E). Students are involved in the activities of the breeding station. Thus, provides high quality practical training in equine reproduction to both graduated and under-graduated students.



Indicate how the level of clinical service that is offered by the establishment (in small companion animals, equines and production animals) compares with outside practices in terms of facilities, hours of service, equipment, expertise, responsiveness etc.

The Veterinary Clinical Hospital has equipment of high quality that is well above of the average private veterinary hospital and in some aspects well above most of the Veterinary Clinical Hospitals. In general the Veterinary Clinical Hospital is well provisioned with large diagnostic and treatment devices (digital radiology, ultrasound both for large and small animals, also Doppler color ultrasound is available for small animals and equine, endoscopy, laparoscopy, fluoroscopy etc). Recently a Magnetic Resonance Imaging machine has been incorporated to the Hospital. This is the only one in the South of Spain and Portugal, and is one of the few ones suitable both for small animals and equines. Also gammagraphy equipment has been acquired and will be operating along this year. The Veterinary Clinical Hospital probably is the best equipped in Spain in the area of Equine Reproduction, with a sperm-sorting machine, micromanipulator for ICSI, flow cytometry for sperm analysis etc.

The small animal hospital needs to organize as soon as possible the emergency and a central hospitalization service. However the lack of personal, both clinical and support staff does not allow us to provide at this moment this service. In spite of this the caseload is sufficient to provide adequate clinical training to our students. It is noteworthy that the Veterinary Clinical Hospital has almost tripled the caseload in the last four years.

The Veterinary Clinical Hospital has a highly qualified staff. There are one Diplomat in the European College of Veterinary Surgery and one Diplomat in the European College of Animal Reproduction. Taking in account that only 5 teachers from the major clinical subjects are involved in the Hospital the percentage of Diplomats seems paradoxically high. Most of the staff veterinarians hired by the Veterinary Clinical Hospital are involved as residents or are applying for residences in European Colleges. Most of the staff spent some months a year abroad for study visits in Hospitals in other European Countries or the USA. However the major drawback in the human resources of the Veterinary Clinical Hospital are the lack of personal, most of the teachers of the main clinical subjects (medicine, surgery and

reproduction) are not involved in clinical activities in the Veterinary Clinical Hospital.

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

The proportion of referral cases is highly variable, but as a whole we can consider to be about 40%. However is nearly 100% for some specific services, like semen freezing, Magnetic Resonance Imaging, etc. At this moment, since the service of Magnetic Resonance imaging is very recent (was initiated in June 2009), and new services are going to be opened along 2010, is expected a tendency toward a higher percentage of referral cases in all species. However, since first opinion cases offer valuable teaching material for students, in fact that is the kind o cases that the students will face after graduation, the policy of the Veterinary Clinical Hospital is to maintain a minimum of first option cases, and never below 25-30%.

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

The Veterinary Clinical Hospital has a broad variety of services covering specializations in Internal Medicine, Surgery, Anesthesia, Traumatology, Dermatology, Cardiology, Neurology, Gastroenterology, Nephrology, Ophthalmology, Odontology, exotic pet medicine etc.

The range of specialties covered is satisfactory, however we still lack an emergency service and a central service of hospitalization for the small animals section of the Veterinary Clinical Hospital, this service is provided by the equine hospital. The services provide are much better that most of the private practices in the area.

Outline how the fees for clinical services are decided and how these compare with those charged by private practitioners

The management committee of the VCH decides the fees. As a general police the fees are at least equal or higher to those recommended by the Official College of Veterinarians.

Indicate the relationship the establishment has with outside practitioners (in small companion animals, equines, and production animals) in term of matters such as referral work, providing diagnostic or advisory services for private practitioners, practitioners participating in teaching, holiday, or "seeing practice" work for students, feedback on the level of clinical training

The Veterinary Clinical Hospital is encouraged to offer both internal and external support to private practitioners. In general terms in spite of some punctual conflicts of interest with some local small animal clinics, the Veterinary Clinical Hospital has good relations with many veterinarians of the region of Extremadura. Together with some services that have been traditionally offered, in recent years clinical services like echocardiography or many laboratory services, and more recently the Magnetic Resonance Imaging service will improve and strength the role of the Veterinary Clinical Hospital as a referral non competitive institution.

In the large animal hospital, the Magnetic Resonance Service, that is one of the few available for equines in Spain, will also help to the goal above mentioned. Also in recent years the stallion station is the main supplier of seminal doses in the province of Cáceres for local Veterinarians.

Moreover the Veterinary Clinical Hospital is open to receive any private practitioner willing to improve or learn specific techniques. For example private practitioners have been in the Veterinary Clinical Hospital learning techniques such as freezing canine semen, equine ultrasonography or other matters.

Describe (if applicable) any other relationship with outside organizations that are routinely used to provide students with training (in particular practical training) (e.g.

pathology work, interaction with state veterinary work)

The Faculty of Veterinary has many agreements with outside bodies to provide the students additional practical training in many other subjects such as pathology work, herd health, public health and so on. This training is covered under the subject obligatory extramural fieldwork, "Estancias", and under elective free credits. See further information in chapter IV-V.

Provide an outline of the administrative system used for the patients, e.g. intern on how case records are kept, how data is retrieved, whether systems are centralized, etc

All patient related administrative tasks are dealt with in the Reception area with two members of the administrative support staff, for payments appointments and records maintenance. After hours the clinicians has to collect all data to open a new record. The first time that a patient comes to the Veterinary Clinical Hospital, is registered on the center's computer database, data records include owner's data (name, address ID, telephone) and the patients file (species, breed, age, sex) each patient is registered with a unique code. This code allows the identification of the client's record in the archive. The same code is used to identify any diagnostic test. Each patient record is stored in the computer at the receptions area; also a general record is kept as a hard copy. In addition, in each service it is kept a hand written copy of each patient clinical record. Now the Veterinary Clinical Hospital is in the process to implement a new computerized database.

The reception area is also in charge of answering phone calls, making appointments for the different consultations, and preparing the patient records for the appointments of each day.

## 7.1.10. Ratios

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

R11 = Ratio: students/ production animals

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of food-producing animals seen at Faculty}} = \frac{83}{95} = \frac{1}{1.14}$$

\* Data at December 10<sup>th</sup> 2009

R12 = Ratio: students/ production animals

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of individual food-producing animals seen outside Faculty*}} = \frac{83}{1383} = \frac{1}{16.6}$$

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of production animals seen on herd health visits*}} = \frac{83}{26270} = \frac{1}{316.50}$$

\* Data at December 10<sup>th</sup> 2009

R13 = Ratio: students/ production animals

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of herd health}} = \frac{83}{9} = \frac{1}{0.11}$$

R14 = Ratio Students /equines

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of equines*}} = \frac{83}{510} = \frac{1}{6.14}$$

\* Data at December 10<sup>th</sup> 2009

R15 = Ratio Students /poultry/rabbits

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of poultry/rabbit cases}^*} = \frac{83}{66} = \frac{1}{0.79}$$

\* Data at December 10<sup>th</sup> 2009 (including other small mammals and reptile)

R16 = Ratio students/ companion animals\*

$$\frac{\text{Number of students graduated in the last year}}{\text{Number of companion animals}^*} = \frac{83}{3148} = \frac{1}{37.92}$$

\* Data at December 10<sup>th</sup> 2009

R18 = Ratio students/necropsies

$$\frac{\text{Number of students graduated in the last year}}{\text{Necropsies food production animals and equine}^*} = \frac{83}{56} = \frac{1}{0.67}$$

\* Data at December 10<sup>th</sup> 2009

R19 = Number of students graduated in the last year/ Necropsies poultry/rabbits\*

$$\frac{\text{Number of students graduated in the last year}}{\text{Necropsies of poultry/rabbit}^*} = \frac{83}{29} = \frac{1}{0.35}$$

\* Data at December 10<sup>th</sup> 2009

R20 = Number of students graduated in the last year/ Necropsies companion animals\*

$$\frac{\text{Number of students graduated in the last year}}{\text{Necropsies of companion animals}^*} = \frac{83}{60} = \frac{1}{0.72}$$

\* Data at December 10<sup>th</sup> 2009 (including exotics animals)

### 7.2. COMMENTS

Feel free to comment on all data provided in this chapter.

Comment on major developments in the clinical services, now and the near future.

Comment on local conditions or circumstances that might influence the ratios in 7.10

With respect of the Veterinary Clinical Hospital one of the major drawbacks is the limited staff. Very few of the teaching staff is really involved in clinical activities in the Veterinary Clinical Hospital. For example, the ambulatory clinic relies only in one person; only two teachers of the internal medicine section are involved in the hospital, only two in surgery and only one in reproduction. Especially worth of mentioning is the fact that only three Teachers of the Faculty of Veterinary are involved in the Equine Clinic, and sharing this activity with activities in the Small Animal Clinic.

This problem is partially solved with the help of veterinarians hired by the hospital.

However in order to increase the caseload and to provide an emergency service in the small animal clinic, the number of staff veterinarians should be increased.

Another drawback is the design of the Veterinary Clinical Hospital building that was constructed as a new faculty building rather than a Veterinary Clinical Hospital by itself. In this way there is duplication of surgery rooms, rooms for hospitalization, etc, that difficult the establishment of a central service for hospitalization, or a common service of anesthesia etc...

However, major developments expected to occur in the future are:

The new service of MRI and the upcoming opening of the gammagraphy service will increase largely the number of referrals.

The upcoming service of sperm sexing and the service of embryo transfer with sexed semen will probably increase the number of referrals for the equine reproduction service.

The direction of the Veterinary Clinical Hospital recognizes the urgent need to increase the number of staff veterinarians to consolidate the emergency service in equine and to open an emergency service in small animals.

An internal re-organization of facilities and spaces within the Veterinary Clinical Hospital will help to develop a more efficient work, especially in the future service of Hospitalization and Emergencies in Small Animals.

A new computer network is expected to improve information in the administrative and clinical areas of the Veterinary Clinical Hospital.

### 7.3. SUGGESTIONS

If the ratios in 7.10 for your establishment do not fall into the category satisfactory according to the indicative table in Annex I, what can be done to improve these ratios?

All the ratios fall within the category satisfactory; however the ratio for small animals does very close to the limit. The number of necropsies in companion animals should also be increased; however the reason for this is the high percentage of rejection to practice a necropsy of the owners of deceased animals. Increasing the collaboration in this matter to local shelters could be an option. The caseload in the small animal hospital should be increased. For this propose the opening of the emergency service, the new service of MRI and extending the service of support of animal charity shelters are steps to be taken as soon as possible. However financial support to hire new veterinarians is a must.

The role of the Veterinary Clinical Hospital as a referral institute for equines should be harnessed.





## Chapter VIII.

# LIBRARY AND LEARNING RESOURCES





## CHAPTER VIII. LIBRARY AND LEARNING RESOURCES

## 8.1. FACTUAL INFORMATION

## 8.1.1. Library

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

## 8.1.1.1. Main Library

The Library of the Veterinary Faculty is part of the University of Extremadura`s (UEX) central library on the Cáceres Campus (*Biblioteca Central de Cáceres*, BICC). This Central library centralises bibliographical collections of several Centres: the Philosophy Faculty, the Veterinary Faculty, the Teaching Formation Faculty, the Higher Polytechnic School (EPS), the Sport Sciences Faculty, the Law Faculty and the Nursery and Occupational Therapy Faculty. Thus, the librarians working there are responsible for providing services for our students (undergraduate and postgraduate), professors, support staff, and researchers who study and work in our centre, and also to all veterinary professionals who collaborate with the Veterinary Faculty in educational activities. The BICC is housed in a building inaugurated in 1998; and opened in September 1999, and it occupies a total area of 4592 m<sup>2</sup> and is divided in three separated floors, and a basement, where different premises can be found:

- Reading rooms: they are situated in the ground and first floor. In each case, it is divided in four modules, as follows:

## Ground floor:

Module 1: Dictionaries, Encyclopaedias, Catalogues, Bibliographies, Biographies

Module 2: Philosophy, Psychology, Sociology, Economy, Law, Education

Module 3: Health Sciences, Biological Sciences, Medicine-nursery, Veterinary Sciences, Computing

Module 4: Art, Architecture, Cinema, Sports

## First floor:

Module 1: Philology, Linguistics, Grammar, Classical languages

Module 2: Modern languages, Literary criticism, Literature

Module 3: History, Archaeology, Prehistory, Ancient history, medieval history, Modern history, Contemporary history

### Module 4: Geography, Physical geography, Human geography

Books in both reading rooms are arranged according to the Universal Decimal Classification System (CDU). This system divides knowledge according to decimal numbers, by assigning a number to each subject. The veterinary books are situated mainly in the number 59 (zoology) and also 619 (veterinary sciences), both in module 3. Moreover, there are many other books which are distributed to other numbers, even if they are associated to veterinary sciences, according to their speciality (for example, number 57 for biology, 55 for environment...).

- Deposits: they are situated in the basement, and they are three, according to the following distribution:

Deposit 1: thesis and books of lower use in the BICC

Deposit 2: Rarely-used books and journals from the Polytechnics School

Deposit 3: batches of documents from the University Publications Services

- Newspapers and Journals Room (*Hemeroteca*): situated in the first floor

- Computer room: for teaching activities, in the first floor. It is equipped with 20 PCs and dedicated to multiple uses: formative sessions on the use and administration of library information which is taught by auxiliary staff, students' work, etc. There is also a working room, with place for 8 persons.

- Documentation Unit: in the second floor: specialised service for researches: ILL, database searches and assesment, bibliometric services and information.

- Offices for the personnel of the Library: in the first floor

Certain general information about the BICC is listed below:

- 895 reading places.
- 3,964 m of bookshelves.
- 22 Computers (PCs), 12 printers and 2 fax for internal use.
- 20 Pc's for Unviersity staff teaching purposes
- 24 PCs for public use.
- WIFI connection for Internet in the entire whole building.

- More than 190,000 books and monographs.
- 1864 titles of current print journals.
- 765 titles of closed print journals.

Information about access provided for electronic journals can be consulted in the BUEX webpage: <http://biblioteca.unex.es/bibliotecae.html>. The library is open to everyone, and services are free for UNEX students, staff and collaborators.

On each floor of the library, reading places are located near the shelves; in the main floor there are a librarian's offices while loan and information desks are attended by auxiliary staff.

The general structure of the Library is constituted by different technical units, as follows:

- Unit of Documentation and interlibrary loan
- Unit of User's Attention
- Unit of Collection Management, Selection and Acquisition
- Unit of Technical and Bibliographical process
- Unit of Computing and Information Technology
- Unit of Communication and Cultural activities
- Unit of Digital and Virtual Library
- Reception

There are 27 full-time people on the library staff:

- 10 Library-specialist technicians
- 8 Library assistants (LA)
- 3 Library facultatives
- 3 Service assistant at the reception
- 2 Support staff for administrative tasks
- 1 Support staff for computer tasks

With regard to internal organization, the BICC depends on the Vice-Chancellor for Coordination and Institutional Relations. The general lines of operation are established by the UEX Library Committee whose composition and functions are addressed in their own Regulations. According to Article 50 of these Regulations, the Service of Library is a functional unit, which provides sources for learning, teaching,

and other related activities for general functioning of the University as institution. The UEX Library will take care of conservation and administration all the bibliographical patrimony, and also of collaboration in the knowledge process. There is a Consultant Committee, according to the article 47.3 of the UEX, and whose composition is established according to article 8.1.

Annual Operating Budget (2008) for the global Libraries of the University of Extremadura:

Monographs	619,143 €
Periodicals	723,653 €
Data bases	144,638 €
Others	18,070 €
TOTAL	1,505,504 €

Library Opening Hours: during the whole year

Working days: from 8:30 to 21:30

Weekends during exam time (February, June-July, September): 9:00 to 21:00

Easter, Christmas and summer vacations: 8:30 to 21:30

Users of the BICC:

Students: 2855

Teachers: 251

Number of Loans to Students per Academic Year

In 2008 the number of loans to students was 29,903.

Computerised Document Search System that is accessible to students

The University library works with the Innopac *Millennium software (Innovative Interfaces)* linked to the webpage. This platform offers the possibility of simple and advanced searches, as well as searches in the complete catalogue or only in some in scopes (journals, old collections, etc.). Any user can also store, send and retrieve their own personal searches. In addition, it offers information on the books and articles in a PDF format that the teachers recommend in their subject programmes (recommended Bibliographies). It also allows the users to check the books they have

on loan, renew them, reserve resources on loan to other users, and even request books from the collections found in any of the many other UEX libraries.

Finally, another one of its functions is to remind users of expiration dates and such by e-mail.

Other computerised document search systems available to all staff (teaching and support staff) and students are:

- Online databases.
- Collections of electronic journals and ebooks either individual titles or big editorial packages such as *Science-Direct*, *Springerlink*, *ACS* and many others.
- Websites and other free access resources in Internet.

### 8.1.1.2. Library of the Veterinary Faculty

The Library of the University of Extremadura (BUEX) is one functional unit with a single management and technical coordination, and is integrated by centralised technical services, Central Campus Libraries and Faculty libraries. The Library of the Veterinary Faculty on Cáceres campus is part of this structure and depends organically and functionally of the Director of the BUEX.

The Library of the Veterinary Faculty occupies a total area of 252 m<sup>2</sup> divided into the following sections:

- General Reading Room: 178 m<sup>2</sup>
- Storeroom, books and periodicals: 50 m<sup>2</sup>
- Staff working area Room: 18 m<sup>2</sup>
- Video room: 6 m<sup>2</sup>

There is a Library Committee which is in charge of collecting, analysing and resolving the proposals and suggestions of the Veterinary Faculty, Departments and users to those who work in the library, within the policies and rules established by the ruling bodies.

The budget of the Library is provided by the own UEX, Departments and research projects.



- The total budget of the Library of the Veterinary Faculty in 2008 was 7,929.81 €

Access to the library is free for all members of the UEX. The BUEX also allows external users with special needs (research, study or similar) access to its collections and loan service by providing them with a temporal library pass, subject to approval.

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

#### Main Library of the Veterinary Faculty

Is this specific to the veterinary training establishment?	YES
Is this common to two or more establishments?	NO
Full time equivalents of part time employees	2 grant holders
Number of full-time employees	2
Number of journals received each year as hard copies	87
Number of full access Electronic journals	About 6293
Availabilities for online literature search	YES
Availability of textbooks	YES
Number of student reading places	96
Library opening hours	
• During term-time	9:00-14:00 h and 16:00-19:00 h
• During vacations	9:00-14:00 h

#### Indicate how the facilities are used by students

A loan service is available to the students, with the possibility of renewing loans and reserving books by internet.

In 2008, a total of 1,325 loans were issued.

With regard to the library collection, it has, on 31 December 2008, a total of 12,562 documents. Library holdings may be consulted online in the catalogue of the BUEX

(<http://lope.unex.es/>), which is also integrated in the collective catalogue of the Spanish University Libraries Network (*Red de Bibliotecas Universitarias de España*, REBIUN). Monographs, periodicals and any other document available can also be consulted.

Users can access from any computer in the Faculty or from home the electronic resources portal of the BUEx, (<http://biblioteca.unex.es/> or <http://biblioteca.unex.es/bibliotecae.html>), which includes: databases, e-magazines, e-books, theses, patents, regulations, e-prints, library catalogues, web resources, encyclopaedias and e-dictionaries, press, official bulletins, etc. This portal also offers access to 14,025 e-books and 6,293 e-journals as support to teaching and research.

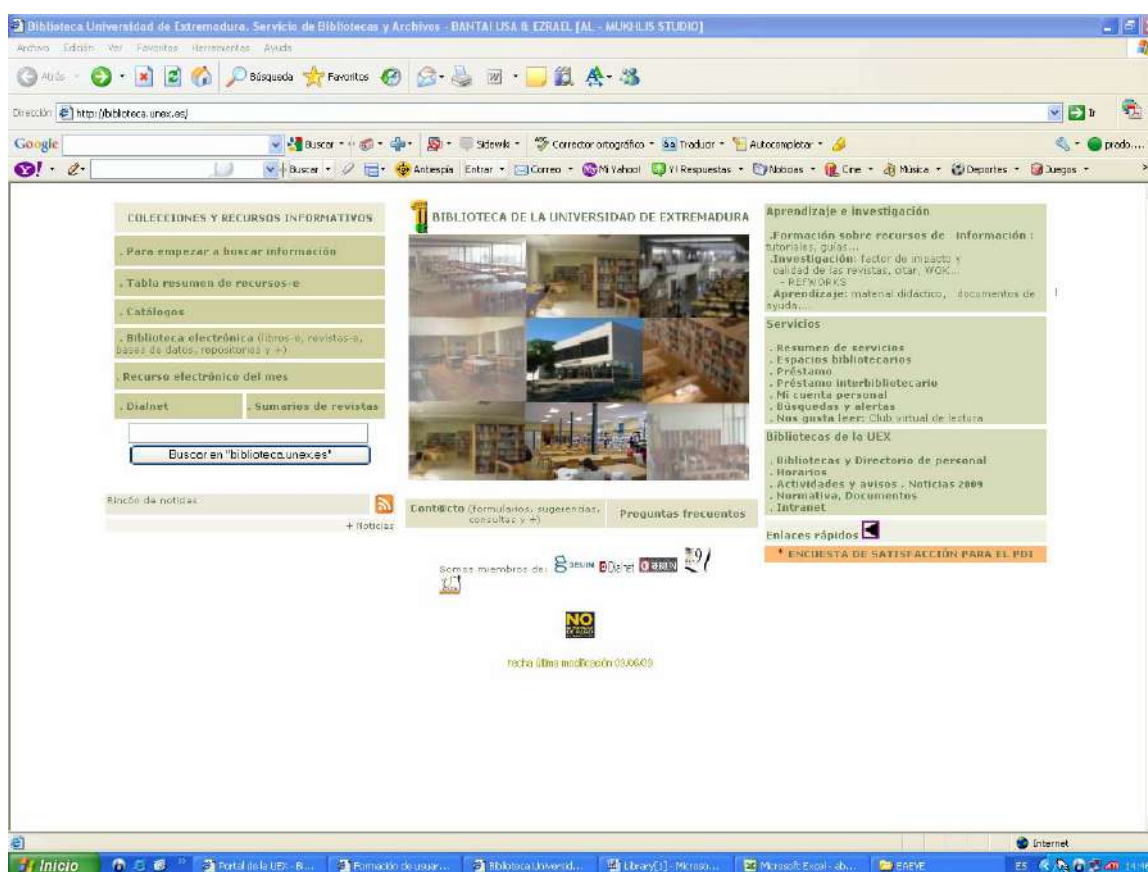


Figure 8.1. Main entrance to access to the electronic resources portal of the BUEx

In addition to all those information sources, users may also consult the on-line catalogue with the list of books recommended by teachers for the different subjects:

- Teacher ..... [http://lope.unex.es/search\\*sipi/p](http://lope.unex.es/search*sipi/p)

- Subjects ..... [http://lope.unex.es/search\\*spl/r](http://lope.unex.es/search*spl/r)
- Both the library and the study room are WiFi areas as in the rest of the Faculty.

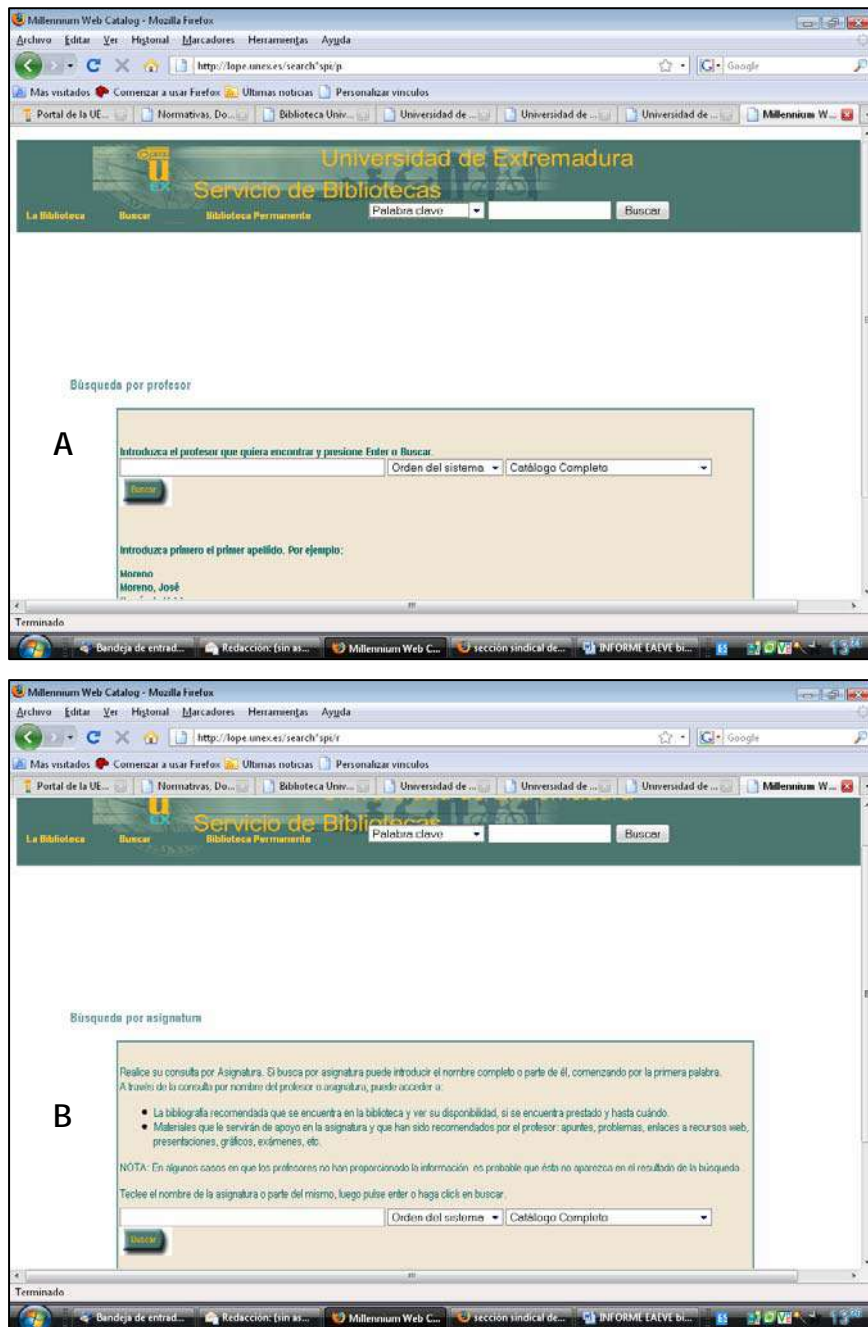


Figure 8.2. Main entrance to consult the on-line catalogue. A: list of books recommended by teachers. B: list of books for the different subjects.

The available platforms are:

- [ACM Digital Library](#)
- [ACS](#)

- [Annual Reviews](#)
- [Emerald](#)
- [IEE/EL](#)
- [IOP Science](#)
- [JSTOR](#)
- [Myilbrary](#) (books of Multilingual Matters)
- [OvidSp](#) (books of Lippincott)
- [Royal Society of Chemistry](#)
- [ScienceDirect](#)
- [SpringerLink](#)
- [Wiley](#)

#### 8.1.1.3. Subsidiary Libraries of the Faculty

Please describe the subsidiary (e.g. Departmental) libraries of the establishment, and arrangements for student access.

Indicate whether the main library holds a list of individual books of the subsidiary libraries.

Every Department or Working Unit of the Veterinary Faculty is endowed with a Classroom-seminar where there are specialised volumes (teaching and research) on loan from the university library. They are for the use of teachers and students writing supervised papers, practical sessions, etc. Some Units hold research journal titles, available to the students for consultation.

#### 8.1.2. Information Technology Services

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

##### a) Audio-visual Service

In Cáceres, the Central Library has an important collection of slides, microfiche, videos, CDs and DVDs that are available on loan.

Generally speaking, the Departments have computer support (CDs, DVDs) containing specialised information for their use in theoretical and practical classes.

By means of the WIFI System, the entire Campus is connected to Internet and therefore to any specialised source of information.

### b) Computer Service at the Veterinary Faculty

The Veterinary Faculty has 69 PCs available for the students distributed in 6 computer rooms, which are used for teaching.

One of them, where students have free access, is constituted of 26 PCs, and it is situated close to the classrooms. Students have access to the computers in the Faculty on weekdays from 8.00 a.m. to 12.00 p.m. This Service is closed in holidays and weekends.

The second one, called “Department room” has 20 PCs and it is only used for practical activities.

Moreover, there are 4 micro-classrooms (three with 5 PCs each one, the fourth with 8 PCs), specially considered for practical activities with small working groups.

The Information and Commissionaire’s Office staff control access to the computer rooms and take note of any possible incidences. Moreover, the Veterinary Faculty has a full-time support staff for computer technical assistance.

Throughout the academic year, the BICC offers a programme of user formation featuring general sessions offered to all users and specific sessions dedicated to students and teachers as *per* their typology and thematic interests.

c) The Virtual campus of the UEX (CVUEX) constitutes a very important tool for teaching and learning activities. The CVUEX allows teachers to offer several kinds of materials on Internet (<http://campusvirtual.unex.es/portal/>), in order to complete the general teaching activities offered in the classroom. Moreover, Internet and/or computer programmes are commonly used for teaching in lectures and practical sessions; some of the programmes used have been created by Faculty teachers.

The virtual Campus of UEX is an alternative which allows access to higher education through open and flexible courses which take advantage of the opportunities that Information Technology provides.

In the same way, traditional teaching can also benefit from Information Technology. Students, as well as having classroom contact with teachers and colleagues, have at their disposal a virtual world of teaching and learning which improves the quality of their education.

To offer this, the Virtual Campus of the UEX has three basic services:

### TeleTraining

The UEX offers non-contact teaching/distance learning at all educational levels. In this way, by internet, official courses, doctorate programmes, postgraduate qualifications (Master's degrees and University expert), elective subjects, University extension courses and specialist courses of continuous training can all be offered.



Principio del formulario

### Bienvenidos al Campus Virtual de la Universidad de Extremadura

El Campus Virtual de la UEX permite complementar la educación que los alumnos reciben en las aulas. Apoyándose en la Nuevas Tecnologías de la Información y la Comunicación se pretende dotar tanto a profesores y alumnos como a personal de administración y servicios, de herramientas que amplían y mejoran los procesos de Enseñanza-Aprendizaje y de Coordinación de tareas y servicios.

El Campus Virtual de la Universidad de Extremadura (CVUEX) proporciona un espacio de teleformación tanto para la comunidad universitaria como para otras administraciones de la región.



Este portal tiene como objetivo integrar y simplificar el acceso a los diferentes servicios ofrecidos por el Campus Virtual de la UEX, básicamente: aulas virtuales, oficina de ayuda, asistentes de creación de cursos.



Figure 8.3. Main entrance of the Virtual Campus Webpage

### Approach to self-learning

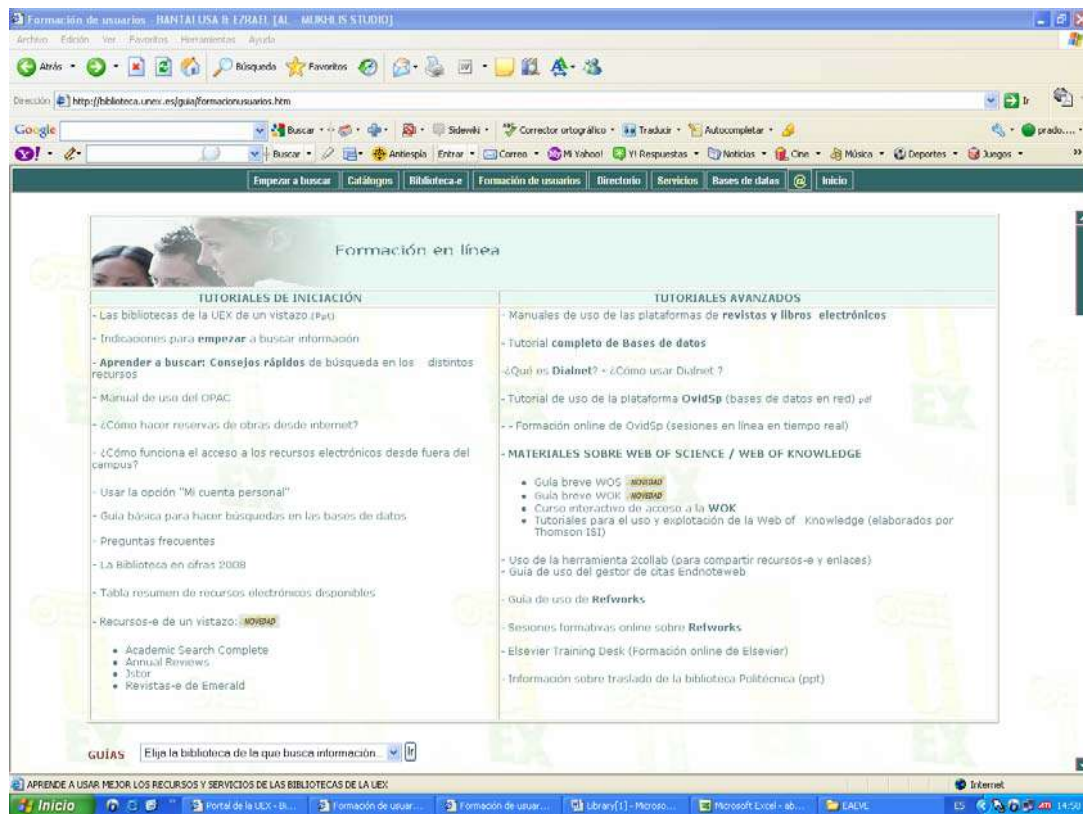


Figure 8.4. Self learning access of the BICC

BICC users can easily access to learning tools for an adequate use of the different services which are offered by the library.

### Classroom Teaching

Face to face classes which are taught at the UEX have at their disposition a teletraining platform through which they can contact teachers, ask questions, send

coursework, and receive back grades, etc. The Veterinary library is also in the Virtual Campus, extending its functions and services through information technology and communication. In this way students and teachers have another communication and training tool as a complement to the traditional use of the library, not only with a link in the webpage of the BUEX, but also by answering on-line queries about its services, and announcing interesting news (training courses, updates to the webpage, etc.).

### Collaborative Work

The same platform functions as a collaborative work tool, allowing different groups or teams within the University community to develop a variety of projects together (management, research, training, social, etc) without needing to be physically present, or at least reducing the need

## 8.2. COMMENTS

### Library:

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

Generally speaking, the inter-centre BICC collections on the Cáceres Campus are considered adequate. They are upgraded continually with an active effort on part of professors who annually propose purchases for their areas of interest. The acquisition policy is based on the bibliography recommended by teachers for each subject, on specific requests made by teachers. Since the teaching staff intervenes directly in the selection, the content of the collection is adapted to all teaching needs. In the case of books, although there is a minimum of at least one copy for each title recommended, we believe that in many cases (exam periods) this is not enough for our students.

Regarding the opening hours, they have been extended in recent years and now fulfil the needs of the majority of our students. The Library schedule is established by the BICC Central Services' Office depending on the academic calendar. In general, the timetable covers the students' needs, including exam periods and weekends. On the other hand, by way of Internet, the entire UEX community has access to the



electronic resources of the BICC. This means that students may find a convenient place to study and use the electronic resources and Internet library services at any time.

Considering our number of students, the provision of reading spaces and support personnel could be deemed adequate; we have a good percentage of places/potential students during the entire academic year. However, at times, the staff of the BICC in Cáceres are overworked.

Veterinary Faculty Library Holdings are specialised in Veterinary Science, Agriculture, Animal Production, and Food Technology and Hygiene. In general terms, it can be said that the collection is adequate, thanks to its annual renewal.

With regard to the periodic publications of the BUEX, a reorganisation of subscriptions takes place every four years, which is when new subscriptions can be added. In addition to the journals subscribed to by the Faculty Library, the BUEX makes available to the University community the complete text of electronic books and journals through <http://biblioteca.unex.es>.

The BUEX has an ILL and Document Access Service which locates and retrieves documents not found in the library archives of the University, as well as lending documents to other institutions when requesting them.

The Library opening hours are established by the BUEX Central Services, depending on the academic calendar. This timetable in general covers the students' needs, although many users request extended opening hours at weekends. It is currently impossible to satisfy demand due to a lack of staff. The study room is open every day from 8:30 to 21:30

The Veterinary Library has two Library Assistants working under the technical supervision and coordination of the Health Library Librarian, which is insufficient, given user demand.

### 8.3. SUGGESTIONS

Considering the number of potential users, the number of reading positions is insufficient. This is especially obvious at exam times. Users have also requested group study rooms, which we currently do not have. The BUEX is taking measures in various libraries to move towards the Information Commons model (CRAI), which involves adapting space and equipment.



## Chapter IX.

# ADMISSION AND ENROLMENT





## CHAPTER IX. ADMISSION AND ENROLMENT

## 9.1. UNDERGRADUATE COURSES

## 9.1.1. Undergraduate Students Number

Table 9.1. Undergraduate student composition (academic year 2008/09)

1 <sup>st</sup> year students	123
Total number of undergraduate students	688
Total number of male students	294
Total number of female students	394
Foreign students	26
- from EU countries	22 (Portugal, Holland, Germany)
- from non-EU countries	4 (Uruguay, Canada, Morocco, Romania)

Minimum number of years (MNY) allowed to successfully passing the curriculum: not legally established

## 9.1.2. Students Admission

State the minimum admission requirement.

Indicate whether there is a limit to the number of students admitted each year.

Describe how the number of government-funded student places is determined.

Outline any selection process (or criteria) used in addition to the minimum admission requirements.

Describe whether students applying for and/ or starting veterinary training have an equal or very variable knowledge base in scientific disciplines from their previous studies.

Describe any circumstances under which extra students may be admitted to the undergraduate veterinary course.

Outline any changes foreseen in the number of students admitted annually. If applicable, describe how the Faculty plans to adjust to these changes.

## Minimum Admission Requirements

The Spanish Education System comprises the following stages:

- **Primary Education** (compulsory, lasting six years; usually 6-12 years of age).
- **Secondary Education** (compulsory, lasting four years; usually 12-16 years of age).

- **Baccalaureate** (non compulsory, two years; usually 16-18 years of age).

Depending on their preferences and future study plans, Baccalaureate students can choose between four different options:

- Arts
- Life and Health Sciences
- Humanities and Social Sciences
- Technology

There are two sub-options within the Life and Health Sciences baccalaureate: Scientific-Technical and Health Sciences. Those students wishing to take a degree in Veterinary Science must choose the Health Sciences sub-option within the Life and Health Sciences option.

- **Higher Education** (University degree)

Admission requirements for starting University Studies are established by the Ministry of Education (Education Organic Law 2/2006, art. 38; University Organic Law 6/2001, amended by Organic Law 4/2007; Real Decree 1892/2008, 14 November). To access University studies at the University of Extremadura, the student, having completed the Baccalaureate, must pass the University Access Test (PAU, *Prueba de Acceso a la Universidad*) of the University of Extremadura. There is no additional test to enter to the Veterinary Faculty.

Access to Veterinary Studies at the University of Extremadura is regulated by a *numerus clausus* system. According to the pre-approved number of students to be admitted (100 in 2007/08) and to the number of students requesting admission, a certain cut-off line is established. The students' access mark is calculated using the average from their Baccalaureate average mark (60 % of the final mark) and their University Access Test mark (40 %). The mark required to enter our Faculty was 7.38 (on a scale from 0 to 10) for the academic year 2007/08. As there are always more students with top grades applying than places available, the admission of undergraduate students in our Faculty is very competitive (see Table 9.2).

#### **Limit to the Number of Students Admitted each Year**

There is a limited student intake. Every year, the Veterinary Faculty, by means of this Faculty Board, proposes the specific number of places to be offered (80 at the 1<sup>st</sup> year). The Faculty then sends this proposal to the University Government Board, which, in turn, can decide whether to accept it or no. If approved, it is sent on to the University Coordination Committee. This body is empowered to decide whether

to accept it or no; it usually accepts the University of Extremadura proposal. The number is decided finally by the University Co-ordination Committee of the Ministry of Education.

#### **Determination of the Number of Government-funded Student Places**

Since the University of Extremadura is a Public University, the fees that our students have to pay are not very high (1150 €/year on average). Even so, the Education Protection Act (19th July 1994, BOE 21st July) sets out indirect financial aid or *free tuition* under certain circumstances:

- **Outstanding marks.** In the Spanish grading system (0-10), the highest possible mark is a 10 or the so-called *Matrícula de Honor* (MH). For each MH obtained, in the next academic year the student will be able to enrol for free in the same number of credits as the ones for which he got the MH mark. In addition, students with an average grade of MH during Baccaulaureate have free tuition during their first year of University studies.
- **Beneficiaries of a programme for large families** can have reduced or waived public fees for university studies, according to the rating with categories of families. Large families (with 3-4 children) have a 50 % discount. Especially large families (5 children or more) receive a 100% discount.
- **State-funded scholars.** Students can receive a grant from the Spanish Government or the Extremadura Autonomous Community, to pay their University fees (RD 2298/1983 28th July, article 3.1). The grants are given according to the student's family income and the academic records. Orphaned children of Civil Servants, students with disabilities, victims of the terrorism, victims of gender violence also get free tuition. The Statutes of the University of Extremadura also establish that staff and the children of staff of the University of Extremadura do not have to pay tuition fees.

#### **Selection Criteria and Process Used in Addition to the Minimum Admission Requirements**

Applications from successful candidates, who have passed the PAU in June, or in previous years, will be processed first. Then, applications are taken from successful candidates who passed the PAU in September (the latter is usually non-applicable since the available places are generally filled in June). There is a percentage of offered places reserved for students with special situations:



- **Students with disabilities:** 5% of places are reserved for this group. They must present an official disability certificate issued by the Social Services Institute (*IMSERSO*) or the Extremadura Community, giving a disability rating of 33% or higher.
- **Gifted athletes:** 3% of places are reserved for this group. They must attach a certificate justifying their status issued by the National Sports Institute (*Consejo Superior de Deportes*).
- **Graduates in other University Studies:** 1-3 % of places are reserved for this group.
- **Students older than 25:** 2 %. Special PAU exams have been developed to allow them another opportunity to carry out their University studies.

### **Comparative Level of Knowledge in Scientific Disciplines of Students Applying for or Starting Veterinary Training from Studies at School.**

Prospective students must take the Health Sciences option for Baccalaureate (as stated in the Organic Law 1/1990 dated 3<sup>rd</sup> October, LOGSE). Compulsory subjects in the health Sciences option are *Biology* and *Chemistry*; thus, *Mathematics* and *Physics* are electives and may not have been taken. Students tend to avoid these subjects in favour of others, thought to be easier, in order to obtain higher marks and achieve a better grade point average in their academic record. This can cause problems in the first year of the Veterinary degree, where Mathematics and Physics are core subjects.

### **Some Circumstances under Which Extra Students may be admitted to the Undergraduate Veterinary Course**

Foreign students who request permission to enrol in the veterinary curriculum at our Faculty must have previously passed in their Faculty a sufficient number of credits to allow a minimum of 30 credits to be convalidated into our Faculty.

Students of Veterinary Sciences in other Spanish or foreign Faculties can request a transfer of academic records. The request is made to the Dean of the Faculty, who is authorised by the Chancellor to accept or not, by taking into account:

- In necessary cases of change of residence for family movement.
- In cases of working students, providing in the moment of the request, to be met of discharge in the National Health Service by an anticipation of 6 months.
- The students that, they still having at the maximum 2 subjects to finish the studies, had exhausted the sittings having in his University of origin for the same ones.

- The students who credit in evidence to have obtained an academic performance up to 80 %.

This type of access to our Faculty includes approximately 25 students by year.

We also regularly receive foreign students within official International Exchange Programmes. Our Faculty has Socrates/Erasmus agreements with 17 European Faculties of seven countries (15 outgoing students and 36 incoming students in the academic year 2008/09). In addition our Faculty has SICUE agreements with nine Spanish Veterinary Faculties (7 outgoing students and 7 incoming students in the academic year 2008/09).

Academic Year	Exchange Programme	Incoming students	Outgoing students
2007/2008	Socrates/Erasmus	8 (Italy) 2 (Germany) 2 (Portugal)	3 (Belgium) 1 (France) 2 (Hungary) 7 (Italy) 1 (Portugal)
2007/2008	SICUE	2 (Santiago de Compostela) 2 (Madrid) 2 (Las Palmas de Gran Canaria) 1 (Cardenal Herrera-Ceu)	2 (Cardenal Herrera-Ceu) 2 (Madrid) 2 (Córdoba) 2 (Las Palmas de Gran Canaria) 1 (Murcia) 1 (Barcelona)
2008/2009	Socrates/Erasmus	6 (Turkey) 26 (Italy) 1 (France) 3 (Roumanie)	1 (Belgium) 11 (Italy) 3 (Portugal)
	SICUE	2(Santiago de Compostela) 1 (Madrid) 2 (León) 2 (Murcia)	2 (Madrid) 2 (Córdoba) 1 (Las Palmas de Gran Canaria) 1 (Zaragoza) 1 (Barcelona)

## Agreements with European Veterinary Faculties:

ECOLE NATIONALE VETERINAIRE NANTES	France
UNIVERSITÄT BERLIN LUDWIG-MAXIMILIANS-UNIVERSITÄT	Germany
UNIVERSIDADE DE EVORA UNIVERSIDADE DE TRAS-OS-MONTES E ALTO DOURO UNIVERSIDADE DO PORTO -INSTITUTO DE CIENCIAS BIOMÉDICAS ABEL SALAZAR UNIVERSIDADE TECNICA DE LISBOA	Portugal
UNIVERSITÁ DEGLI STUDI DI BARI UNIVERSITÁ DEGLI STUDI DI BOLOGNA UNIVERSITÁ DEGLI STUDI DI CAMERINO UNIVERSITÁ DEGLI STUDI DI NAPOLI -FEDERICO II UNIVERSITÁ DEGLI STUDI DI PADOVA UNIVERSITÁ DEGLI STUDI DI PARMA UNIVERSITÁ DEGLI STUDI DI PERUGIA UNIVERSITÁ DEGLI STUDI DI TERAMO UNIVERSITÁ DEGLI STUDI DI TORINO	Italy
UNIVERSITATEA DE STIINTE AGRICOLE SI MEDICINA VETERINARIA CLUJ-NAPOCA	Roumanie
UNIVERSITÉ DE LIEGE	Belgium
UNIVERSITY ADNAN MENDERES	Turkey

Programme of International Grant BANCAJA-UNIVERSITY OF EXTREMADURA "AMERICAMPUS": His aim is to stimulate the international mobility of the students of the University of Extremadura towards countries of Latin America and North America to deal studies during a semester.

UNIVERSIDAD AUTÓNOMA DE YUCATÁN (Max. 1 Plaza) UNIVERSIDAD POPULAR AUTÓNOMA DEL ESTADO DE PUEBLA (Max. 1 plaza)	MÉXICO
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**Foreseen Changes in Annual Intake. Adjustment to These Changes**

At the moment there are no plans to change the annual student intake. Our Faculty Board would like to decrease slightly the number of admissions, to 80 per year. However it is going to be difficult to achieve this, since we have a very high demand. Moreover, our University and the Extremadura Autonomous Community would probably not approve this reduction, as it would imply a decrease in their revenue derived from students' fees and increase cost per student.

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

Year	Number applying for admission	Number admitted	
		"standard" intake	Other entry modes (*)
2008/2009	688	100	32
2007/2008	682	100	27
2006/2007	680	100	21
2005/2006	664	100	17
2004/2005	654	100	4
Average	673	100	20

(\*) Students from other Veterinary Faculties

**9.1.3. Student Flow**

Table 9.3 establishes to what extent students make progress in their studies. To this end, we look at students who were admitted initially and which year they have reached after the minimum number of years (MNY).

	Number of students present after admitted year (2003/2004)
1 <sup>st</sup> year	-
2 <sup>nd</sup> year	-
3 <sup>rd</sup> year	4
4 <sup>th</sup> year	8
5 <sup>th</sup> year	36
Graduate students	33
Transfer to other Universities	7
Dropped students	9
Number of undergraduate students	688

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

Year	Number graduating
2008/2009	83
2007/2008	103
2006/2007	88
2005/2006	78
2004/2005	80
Average	86

**Table 9.5.** Average duration of studies (distribution of students in years)

Duration of attendance	Number
5 years	28
6 years	18
7 years	18
8 years	18
9 years	8
> 9 years	11

#### Requirements for progressing to a subsequent year of the course

Our Veterinary Degree comprises five years, divided in two cycles:

- First cycle: 1st and 2nd year of the degree.
- Second cycle: 3<sup>rd</sup>, 4th and 5th year of the degree.

In general, there are no official limitations for passing from one year to the next, or for passing from the first cycle to the second cycle. There are limitations on enrolling in the core subjects *Obligatory extramural fieldwork (Estancias)* according to RD 1497/1981 and the Faculty Board (22-mayo, 2006) in which it is regulated that to carry out studies in an external entity, students must have obtained more than 49 % of the core credits for their degree (198,5 credits up of 398).

**Academic circumstances under which the Faculty would oblige students to leave the course (DOE nº 116, October, 2, 2003)**

First year students who have not passed one annual subject or two four-month subjects in the two ordinary sittings available in that academic year, will not be able to continue their studies in this Faculty. In addition, students who have unsuccessfully used up all the possible retakes for one subject (maximum of six) will have to leave our Faculty. In the cases of all six of these retakes being used and to finish his studies he lacks a maximum of 25 % of the global credits, if there is the possibility of asking the Chancellor for a 'grace' retake.

## 9.2. COMMENTS

### Comment on standard of the students starting the course

In general, students entering the first year have outstanding secondary school academic records. The access mark is medium/high for the University of Extremadura. Moreover, the percentage of students enrolled in the first-year of this Faculty who choose Veterinary Science as their first option for University study is very high (92/103); thus, the level of motivation of our students tends to be elevated.

### Comment on the ability of the Faculty to satisfactorily decide the number of students it can accept

The Faculty Board proposes the number of places, which must be approved by the University of Extremadura Government Council and also by the University Co-ordination Committee of the Ministry of Science and Innovation (formerly name Ministry of Education and Science) which has the final decision.

### Comment on the factors that determine the number of students admitted

We try to adapt our student intake to the availability of human and material resources and means. The University of Extremadura also takes into account the demand for Veterinary graduates in the labour market.

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

The number of teachers makes difficult to maintain small practical groups in which the individual student carries out the practice and is not limited to merely observing the teacher. We consider that the teaching staff, especially in some lacking areas, should be increased.

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

The Teaching Affairs Committee undertakes evaluation and monitoring of the teaching/learning process. Its meetings (which always include students) improve our perception of the situation and the adequacy of students' progress. It is also possible to analyse the latter through teachers' personal tutorials.

Comment on the percentage of students that will eventually graduate

The number of graduate students has remained more or less stable along the last years (average: 86 per year). An increase in the number of graduates from our Faculty is not expected in the next years, due to the present student intake limitations.

## Chapter X.

# ACADEMIC AND SUPPORT STAFF







## 10.1. FACTUAL INFORMATION

Table 10.1. Personnel in the establishment provided for veterinary training

1. Academic staff	Budgeted posts (FTE)		Non-budgeted posts (FTE)		Total (FTE)	
	VS	NVS	VS	NVS	VS	NVS
Teaching staff	68	36	-	-	68	36
Research staff <sup>(1)</sup>			2.31	1.32	2.31	1.32
Total FTE	68	36	2.31	1.32	70.31	37.32
Total FTE (VS + NVS)	104		3.63		107.63	
<b>2. Support staff</b>						
a) Responsible for animal care and handling <sup>(2)</sup>	4		-		4	
b) Responsible for preparing practical and clinical teaching <sup>(3)</sup>	21		-		21	
c) Responsible for administration, services, maintenance, etc <sup>(4)</sup>	21		-		21	
d) Engaged in research work <sup>(5)</sup>	-		72		72	
e) Others (VCH) <sup>(6)</sup>			10		10	
Total support staff	46		82		128	
<b>3. Total staff</b>	<b>150</b>		<b>85.63</b>		<b>235.63</b>	

FTE: Full time equivalent

VS, Veterinary staff, NVS, no veterinary staff

(1) PhD students performing also teaching activities (financed by the Spanish Education Ministry or Regional Government). They are involved with 0.33 FTE each one.

(2) Jose Germán Águila Pinar (Veterinary Clinical Hospital), Rubén Flores Polán (Teaching Farm), Andrés Quintanilla Salas (Teaching Farm), Noelia Tejero Mateos (Department of Animal Medicine).

(3) Laboratory technicians in the Faculty and VCH

(4) 20 FTE in the Faculty and 1 FTE in VCH

(5) Technicians financed by research projects, PhD students and others research staff (only performing research activities without teaching activities)

(6) 8 FTE contracted veterinarian and 2 veterinarian internship (all of them financed by the VCH foundation)

Table 10.2. Teaching posts at the Faculty

Tenured staff (Civil-Servant)		Contracted staff	
Full Professors	Professors	Permanent	Temporary
12	73	9	10
85		19	
104			

Table 10.3. Allocation of academic (veterinary surgeon and non-veterinary surgeon) teaching staff (expressed as FTE) and support staff to the various departments.

Name of Department	Academic Staff						Support Staff		
	CU	TU	CD	AS/AYD /AY/RC	PS	PI	Teach/ Research (b+d+e)	Animal care (a)	Admin. (c)
	VS-NVS	VS-NVS	VS-NVS	VS-NVS	VS-NVS	VS-NVS			
Biochemistry, Molecular Biology & Genetics	-	0-7	0-2	0-1	-	0-2	9	-	-
Anatomy, Cellular Biology & Zoology	0-1	0-2	0-1	-	-	1-0	6	-	-
Medicine and Surgical Therapeutic	-	0-1	-	-	0-1	-	-	-	-
Mathematics	-	0-2	-	-	-	-	-	-	-
Applied Physical	-	0-2	-	0-1	0-1	-	8	-	-
Organic and Inorganic Chemistry	-	0-1	0-2	0-1	-	-	2	-	-
Physiology	0-1	3-2	2-0	0-1	-	0-2	8	-	-
Animal Health	4-0	12-1	-	-	-	2-0	26	-	-
Animal Medicine	2-0	21-0	1-0	2-0	-	-	12	1	-
Animal Production and Food Sciences	4-0	15-4	1-0	1-0	0-1	4-0	22	-	-
VCH	-	-	-	-	-	-	10	1	1
Teaching farm	-	-	-	-	-	-	-	2	-
Faculty, Centralised Services	-	-	-	-	-	-	-	-	20
TOTAL	10-2	51-22	4-5	3-4	0-3	7-4	103	4	21

CU (*Catedrático de Universidad*): Full professor, civil servant, full time

TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

AS/AYD/AY/RC (*Asociado/Ayudante Doctor/Ayudante/Ramón y Cajal*): Contracted profesor, non-permanent, full time

PS (*Profesores Sustitutos, TU interinos e I3*): Contracted professor to cover vacancies or teaching reduction of the other Professor

PI (*Personal Investigador*): Scholarship holders or hired positions performing teaching activities

## RATIOS

R1: No. total academic FTE in veterinary training/ No. undergraduate veterinary students

$$\frac{\text{No. total academic FTE}}{\text{No. veterinary undergraduates}} = \frac{107.63}{688} = \frac{1}{6.39}$$

R2: No. total FTE at faculty / No. undergraduate veterinary students

$$\frac{\text{No. total FTE at faculty}}{\text{No. veterinary undergraduates}} = \frac{104}{688} = \frac{1}{6.61}$$

R3: No. total VS FTE in veterinary training / No. undergraduate veterinary students

$$\frac{\text{No. total VS FTE}}{\text{No. veterinary undergraduates}} = \frac{70.31}{688} = \frac{1}{9.78}$$

R4: No. total VS FTE in veterinary training / No. students graduating annually

$$\frac{\text{No. total VS FTE}}{\text{No. students graduating annually}} = \frac{70.31}{86} = \frac{1}{1.22}$$

R5: Total FTE academic staff / Support staff

$$\frac{\text{Total FTE academic staff}}{\text{Total FTE support staff}} = \frac{107.63}{128} = \frac{1}{1.18}$$

Outline how the allocation of staff to the Faculty is determined.

Outline how the allocation of staff to the departments (or other units) within the Faculty is determined.

### 10.1.1. Teaching staff

The Departments have the right to request new academic positions and hire teaching staff. There are two types of academic staff: tenured and hired, each one recruited in a different way. In both cases, funding is provided by the University of Extremadura and the Regional Government. The status of University teaching staff is currently governed by the Organic Law on Universities (published in BOE 8307 of 24 December 2001 and amended by BOE 89 of 13 April 2007), by the regulations of the Regional Government and by Statutes of the University of Extremadura.

Tenured positions (called "*profesor titular (TU)*"=Professor, and "*catedrático (CU)*"=Full Professor) are civil servants. Non-tenured or hired (contracted) posts are mainly intended for young teachers.

Staff needs are determined by Departments themselves, who present the request for posts to the Vice-Chancellor of Teaching staff of the University of Extremadura. Requests to take on additional staff or replace current staff are approved or rejected by the University depending on the funds available and to the staff needs calculated by the Chancellor's Office for each Department according to the so-called University Teaching Capacity in the different Areas of Knowledge. This document establishes the need for academic staff based on the number of students, teaching credits, number of practical groups, and type of practical teaching of each Area of knowledge.

If the request is approved by the Chancellor's Office, and if it refers to civil servant appointments (TU, CU), the Chancellor forwards the request to the Secretariat of the University Coordination Committee; if approved, the post is advertised and selection is performed following the National Certification Process (according to regulations laid down in the Organic Law on Universities).

When posts for contracted teachers are involved, the Chancellor's Office carries out the recruitment and appointment process as per the regulations set out in the LOU and by the Regional Government. All contracted lecturers teach in the department in accordance with the terms of their contracts; in most cases, they also carry out research.

All permanent tenured and non-tenured (contracted) teaching staff are full-time employees (37.5 hours/week): eight hours of classes (21.33%); six hours of tutorials (16%) and the remaining 23.5 hours (62.66%) of research and student advisory services.

The maximum teaching load, based on 8 hours of classes per week and 30 weeks of classes per year, is 240 hours, the equivalent of 24 full-time credits.

### 10.1.2. Support Staff

The number and distribution of Administration and Services Personnel (PAS) is laid down in the current Employment Schedule (RPT) at University level. This schedule takes into account the requirements of each Faculty and/or Department involved.

There are two types of Administration and Service Personnel: Civil servants and Contracted positions. In both cases, funding, selection and staff appointments are dealt with at University level, i.e. funds are provided from the University budget, except for research support staff, whose salaries may be paid through research contracts and projects funded by private or public bodies outside the University.

Civil-service support staff is appointed through public examinations held by the University itself. Short-term hired support staff are paid from the University budget, and selected from a standing shortlist of qualified candidates. Posts linked to research contracts or projects are filled by the research group in question, in accordance with previously published criteria.

Indicate whether there are difficulties in recruiting or retaining staff.  
Describe (if appropriate) any relevant trends or changes in staff levels or the ability to fill Vacancies over the past decade.  
Indicate whether it is easy to employ additional staff from service income (e.g. from revenues of clinical or diagnostic work).

The number of new staff appointed by the Chancellor's Office tends to be lower than that recommended by the Departments, who are more directly aware of their needs. One aspect we consider to be positive is the high level of competence observed in contracting new staff, resulting in the better preparation of candidates.

Candidates for permanent posts are required to comply with a set of demanding criteria at national level. The clear criteria laid down by the appointments committee for the selection of temporary (non-budgeted) staff has also given rise to

a highly-competitive field of candidates and thus to well-qualified staff. Nonetheless, the University has not yet managed to create a “teaching career” that would guarantee teachers stable employment and fair prospects for professional promotion in accordance with pre-established criteria.

Concerning staff employment from Service Income, the VCH has the capacity to contract clinical, support and administrative staff charged to its budget. The VCH budget includes payments to eight contracted veterinarians and two internship veterinarians. Besides, two additional veterinarians are working as support staff to the Ambulant Clinic Service at the VCH, financed by a private enterprise (TRAGSA).

Describe the regulations outside work, including consultation and private practice, by staff working at the establishment.

Describe the possibilities and financial provisions for the academic staff to:

- a) attend scientific meetings
- b) go on a sabbatical leave.

Full-time teaching staffs are not allowed to work outside the University (either as consultants or in private practice), except in official institutions with the prior approval of the University (Law 53/1984, 26 December, regulating additional work by civil servants). Part-time lecturers are allowed to take additional employment outside the University. Both the Organic Law on Universities and the University Statutes permit the signing of contracts between teaching staff and people, Universities and public or private bodies for a specific scientific task.

Academic staff should seek financial support from external sources to attend scientific meetings. These funds usually come from the Regional Government who offers economic help for the “Official research groups” for this type of activity, although the quantity of funds is quite limited. Additional funds usually come from research grants, projects, contracts, etc. Attendance at congresses is funded only when the applicant will be presenting a paper or poster. The maximum limit for bursaries differs depending on the location of the congress.

Lecturers who have taken on additional administrative duties may request leave in order to undertake research or refresher courses; the maximum leave allowed is one year, and varies depending on the duration of the administrative duties undertaken.

## 10.2. COMMENTS

Comment of the number of personnel in the various categories.

### 10.2.1. Academic Staff

The number and, more importantly, the quality of the teaching staff have been improving steadily for the last ten years. There were 84 lecturers in 2000, compared to 104 at present.

In recent years, there has been an important stabilisation of teaching staff which has had a positive effect on specialisation and dedication to teaching in the Faculty (65.4% of which are civil servants). We consider that the academic staff are of high quality, and are relatively young (average age: 45). This is a positive situation, since it gives rise to high degree of motivation and a keen desire to engage with the challenges posed by European Convergence over the next few years: the adoption of new technologies and the application of new teaching methods.

### 10.2.2. Support staff

The number of support staff has increased during the last ten years due to the research projects or diagnostic work. These two activities have been very active, providing an important potential for the recruitment of new people, mostly Technical Staff and Graduate students. We consider this a very positive situation, although the caveat might be that those are non-permanent positions that may disappear in less positive circumstances.

We consider that the number of support staff must be increased, especially in offering support for all teaching activities. For example, all support staff for teaching activities work in the mornings and cannot help to organise and prepare afternoon practical sessions. Particularly problematic are situations in which a member of the support staff is off sick. The University does not usually send a substitute teacher for 15 days, which, added to the lack of staff, makes it tremendously difficult to carry out normal teaching activities.



Comment on the salary levels, specially those of the academic staff in relation to the level of income in the private sector

Currently, implementation of some economic incentives from the Regional Government has improved salary levels for academic staff. Merits concerning teaching quality, research quality, and participation in the University management are evaluated each 5 years by the Regional Government. However, the teaching staff has asked for a larger increase in pay comparable with other workers in the Autonomous Community at the same administrative level, considering that the high qualifications required to obtain a University teaching post are not completely reflected in the financial rewards they receive.

With respect to the comparison of income levels in the private sector, this is variable, with great instability in the job market for new graduates being very noticeable in recent years. When compared to this unstable situation, the teaching salaries of the University staff are obviously clearly superior.

Gross salaries for various categories of academic staff at the Faculty are shown below.

**Table 10.4.** Gross monthly salaries (Euros) for various categories of Tenured Academic Staff<sup>1</sup>

Category	Full Professor (CU)	Assistant Professor (TU)
Salary	1157.82	1157.82
Post Adjustment	911.92	835.22
Specific bonus	1028.18	512.11
Three-year increment <sup>2</sup>	44.51	44.51
Teaching merit bonus <sup>3</sup>	155.92	126.29
Research merit bonus <sup>4</sup>	155.92	126.29
Homologate Bonus	162.83	162.83
Regional Government bonus for teaching and research quality <sup>5</sup>	70.83	70.83
Regional Government bonus for management University <sup>6</sup>	Variable	Variable

1 Monthly salaries are subject to income tax (IRPF), pension contributions (105.42 euros) and health insurance contributions (46.34 euros). Staff receive fourteen monthly payments (extra payments in June and December).

2 Paid for every three years of service. There is no limit on the number of increments.

3 Renewable every five years. Maximum of six successive bonuses.

4 This bonus is paid following evaluation by the national Committee on Research Work. It can be applied for every six years. Maximum of five successive bonuses.

5 The Regional Government bonus is paid following the evaluation by the Autonomous Government and depending of the experience years of the teacher. Maximum of four successive bonuses.

6 The Regional Government gives a bonus for management activities at the UEX (the 20% of the complement received during the post). Maximum of 1600 € a year.

**Table 10.5.** Gross monthly salaries for various categories of non-tenured (contracted) academic staff<sup>1</sup>

Category	Contracted Doctor (CD)	Assistant Doctor (AYD)	Assistant (AY)	Sustitute Teacher (PS)	Associate type III (AS)
Salary	1070.44	1070.44	1070.44	1070.44	926.24
Post Adjustment	664.90	589.69	332.72	488.01	668.20
Specific bonus	330.92	32.45	32.45	170.02	330.93
Homologate bonus	162.83	162.83	162.83	162.83	162.83
Three-year increment <sup>2</sup>	38.5	-	-	-	-

1 Monthly salaries are subject to income tax (IRPF). Staff receive fourteen monthly payments (extra payments in June and December).

2 Paid for every three years of service. There is no limit on the number of increments.

Comment on the percentage of veterinarians in the academic staff

A total of 65.4% of the Faculty's academic staff are veterinarians. The large majority of the Academic Staff in the Departments of Animal Health, Animal Medicine and Animal Production and Food Science is comprised of veterinarians. However, this percentage is very low in the Basic Sciences Departments.

### 10.3. SUGGESTIONS

The R1; R2; R3; R4 and R5 ratios for the Faculty are fairly satisfactory. A few comments can be made in this respect:

- The Faculty or the Departments should have greater say in the appointment of support staff contracted by the University, in order to make sure that new staff meets specific Faculty requirements.
- Numbers of the support staff could be increased to ensure adequate cover in both morning and evening shifts.
- Although contracts for researchers and research support staff can be funded through research projects, the Chancellor's Office, and the national and

- regional governments, should take full advantage of any opportunity for extra funding for the appointment of specialist teaching and research support staff.
- The job descriptions and required qualifications for support staff have not been updated by the Chancellor's office for the last few years; this should be done, in order to ensure that candidates meet more closely the Faculty's specific requirements.
  - The number of students in practical classes in the various departments should be reviewed, since certain departments tend to teach practices in smaller groups than established by law, particularly in the fourth and fifth years of the degree course.
  - To achieve the goal of the new teaching methods (didactic teaching to small groups, problem-oriented learning, etc) will be necessary to increase the number of academic staff.

#### DEPARTMENT OF BIOCHEMISTRY, MOLECULAR BIOLOGY & GENETICS

##### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Rafael Blasco Pla	Biochemistry and Molecular Biology	Doctor	9	No (Chemistry)	TU
María Julia Bragado González	"	Doctor	9	No (Biologist)	TU
María Luisa Campo Guinea	"	Doctor	24	No (Biologist)	TU
Francisco Centeno Velázquez	"	Doctor	15	No (Biologist)	TU
Inés Corraliza Generelo	"	Doctor	20	No (Biologist)	CD
M <sup>a</sup> Isabel Guijo Sánchez	"	Doctor	8	No (Biologist)	AS
M <sup>a</sup> Isabel Igeño González.	"	Doctor	9	No (Biologist)	TU
M <sup>a</sup> Jesús Lorenzo Benayas	"	Doctor	10	No (Biologist)	TU
Faustino Merchán Sorio	"	Doctor	9	No (Biologist)	CD
Alberto Quesada Molina	"	Doctor	10	No (Biologist)	TU

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

AS (*Asociado*): Contracted professor, non-permanent, full time

##### Research and Support Staff

First Name, Surname	Area of expertise	Category
Ricardo Argent Ternerero	Biochemistry and Molecular Biology	Technician
Juan Carlos Alonso Casillas	"	Technician
Gloria Gutiérrez Montero	"	Technician
Javier Corcho Molano	"	Technician
Patricia Rojo Domínguez	"	Technician
Felipe Acera Hernández	"	PhD student
Maria Isabel Carmona Gallardo	"	PhD student
Gracia Becerra León	"	PhD student
Alejandro Gallardo Soler	"	Technician
Marta Olivera Santa Catalina	"	PhD student
Montaña Caballero Bermejo	"	PhD student

### DEPARTMENT OF ANATOMY, CELLULAR BIOLOGY & ZOOLOGY

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Juan Carranza Almansa	Zoology	Doctor	26	No (Biologist)	CU
Sebastián Hidalgo de Trucios	"	Doctor	25	No (Biologist)	TU
Inmaculada Mateos Montero	"	Doctor	20	No (Biologist)	TU

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

#### Research and Support Staff

First Name, Surname	Area of expertise	Category
Antonio Flores Cerro	Zoology	Technician
Leticia Castillo Hernández	"	PhD student
Javier Pérez González	"	Research
Francisco Antonio Gómez Correa	"	Research
Cristina Sánchez Prieto	"	PhD student
Sheila Martín Valle	"	Technician
Pedro Fernández Llarío	"	Research

### DEPARTMENT OF MEDICINE AND SURGICAL THERAPEUTIC

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Guillermo Gervasini Rodríguez	Pharmacol.	Doctor	5	No (Pharmac.)	TU
Sara Isabel Ramos Rodríguez	"	Doctor	1	No (Biologist)	PS

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

PS (*Profesores Sustitutos e I3*): Contracted professor to cover vacancies or teaching reduction of the other Professor

### DEPARTMENT OF MATEMÁTICAS

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Carlos Pérez Sánchez	Mathematics	Doctor	10	No (Mathematics)	TU
Alfonso Ramos Cantariño	"	Doctor	12	No (Mathematics)	CD

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

### DEPARTMENT OF ORGANIC AND INORGANIC CHEMISTRY

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Carlos Fernández Marcos	Chemistry	Doctor	10	No (Chemistry)	TU
Guadalupe Silvero Enríquez.	"	Doctor	9	No (Chemistry)	CD
Jesús Díaz Álvarez	"	Doctor	2	No (Chemistry)	AYD
Ana Gómez Neo	"	Doctor	1	No (Chemistry)	CD

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

AYD (*Ayudante Doctor*): Contracted professor, non-permanent, full time

#### Research and Support Staff

First Name, Surname	Area of expertise	Category
José Javier Delgado Muriel	Chemistry	Technician
Rosa María Carrillo del Cacho	"	Technician

### DEPARTMENT OF APPLIED PHYSICAL

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Antonio Baeza Espasa	Physical	Doctor	26	No (Physician)	TU
Conrado Miró Rodríguez	"	Doctor	26	No (Physician)	TU
Alejandro Salas García	"	Doctor	11	No (Physician)	PS (TU Interino)
José Ángel Corbacho Merino	"	Doctor	11	No (Physician)	AS

\* TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

AS/AYD/AY/RC (*Asociado/Ayudante Doctor/Ayudante/Ramón y Cajal*): Contracted profesor, non-permanent, full time

PS (*Profesores Sustitutos, TU interinO e I3*): Contracted professor to cover vacancies or teaching reduction of the other Professor

### Research and Support Staff

First Name, Surname	Area of expertise	Category
Felipe Mogeno Cantero	Physical	Technician
Álvaro Collado Silgado	"	Technician
Mercedes Navarro Parra	"	Technician
Guillermo Sánchez Lucas	"	Technician
José Vasco Vargas	"	Technician
Javier Miranda Carpintero	"	PhD student
Ismael Vallejo Jiménez	"	PhD student
Antonio Rodríguez Perulero	"	Technician

### DEPARTMENT OF PHYSIOLOGY

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Pedro J. Camello Almaraz	Physiology	Doctor	18	Yes	TU
Cristina Camello Almaraz	"	Doctor	8	Yes	CD
Luis J. García Marín	"	Doctor	18	No (Biologist)	TU
Antonio González Mateos	"	Doctor	8	Yes	TU
Juan Antonio Rosado Dionisio	"	Doctor	9	Yes	TU
Ginés M. Salido Ruiz	"	Doctor	25	No (Biologist)	CU
José Antonio Tapia García	"	Doctor	5	Yes	CD
Pedro Cosme Redondo Liberal	"	Doctor	1	No (Biologist)	RC
Raquel Tarazona Lafarga	Immunology	Doctor	7	No (Medicin)	TU

\* CU (*Catedrático de Universidad*): Full professor, civil servant, full time

TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

RC (*Contratado Ramón y Cajal*): Contracted professor, non-permanent, full time

### Research and Support Staff

First Name, Surname	Area of expertise	Category
Mercedes Gómez Blázquez	Physiology	Technician
Álvaro Miró Morán	"	PhD student

Isaac Jardín Polo	"	PhD student
Carmen Galán Pérez	"	Research
Natalia Alba Dionisio	"	PhD student
Javier García Casado	Immunology	Research
Juan José Gordillo González de Miranda	"	Technician
Sara Morgado García	"	PhD student
Beatriz Sánchez Correa	"	PhD student
María Rosario González Roncero	"	Technician

**DEPARTMENT OF ANIMAL HEALTH****Teaching Staff**

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
María del Prado Míguez Santiyán	Toxicology	Doctor	24	No (Pharmac.)	TU
Marcos Pérez López	"	Doctor	7	Yes	TU
Francisco Soler Rodríguez	"	Doctor	22	Yes	TU
Eva M <sup>a</sup> Frontera Carrión	Parasitology	Doctor	8	Yes	TU
Carlos Gómez Nieto	"	Doctor	23	Yes	TU
Miguel Angel Habela Martínez-Estellez	"	Doctor	26	Yes	TU
Juan Enrique Pérez Martín	"	Doctor	20	Yes	TU
David Reina Esojo	"	Doctor	25	Yes	CU
Francisco J. Serrano Aguilera	"	Doctor	23	Yes	TU
Emilio Mateos Yanes	Microbiology	Doctor	20	Yes	TU
Segundo Píriz Durán	"	Doctor	23	Yes	CU
Santiago Vadillo Machota	"	Doctor	25	Yes	CU
Jorge Valle Manzano	"	Doctor	25	Yes	TU
Juan Manuel Alonso Rodríguez	Infectious Diseases	Doctor	22	Yes	TU
Javier Hermoso de Mendoza Salcedo	"	Doctor	22	Yes	TU
Miguel Hermoso de Mendoza Salcedo	"	Doctor	22	Yes	CU
Joaquín M. Rey Pérez	"	Doctor	21	Yes	TU

\* CU (*Catedrático de Universidad*): Full professor, civil servant, full time  
 TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

**Research and Support Staff**

First Name, Surname	Area of expertise	Category
Manuel Ortega Sánchez	Toxicology	Technician
Irene de la Casa Resino	"	PhD student
Manuel Gómez Blázquez	Parasitology	Technician

## ACADEMIC AND SUPPORT STAFF

Jesualdo Carcelén Rodríguez	"	Research
Virginia Iniesta Orozco	"	Research
Javier Fernández Cotrina	"	Research
Rafael Calero Bernal	"	PhD student
Jose Antonio Gamito Santos	"	PhD student
Francisco Javier Pariente Palomino	"	PhD student
Isidro Suárez López	"	PhD student
Antonio Moreno	"	PhD student
Victoria Baz Agudo	"	Technician
Pablo Pajares del Sol	"	Technician
Jaime Sánchez Díaz	"	Technician
Isabel Monroy Pérez	"	Technician
David Grajera Cordero	"	Technician
Eulogio Fernández Corrales	Microbiology	Technician
Patricia Roncero Clemente	"	PhD student
Gonzalo Palomo Guijarro	"	PhD student
María Jorge Campos	"	PhD student
Montaña Rodríguez Gilete	Infectious Disease	Technician
Remigio Martínez Pérez	"	PhD student
Waldo Luis García	"	PhD student
José Manuel Benítez	"	PhD student
María Cortés Gómez	"	PhD student
Félix Bermejo Martín	"	PhD student
Belinda Corchero	"	Technician
Raquel Rubio Gómez	"	Technician

### DEPARTMENT OF ANIMAL MEDICINE

#### Teaching Staff

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Antonio Franco Rubio	Anatomy and Comparative Anatomy	Doctor	21	Yes	TU
María Teresa Guillén Ramírez	"	Doctor	25	Yes	TU
Ana Isabel Mayoral Calzada	"	Doctor	20	Yes	TU
Sergio Regodón Mena	"	Doctor	25	Yes	TU
Angel Robina Blanco-Morales	"	Doctor	26	Yes	CU
José Manuel Vivo Rodríguez	"	Doctor	26	Yes	TU
María Esther Durán Florez	"	Doctor	23	Yes	TU
Antonio Gázquez Ortiz	"	Doctor	26	Yes	CU
Luis Gómez Gordo	"	Doctor	18	Yes	TU
A. Javier Masot Gómez-Landero	"	Doctor	21	Yes	TU
Eloy Redondo García	"	Doctor	24	Yes	TU



## ACADEMIC AND SUPPORT STAFF

Vicente Roncero Cordero	"	Doctor	25	Yes	TU
Luis Javier Ezquerro Calvo	Animal Medicine and Surgery	Doctor	23	Yes	TU
Joaquín Jiménez Fragoso	"	Doctor	19	Yes	AS
Jesús María Usón Casaús	"	Doctor	23	Yes	TU
Miguel Ángel Vives Vallés	"	Doctor	23	Yes	TU
Eva María Pérez Merino	"	Doctor	12	Yes	AS
Cinta Mañé Seró	"	Doctor	23	Yes	TU
Rafael Barrera Chacón	"	Doctor	24	Yes	TU
Antonio Jiménez Redondo	"	Doctor	25	Yes	TU
Santiago Andrés Díaz	"	Doctor	17	Yes	TU
Joaquín Sánchez Peinado	"	Doctor	23	Yes	TU
Concepción Zaragoza Bayle	"	Doctor	14	Yes	CD
María Cruz Gil Anaya	"	Doctor	15	Yes	TU
Fernando Juan Peña Vega	"	Doctor	12	Yes	TU
Teresa de Jesús Roy Pérez	"	Doctor	21	Yes	TU

\* CU (*Catedrático de Universidad*): Full professor, civil servant, full time

TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

AS (*Asociado*): Contracted professor, non-permanent, full time

### Research and Support Staff

First Name, Surname	Area of expertise	Category
Miguel Masa Quirós	Anatomy and Comparative Anatomy	Technician
Asunción Ramos Chamizo	"	PhD student
Pilar Parra Piris	"	Technician
Ángela García González	"	PhD student
Caridad Masa Sánchez	Animal Medicine and Surgery	Technician
José María Cadenas Holguín	"	Technician
Miguel Ángel Moreno Collado	"	Technician
Germán Fernández Corrales	"	Technician
David Martín Hidalgo	"	PhD student
Juan María Gallardo Bolaños	"	PhD student
Antolín Morillo Rodríguez	"	PhD student
Beatriz Macías García	"	PhD student

**DEPARTMENT OF ANIMAL PRODUCTION AND FOOD SCIENCES****Teaching Staff**

First Name, Surname	Area of expertise	Degree	Experience (Years)	Vet.	Post*
Leonor Martín Cáceres	Animal Production	Doctor	21	Yes	TU
Miguel Escribano Sánchez.	"	Doctor	12	Yes	TU
Ana Rota García	"	Doctor	22	Yes	TU
Julio Tovar Andrada	"	Doctor	24	Yes	CU
Miguel Angel Aparicio Tovar	"	Doctor	24	Yes	TU
Juan de Dios Vargas Giraldo	"	Doctor	17	Yes	TU
José Luis Fernández García	"	Doctor	18	Yes	TU
Margarita Martínez Trancón	"	Doctor	24	Yes	TU
José Ángel Padilla Peñas	"	Doctor	23	No (Biologist)	TU
Juan Carlos Parejo Rosas	"	Doctor	10	Yes	CD
Araceli Rabasco Mangas	"	Doctor	24	No (Biologist)	TU
María Antonia Chaso Criado	"	Doctor	23	Yes	TU
María Rosario Pascual Pascual	"	Doctor	23	No (Biologist)	TU
Pedro Luis Rodríguez Medina	"	Doctor	24	Yes	TU
Miguel Angel Asensio Pérez	Nutrition and Bromatology	Doctor	22	Yes	CU
Elena Bermúdez Polo	"	Doctor	22	Yes	TU
Juan José Córdoba Ramos	"	Doctor	22	Yes	CU
Félix Núñez Breña	"	Doctor	20	Yes	TU
María del Mar Rodríguez Jovita	"	Doctor	11	Yes	TU
M <sup>a</sup> Jesús Andrade Gracia	"	Doctor	1	Yes	AY
David Hernández Moreno	"	Doctor	0,5	No (Food Technol.)	PS
Teresa Antequera Rojas	Food Technology	Doctor	23	Yes	TU
Carmen García González		Doctor	25	Yes	TU
Jorge Ruiz Carrascal		Doctor	16	Yes	TU
Ramón Cava López		Doctor	11	Yes	TU
Sonia Ventanas Canillas		Doctor	3	Yes	AYD
Jesús Ventanas Barroso		Doctor	26	Yes	CU

\* CU (*Catedrático de Universidad*): Full professor, civil servant, full time

TU (*Profesor Titular de Universidad*): Professor, civil servant, full time

CD (*Profesor Contratado Doctor*): Contracted PhD holding professor, permanent position, full time

AY (*Ayudante*): Contracted professor, non-permanent, full time

PS (*Profesores Sustitutos e I3*): Contracted professor to cover vacancies or teaching reduction of the other Professor

## Research and Support Staff

First Name, Surname	Area of expertise	Category
José Antonio Andrada Bazaga	Animal Production	Technician
Jürgens Robledo Berrocal	"	PhD student
Francisco González Vega	"	PhD student
Juan Luis Rodríguez Cruz	"	Technician
Justa Salazar Núñez	"	Technician
Guadalupe Rubio Cerrillo	"	Technician
M <sup>a</sup> del Prado Vivas Cedillo	"	Technician
Eusebio Carrasco Redondo	"	Technician
María Jesús Guerrero Mateos	"	Technician
Librada Jiménez del Nero	Nutrition and Bromatology	Technician
Alicia Rodríguez Jiménez	"	PhD student
M <sup>a</sup> del Mar Carvajal	"	Technician
Rubén Gordillo Durán	"	Technician
M <sup>a</sup> Isabel Luque Caballero	"	Technician
Elena Rodas García-Riaño	"	Technician
Inmaculada Flores Cerro	Food Technology	Technician
José Sánchez del Pulgar Rico	"	PhD student
Verónica Fuentes del Castillo	"	PhD student
Jorge Tovar López	"	Research
Raquel Reina Toribio	"	Research
Mar Roldán Romero	"	PhD student
Ana Antúnez Gómez	"	Technician
Ana Mostazo Lázaro	"	Technician
Julia Calvarro Labrador	"	Technician
Luis Ladero García	"	Technician
Víctor Cantero Mena	"	Technician
Trinidad Pérez Palacios	"	PhD student

Chapter XI.

# CONTINUING EDUCATION





**CHAPTER XI. CONTINUING EDUCATION****11.1. FACTUAL INFORMATION**

Describe the role of the Faculty in providing continuing education

The faculty hosts a Master course in **Meat Science and Technology**. This is the third year in which the master is imparted. Besides, the present year has started the **Universitary Master on Research in Health Science, speciality on Veterinary** enrolling an important number of veterinary postgraduate students. The Faculty regularly hosts many continuing education activities, mainly in clinical subjects. The recent activities are summarized as follow:

**Year 2007**

International Congress of the Spanish Society of Veterinary Traumatology

Reptile clinics and management

Introduction to Small Animal Clinics

II Course on Equine Clinics

Canine and feline ethology

Iberian pig production

**Year 2008**

Advances in animal reproduction

International course on equine laparoscopy

Diagnostic Imaging course

XIII International Congress of the Spanish Society of Veterinary Internal Medicine

Prevention of Parasitic Zoonoses in children (1º edition)

**Year 2009**

XVII International Congress of the Spanish Society of Veterinary Surgery

Equine Ultrasonography

Obstetrics and Reproduction of Exotic species

Prevention of Parasitic Zoonoses in children (2º edition)

Diagnosis and control of Parasites on Food

### 11.2. COMMENTS

Comment of the quality of the continuing education programs in which the establishment is involved.

Comment on the degree of participation of veterinarians in the continuing education programs in which the establishment is involved

Although the Faculty provides two Masters of high quality, continuing education in our Faculty is far from being developed. Many reasons explain this fact among them:

- a) Lack of tradition, for years the Spanish Universities have been focused in undergraduate and post graduate education (mainly leading to PhD degrees), and continuing education is not perceived as a task to be performed in the University, moreover endogamy and lack of study travels (sabbaticals, post docs, etc..) is still a problem in many of the teaching staff. This inertia is difficult to overcome.
- b) Lack of academic recognition. With the exception of Masters, continuing education has not been a priority for University leaders and as result of this the time an effort that the teaching staff put on this is not recognized.
- c) In Spain the participation in continuing education to maintain the license to practice is not compulsory. Perhaps the high percentage of veterinarians working for the administration involved in bureaucracy in Spain, explains this lack of interest in continuing education.

### 11.3. SUGGESTIONS

- In most cases continuing education activities relies in personal initiatives; for this a continuing education committee should be establish in the Faculty. This committee should propose an annual calendar of continuing education activities and facilitate be in charge of the administrative a logistic tasks.

- Internationalization of continuing education activities.

## CONTINUING EDUCATION

- Nationally structured Continuing Veterinary Education (Spanish Association of Veterinary Clinical Hospitals is working on it).
- A Master in Management of the Outdoor Livestock is being planned for starting in the 2010-2011 academic year.
- A Master in Equine Reproduction is also being planned.





## Chapter XII.

# POSTGRADUATE EDUCATION





## CHAPTER XII. POSTGRADUATE EDUCATION

## 12.1. FACTUAL INFORMATION

## 12.1.1. Clinical Speciality Training (Interns and Residents)

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

Table 12.1. Clinical speciality training

Clinical discipline	Number Interns	Number residents	Diploma or title anticipated
1. <i>Veterinary surgery</i>	3	2 applied	Diplomat in the European College of Veterinary Surgery
2. <i>Animal Reproduction</i>	3	2	Diplomat in the European College of Animal Reproduction

The Veterinary Clinical Hospital (VCH) offers a total of three internships of each Veterinary surgery and Animal Reproduction clinical disciplines for veterinary graduates. These interns actively collaborate in all the clinical services of the VCH, namely *Surgery (Soft Tissue Surgery, Traumatology), Emergencies and Hospitalisation, Dermatology, Neurology, Exotic animals, Internal Medicine (Cardiology, Digestive, Endocrinology, Urology, Medical Oncology, Paediatrics, Othorhinolaryngology), Ophthalmology, Reproduction y Neonatology, and Laboratory*. They collaborate also in the 24 guard duties in the VCH Equine Emergency Service. They are always under the supervision of senior clinicians. The candidates are selected for these positions based on their *Curricula vitarum*. Interns acquire additional Postgraduate training by means of seminars, rounds, clinical sessions, etc. During this two-year period, the interns also receive a salary from the VCH.

## 12.1.2. Research Education Programmes

To obtain the PhD degree is necessary to complete a PhD programme. PhD programmes include two main periods: the **Teaching period** and the **Research period**, followed by completion of the **Doctoral Thesis**. This self-evaluation comes at

a time of legislative change of university studies in Spain, to bring them to the European Space of Higher Education (ESHE).

There are officially two different ways coexisting in UEX in order to complete the teaching and researching periods right now:

1. First, governed by the provisions of the Royal Decree 778/1998, which still is in force. Students must take and pass 200 hours of theoretical and practical teaching in officially approved doctorate courses, during the **Teaching Period**. Afterwards, students can start the **Research Period**, during which they have to carry out 120 hours devoted to a particular research project, most frequently connected to and part of their Doctoral Thesis. The final stage of this teaching period is an examination in a public session in front of a Specialist Committee. This committee evaluates the research work done, and, if appropriate, the student will receive the Diploma of Advanced Studies (DEA), which implies the recognition of Proficiency in Research.

2. Following the Royal Decree 1393/2007, establishing the management of official university studies in Spain to bring them to the European Space of Higher Education (ESHE), in the next years to be admitted in the research period will be necessary to achieve a Master's Degree (of 60 ECTS credits). Master's teachings aim for the acquisition by the student for advanced training in specialized or multidisciplinary nature, focused toward academic or professional specialization, or to promote initiation into research tasks. The Master's Degrees are recognised throughout the European Union; students with a Master's Degree can register for a PhD.

*The Doctoral Thesis.* The student has to carry out a wholly original research project, under the direction of a Faculty teacher (with PhD degree) or alternatively an external PhD. Once finished, the PhD thesis must be submitted for approval to the University PhD Studies Committee (*Comisión de Doctorado*) and it must also receive five positive evaluations from external and internal experts. After passing all these steps, the work must finally be presented and approved by a Commission of five specialists in a public session.

The Veterinary Faculty organises and participates in several Postgraduate Research Programmes (Table 12.2)

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

Type of degree	Full time	Part time	Duration
<b>PhD</b>			
<i>Strategy for improvement and quality control of animal foods.</i>	13	-	2 years (200+120)
<i>Canine and Feline Medicine and Surgery</i>	19	-	2 years
<i>Veterinary</i>	26	-	2 years
<b>Master-</b>			
<i>Master's in Meat Science and Technology</i>	15	-	1 year. 60 ECTS credits
<i>University Research Master, speciality on Veterinary</i>	19	-	1 year. 60 ECTS credits

The PhD Programme *Strategy for improvement and quality control of animal foods* achieved recently a "Quality Mention" by the Spanish Ministry of Education and Science after a positive evaluation by the National Agency for Quality Assessment and Accreditation (ANECA). This PhD programme is organised by the Department of Animal Production and Food Science of the Extremadura University (UEX) and the Department of Food Hygiene and Technology of the León University.

In the last four years, a total of 4 Doctoral Theses have been presented and approved from this PhD programme in UEX. An average of 16 PhD-holding teachers from the UEX and 24 PhD-holding teachers from others universities have participated annually as teachers of this programme, >90% of whom are veterinary surgeons. The 23% of the postgraduate student enrolled in this PhD programme are veterinary graduates.

PhD Programme Courses: <i>Strategy for Improvement and Quality Control of Animal Foods</i>	Duration of training	Number enrolled	
		Learning period	Research period
	2 years	7	6
Study of the ripening process of cheese and new strategies for optimizing the process	30 hours	0	-
The sensory analysis in research and quality control of foods. Application to dairy products	30 hours	1	-
Predictors of quality meat products	40 hours	7	-
Volatile compounds responsible for the aroma in meat products	40 hours	7	-
Microbiological risk assessment associated with the consumption of foods of animal origin	30 hours	5	-
Strategies to control microbiological hazards in foods of animal origin	30 hours	1	-
Selection of starter cultures for meat products	40 hours	6	-
Advanced techniques in physical-chemical analysis of foods	30 hours	4	-
Methodology for the toxicological evaluation of food microorganisms	30 hours	5	-
Markers of quality for fresh meat and processed products	120 hours	-	2
Packaging of meat and Iberian pork products and their effects on quality	120 hours	-	2
Quality standardization in the meat industry	120 hours	-	1
Factors affecting the suitability and quality of Iberian pig meat intended for fresh consumption and processing into cured products	120 hours	-	1

The PhD Programme *Canine and Feline Medicine and Surgery* is organised by the Department of Animal Medicine. In the last month, 3 Doctoral Theses have been presented and are in process of reading from this PhD programme. An average of 10 PhD-holding teachers from the Veterinary Faculty and 7 PhD-holding teachers from the Center for Minimally Invasive Surgery (CCMI) have participated annually as teachers of this programme, 100% of which are veterinary surgeons. The 95% of the postgraduate student enrolled in this PhD programme are Veterinary graduates.

PhD Programme Courses: <i>Medicine and Surgery Canine and Feline</i>	Duration of training	Number enrolled	
		Learning period	Research period
	2 years	6	13
Canine and feline anaesthesia and anaesthetic monitoring	40 hours	6	-
Neurology and Neurosurgery in small animals	50 hours	3	-
Veterinary laparoscopy	30 hours	6	-
Recent advances in the diagnosis and therapy in clinical urology	30 hours	4	-
Ultrasonography in small animals	30 hours	6	-
Canine assisted reproduction	30 hours	3	-
Methods for diagnostic radiology and interventional radiology	30 hours	4	-
Laboratorial techniques used in canine and feline haematology and cytology	30 hours	4	-
Statistical applied to clinical and animal experiments	20 hours	1	-
Monitoring of anaesthetic depth	120 hours	-	2
Intraoperative and postoperative analgesia	120 hours	-	2
Characterization of proteinuria in canine glomerular disease	120 hours	-	1
Early diagnosis of kidney failure in dogs	120 hours	-	1
Comparison of cytologic and histopathologic analysis in canine cutaneous ontology	120 hours	-	1
Management of benign prostatic hyperplasia by endoluminal techniques	120 hours	-	1
Advanced seminal contrast	120 hours	-	3
Indicators of oxidative stress in pathological and toxicological diseases.	120 hours	-	1
Myelography in the dog	120 hours	-	1

The PhD Programme *Veterinary* is an Inter-Faculty Programme organised by Animal Medicine, Animal Health and Animal Production and Food Science departments. In the last four years, a total of 21 Doctoral Theses have been presented and approved from this PhD programme. An average of 56 PhD-holding teachers from the UEX have participated annually as teachers of this programme, 95% of which are veterinary surgeons. The 85% of the postgraduate student enrolled in this PhD programme are veterinary graduates.



## POSTGRADUATE EDUCATION

PhD Programme Courses: <i>Veterinary</i>	Duration of training	Number enrolled	
		Learning period	Research period
	2 years	13	13
Anatomy of the horse: clinical application.	60 hours	1	-
Toxicology of pesticides.	45 hours	5	-
Major deficiencies of trace elements in dehesa extensive sheep	30 hours	6	-
Immunological diagnostics in parasitology	60 hours	11	-
Technology of livestock production in the dehesa.	40 hours	5	-
Conservation of animal genetic resources.	40 hours	3	-
The animal welfare in animal production.	40 hours	6	-
Basic characteristics of extensive livestock production.	30 hours	6	-
Nutritional aspects for health and physical fitness of human.	50 hours	3	-
Application of molecular biology to epidemiology and diagnosis of infectious diseases of veterinary interest.	40 hours	3	-
Immunohistochemistry applied.	20 hours	1	-
Techniques of isolation and identification of anaerobic bacteria.	40 hours	1	-
Reproduction control in sheep.	20 hours	7	-
Application of ultrasound in animal reproduction	20 hours	6	-
Application of the NIRs analysis in the agrifood sector.	40 hours	3	-
Microbiology	120 hours	-	1
Parasitology	120 hours	-	2
Histology and Veterinary Pathology.	120 hours	-	1
Infectious pathology and epidemiology.	120 hours	-	3
Toxicology	120 hours	-	1
Animal reproduction	120 hours	-	2
Pathology of nutrition in small ruminants.	120 hours	-	1
Animal welfare.	120 hours	-	1
Packaging meat and Iberian pork products and their effects on quality	120 hours	-	1

Additionally, in the next table are shown the courses offered in the training stage of the PhD programmes in which other departments at the Veterinary Faculty participate.

PhD Programmes/Courses	Duration of training	Number enrolled*	
		Learning period	Research period
Chemistry Sciences (A)	2 years	4	10
Techniques of chromatography and spectroscopy combined.	30 hours	1	
Physics and Mathematics (B)	2 years	5	7
Transfer of radionuclides in the environment.	30 hours	1	-
Bayesian Sensitivity Analysis	40 hours	4	-
Simulation	40 hours	3	-
Physiology (C)	2 years	15	13
Physiology of excitable cells.	70 hours	5	-
Cell Signalling	105 hours	10	-
Cell Physiology.	120 hours	-	3
Biomedical and Biotechnology Research (D)	2 years	24	19
Techniques pinched membranes.	10 hours	1	-
Cell Signalling and associated pathologies. Quality mention (E)	2 years	8	11
Cellular and Molecular Biology of Cancer.	30 hours	5	-
Role of p38 MAPK in the physiological response of cells to different types of stress and its implication in various diseases.	120 hours	-	3
Apoptosis and its regulation by neuronal signalling. Implications for neurodegenerative diseases	40 hours	5	-
Techniques and Experimental Design in Biochemistry and Molecular Biology.	50 hours	6	-
Chemical synthesis for discovery of bioactive molecules.	30 hours	1	-
Safety in the laboratory.	30 hours	2	-
Spectroscopic techniques of structure determination.	30 hours	1	-

\* Number of students from all UEX Faculties enrolled.

(A) Department of Analytical Chemistry

(B) Department of Physics

(C) Department of Physiology

(D) Department of Anatomy, Cell Biology and Zoology

(E) Department of Biochemistry, Molecular Biology and Genetic (UEX); Department of Chemistry (Burgos University); Biochemistry and Molecular Biology (Valencia University).

The *Master's in Meat Science and Technology* is being offered by the Animal Production and Food Science Department since 2007-2008 year course. Its main aim is to provide specific integrated training in this topic. The Master in Meat Science and Technology consists of 60 ECTS in a year, including aspects related to obtaining and processing of meat, as well as composition, nutritional value, sensory evaluation, physical-chemical and microbiological testing and legislation of meat and meat products. It also deals with risk management and quality assurance of meat and meat products. The training programme includes external work experience and presenting a report of this activity. In the master's programme, 38 PhD-holding teachers from UEX and 32 PhD-holding teachers from others universities, Official Research Centers and Research Centers from meat factories teach in this master. Around 70% of the teaching staff is veterinary surgeons.

Master Programme Courses <i>Master's in Science and Meat Technology</i>	Duration of Training 1 year
First semester	ECTS credits
Handling and processing of meat	6
Microbial transformation of meat	6
Physic-chemical analysis	6
Microbiological analysis and toxicological evaluation	6
Extramural fieldwork in laboratories or meat factories	6
Second semester	
Sensory evaluation	6
Assessment and risk management	6
Differentiated quality products	6
Legislation and quality management	6
Final degree project work	6

The *University Master on Research in Health Science, speciality on Veterinary* is being offered by the University since 2009-2010 year course. Its main aim is to provide an introduction to the research in the different topics of the Master. This program consists of 60 ECTS in a year, including a final degree project work.

The number of students enrolled in this Master (speciality Veterinary) during the first year has been 19. The 80% of the postgraduate student enrolled are veterinary graduates.

Master Programme Courses <i>University Master on Research in Health Science (speciality on Veterinary)</i>	Duration of Training
	1 year
<b>First semester</b>	<b>ECTS credits</b>
Introduction to research in Health Science	6
Communication and documentation technology on research	6
Introduction to research on Anatomy and Comparative Pathological Anatomy	6
Introduction to research on management of Animals Resources	6
Introduction to research on Parasitology and Toxicology	6
<b>Second semester</b>	
Introduction to research on Animal Medicine and Surgeon	6
Introduction to research on Animal Health	6
Introduction to research on Functional Food	6
Introduction to research on Immunology and Cellular Physiology	6
Introduction to research on Biochemistry and their applications on Biotechnology and Molecular Diagnosis	6
Final degree project work	6

## 12.2. COMMENTS

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

In the last four years, an average of 91 students/year have achieved the graduated in our Faculty, and only a mean of 21 of them started their PhD programmes, the 23% of the total graduates of each year. 61 per cent of the postgraduate students enrolled in the three main PhD programmes are Veterinary graduates.

Whilst a high percentage of students enrolled on doctorate programmes (84%) obtain the Diploma of Advanced Studies (*Diploma de Estudios Avanzados*), the percentage of students who present a doctoral thesis is notably lower (20 %). Traditionally the PhD Degree has merely been a formative stage in the long line of requirements necessary to undertake a career in University teaching. The current difficulties to begin a teaching and research career, given the lack of teaching contract possibilities, and the lack of recognition of the doctoral title in the professional sector are doubtless the reasons why graduate students do not opt to take approximately four years to

write their doctoral thesis. Moreover, the possibilities for students to successfully complete Postgraduate Studies are highly dependent on whether they are able to obtain adequate funding or not.

### **12.3. SUGGESTIONS**

We consider necessary that the VCH should include European Diplomates, with the aim of being able to offer certified residential programmes to the European Board of Veterinary Specialisations. To achieve this, it is necessary to prioritise within the budget provisions for staff, the high cost that contracting this figure would mean.

When planning the criteria for contracting staff in clinical areas the European Diploma qualification should be highly valued. At the same time, the UEX should also establish mechanisms of academic recognition and incentives to motivate the staff responsible to obtain this European Diploma.

Chapter XIII.

**RESEARCH**





## CHAPTER XIII. RESEARCH

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

## 13.1. FACTUAL INFORMATION

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

The optional participation of the undergraduate students in laboratorial activities can be through two different ways; Internal Student Collaborator and Granted Student Collaborator.

## A. Internal Student Collaborator (“Alumno Interno”)

The Departments invite undergraduate students, each academic year, to collaborate in basic work of the Department with different research groups. Although the students do not receive any academic credits for this activity, it does enable them to become acquainted with practical and research methodologies. At the end of the academic year the students receive a Certification of the Dean. The estimated time spend is about 120 hours/year, and the average number of students incorporated each academic year is 200.

During the academic year 2008-2009 the total of students who participate as Internal Student is presented in Table 13.1.

Table 13.1. Number and distribution of internal student during 2008-09.

Department	Research Group	Number students
Department of Biochemistry, Molecular Biology and Genetic	Biochemistry	3
Department of Animal Production and Food Science	Agronomy and Agricultural Economics	4
	Food Hygiene	1
Department of Animal Medicine	Surgeon	34
	Pathological Anatomy	35
	Medical Pathology	32
	Obstetrics and Reproduction	30
Department of Animal Health	Parasitology	34
	Infectious Pathology	26
	Toxicology	12



Department	Research Group	Number students
Department of Physiology	Physiology	9
Department of Anatomy, Cell Biology and Zoology	Biology and Ethology	3

### B. Granted Student Collaborator (“Becario de Colaboración”)

The Departments, according with their previous research incomes receive, each academic year, a number of grants for students in their undergraduate final year. This way is a competitive and completely regulated channel, and for 450 hours/year the student takes part in research activities. The timetable can be made to be compatible with their class schedule and, in this way, they initiate research activities that are directly linked to what they are studying. The academic requirements requested from the students are that they must have successfully completed the entire first cycle and more than 45% of the second cycle. Students apply by submitting a collaboration proposal supervised by a teacher (Tutor) and approved by the Department Council where it will be carried out. This scholarship programme is financed by the Spanish Ministry of Education and the students given a grant receives economic compensation (2,550 €/student/year).

During the academic year 2008-2009 the total of students who participate as Granted Student Collaborator is presented in Table 13.2.

Table 13.2. Number of Granted Student Collaborator during 2008-09.

Department	Number
Physiology	2
Animal Health	4
Animal Medicine	3
Animal Production and Food Science	2

### Graduating Dissertation (Tesina de Licenciatura)

In addition, at the end of the undergraduate period the students can read a Graduating Dissertation (Tesina de Licenciatura). The reading of a Graduating Dissertation is optional and can be one of the goals for the involvement of the undergraduate students in research. The Graduating Dissertation is an experimental introduction to research, which must be original and unpublished, whose subject should be linked to one or more areas of knowledge which are taught at the Veterinary Faculty. The management of the Dissertation falls on one or more PhD-

holding teachers who teach in the Faculty or who have taught at least the previous year. In the case of not fulfilling this last prerequisite, it should be guaranteed by a doctor who teaches in the Faculty who will act as Tutor.

During the academic year 2008-2009 the total of students who present a Graduating Dissertation were 17 (Table 13.3).

Table 13.3. Number of graduating dissertation during 2008-09.

Department	Number
Animal Health	5
Animal Medicine	4
Animal Production and Food Science	2
Biochemistry	1
Chemistry	2
Physiology	3

### 13.2. COMMENTS

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

Although Research is the major resource for teaching information, the research activities usually are not developed with the undergraduate students; therefore, the majority of the research activity carried out at our Faculty is not included in this chapter.

All the Departments and Research Groups welcome these undergraduate students who are particularly enthusiastic about research work and have excellent marks. Once they have started, students tend to stay in these Departments during their Postgraduate training as well. This close relationship often culminates in the realisation of their Doctoral Thesis which allows them to obtain their PhD and reach full research status.

On the other hand, students find difficulties to carry out tasks which are not included in the syllabus as a result of the considerable study load which forces them to spend almost all their available time attending theoretical and practical classes and in personal study to pass their exams. Unfortunately, our curriculum is full time and

consuming and students do not usually have enough time to get properly involved in research. Only the best students they can do it.

### 13.3. SUGGESTIONS

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

Yes but, as stated before, academic obligations are so demanding that it can be hard for students to see research as a priority. To increase student involvement in research, we propose the following strategies:

- The participation of students in research task should be recognised as elective or optional credits in the curriculum.
- The number and financial amount of collaboration scholarship should be increased.
- Seminars and Open houses should be held for the Research Groups to be able to explain their ideas and projects to undergraduate students.

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