



## Standard 4 Facilities and equipment



#### 4.1. Factual information

##### 4.1.1. Description of the location and organisation of the facilities used for the veterinary curriculum

The core of the **FVETUM** infrastructures are 3 buildings, a **Main Building** divided into 3 units (A, B and C), the **Veterinary Teaching Hospital (VTH)** and the **Veterinary Teaching Farm (VTF)**. The Main Building and the VTH are located at Espinardo Campus of the **UM**, in the Northern area of Murcia, 6 Km from downtown and very close to the A-7 and A-30 highways. Access is rapid and easy, as guaranteed by the three main accesses (North, East and South). Buses (up to 5 Lines) and Tram are currently communicating the Espinardo campus with the city of Murcia, and the main cities in the neighbourhood. **VTF** is less than 2 Km from the Main Building of the Faculty. It is well connected and easily reached by car, cycle or Tram. As a whole the **FVETUM** occupies a total area of 175,330 m<sup>2</sup> which corresponds to the Main Building (Units A, B and C) 15,330 m<sup>2</sup> and the **VTF** 160,000 m<sup>2</sup>.

**Table 4.1.1.-** Description of the **FVETUM** buildings and facilities (details are in Appendix 3).

Building	Surface/Floors	Facilities
<b>MAIN BUILDING</b>	15.330 m <sup>2</sup>	Unit A (Central Building), Unit B (Western wing) and Unit C (Eastern wing)
<b>Unit A (Central Building)</b>	5 floors	<ul style="list-style-type: none"> <li>Administrative offices and Dean's Office,</li> <li>Reception, Library (seating capacity for 222 people),</li> <li>Large Conference room (seating capacity for 390 people),</li> <li>Small Conference room ("Sala de Grados", seating capacity for 70 people),</li> <li>Meeting room (seating capacity for 25 people),</li> <li>Four lecture theatres (see Table 4.1.2.1),</li> <li>Canteen,</li> <li>Computer room (seating capacity for 50 people),</li> <li>The students' association headquarters: Students' delegation, VEDEMA, VETERMON and Sport associations,</li> <li>Dissection and Necropsy Rooms and Anatomic Museum,</li> <li>Research and Teaching laboratories of most of the Departments (with the exception of the laboratories of Toxicology,</li> <li>Pharmacology,</li> <li>Mathematics,</li> <li>Biochemistry as well as those related to Food Technology, Nutrition and Food Science, and Clinical Sciences).</li> </ul>
<b>Unit B (Western wing)</b>	2 floors	<ul style="list-style-type: none"> <li>Hospitalization Unit of Infectious-Contagious Animals,</li> <li>Computer-room (seating capacity for 24 people),</li> <li>Area of Toxicology, Food Technology laboratories, Mathematic teaching staff 's offices,</li> <li>Lecture theatre (see Table 4.1.2.1).</li> </ul>
<b>Unit C (Eastern wing)</b>	4 floors	<ul style="list-style-type: none"> <li>Department of Food Technology, Nutrition and Food Science and the Pilot Plant (FPU) facilities,</li> <li>Lecture theatre (see Table 4.1.2.1),</li> <li>Departments of Pharmacology (Veterinary Section) and Biochemistry and Molecular Biology "A".</li> </ul>
<b>VTH Building</b>	6 floors	<ul style="list-style-type: none"> <li>Clinical and Support Services for Small Animals and Equine,</li> <li>Two reception/administrative rooms</li> <li>Main hall and waiting room for small animals (dogs and cats separately).</li> <li>Internal Medicine Service: two consulting rooms</li> <li>Small animal reproduction service: a consulting room</li> <li>Cardiorespiratory service: a consulting room</li> <li>Anaesthesia service: a room adjacent to the surgical area,</li> <li>Diagnostic imaging service: with three rooms one of them lead covered, plus a room for equipment storage</li> <li>Dermatology service: a consulting room</li> <li>Ophthalmologic service: a consulting room</li> <li>Clinical Pathology service: two labs with the equipment needed for haematological and biochemical analysis.</li> <li>Small animal surgery service: two consulting rooms, a pre-operating theatre for surgical cleaning, and three small animal operating theatres fully equipped.</li> <li>Exotic animal service: it has a consulting room??.</li> <li>Hospitalisation Service: it is provided with four rooms, all of them with individual cages (dogs and cats separately).</li> <li>Large animal service: it has a reception room, two exploration rooms with examination stanchions, a riding-ring, with eight boxes to stable horses, two neonatology boxes, a intensive care box, two anaesthesia induction/recovery rooms.</li> <li>Pharmacy service: it houses an office, two store-rooms and a lab</li> <li>Infectious-contagious service: it houses 3 laboratories</li> <li>Sterilising room.</li> <li>Laundry.</li> <li>Four-bedroom apartment (1<sup>st</sup> floor)</li> <li>Administrative and Economic Services of the VTH,</li> <li>Department of Animal Medicine and Surgery, related teaching and research labs</li> </ul>

		and work group rooms, clinical and research laboratories, car park.
<b>VTF Buildings</b>	Total area: 160,000 m <sup>2</sup> Built area: 16,000m <sup>2</sup>	<ul style="list-style-type: none"> <li>● Main Building: (1,900 m<sup>2</sup>).               <ul style="list-style-type: none"> <li>○ Administration and Direction offices,</li> <li>○ Laboratories (4),</li> <li>○ Classrooms (2),</li> <li>○ Computer room,</li> <li>○ Conference room,</li> <li>○ Library,</li> <li>○ Kitchen,</li> <li>○ Residence</li> </ul> </li> <li>● Locker rooms (6),</li> <li>● Laundry and Quarantine (658 m<sup>2</sup>).</li> <li>● Horse facilities (1,640 m<sup>2</sup>).</li> <li>● Fenced area for horses (14,128 m<sup>2</sup>).</li> <li>● Dairy cattle facilities (850 m<sup>2</sup>).</li> <li>● Beef cattle (2,000 m<sup>2</sup>).</li> <li>● Sheep and goats (1,177 m<sup>2</sup>).</li> <li>● Rabbits unit (380 m<sup>2</sup>).</li> <li>● Poultry unit (536 m<sup>2</sup>).</li> <li>● Swine facilities (including Finishers (2) (1,928 m<sup>2</sup>),               <ul style="list-style-type: none"> <li>○ Acclimatization (488 m<sup>2</sup>),</li> <li>○ Gestation (655 m<sup>2</sup>),</li> <li>○ Boars and laboratory (85 m<sup>2</sup>),</li> <li>○ Farrowing rooms (620 m<sup>2</sup>) and</li> <li>○ Nursery (485 m<sup>2</sup>).</li> </ul> </li> <li>● Dogs units (2) (545 m<sup>2</sup>).</li> <li>● Apes (773 m<sup>2</sup>).</li> <li>● Bee unit (85 m<sup>2</sup>).</li> <li>● Straw (237 m<sup>2</sup>).</li> <li>● Experimental Animal Center (480 m<sup>2</sup>).</li> <li>● Experimental unit (Animal Nutrition and Animal Reproduction) (400 m<sup>2</sup>).</li> <li>● Waste treatment plant (2,666 m<sup>2</sup>).</li> <li>● Olive tree plantation (3,518 m<sup>2</sup>).</li> <li>● Irrigation facilities (170 m<sup>2</sup>).</li> <li>● Plantation of forage (10,000 m<sup>2</sup>).</li> </ul>

#### 4.1.2. Description of the premises for:

##### A) lecturing

**Table 4.1.2.1.a** Premises and equipment for lecturing.

	Premises number				
	1	2	3	4	5
<b>Location</b>	Main building				
<b>Building Unit</b>	Unit A				
<b>Level</b>	Ground Floor				
<b>Lecture room number/Model*</b>	0.1 One level	0.2 One level	0.3 Theatre	Main Theatre "Aula Magna"	Graduation Room "Sala de Grados" One level
<b>Name**</b>	Prof. "Luis León"				
<b>Seats</b>	165	165	211	390	60
<b>Equipment***</b>	AC/MS/SB/WA/WG/WF	AC/MS/SB/WA/WG/WF	AC/MS/WA/WF	AC/MC/MS/WA/WF	AC/MS/WA/WF

\*Model: one level or theatre.

\*\*Name approved by the Faculty Board of **FVETUM** and given additionally to the lecture room number.

\*\*\*AC: Air conditioning; MC: microphone system for conference and theatre room; MS: Media system (computer, overhead projector, audio system); SB: smart blackboard; WA: wheelchair accessible; WG: module system tables and chairs for working groups; WF: Wi-Fi coverage and access.

**Table 4.1.2.1.b** Premises and equipment for lecturing.

Premises number						
	6	7	8	9	10	11
<b>Location</b>	Main building					
<b>Building Unit</b>	Unit A				Unit B	Unit C
<b>Level</b>	<b>First Floor</b>	<b>Basement Level 1</b>	<b>Basement Level 1</b>	<b>Basement Level 1</b>	<b>First Floor</b>	<b>Basement Level 1</b>
<b>Lecture room number/Model*</b>	1.1 Theatre	-1.2 One level	-1.3 One level	-1.4 One level	1.2 One level	-1.1 One level
<b>Name**</b>	Prof. "Francisco Moreno"				Prof. "Lasosa"	Prof. "José Luís Sotillo"
<b>Seats</b>	211	20	20	10	100	70
<b>Equipment***</b>	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF	AC/MS/SB/WA/WG/WF

\*Model: one level or theatre.

\*\*Name approved by the Faculty Board of FVETUM and given additionally to the lecture room number.

\*\*\*AC: Air conditioning; MC: microphone system for conference and theatre room; MS: Media system (computer, overhead projector, audio system); SB: smart blackboard; WA: wheelchair accessible; WG: module system tables and chairs for working groups; WF: Wi-Fi coverage and access.

**Table 4.1.2.1.c** Premises and equipment for lecturing.

Premises number					
	12	13	14	15	16
<b>Location</b>	VTH		VTF		
<b>Building Unit</b>	Unit A		Main building		Unit B
<b>Level</b>	<b>First Floor</b>	<b>First Floor</b>	<b>Ground floor</b>	<b>Ground floor</b>	<b>Ground floor</b>
<b>Lecture room number/Model*</b>	0.1	0.2		1.1	1.2
<b>Name**</b>			Pfizer lecture hall	Elanco lecture hall	Vetoquinol lecture hall
<b>Seats</b>	50	40	164	32	32
<b>Equipment***</b>	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF	AC/MC/MS/SB/WA/WG/WF	AC/MS/WA/WG/WF	AC/MS/WA/WG/WF

\*Model: one level or theatre.

\*\*Name approved by the Faculty Board of FVETUM and given additionally to the lecture room number.

\*\*\*AC: Air conditioning; MC: microphone system for conference and theatre room; MS: Media system (computer, overhead projector, audio system); SB: smart blackboard; WA: wheelchair accessible; WG: module system tables and chairs for working groups; WF: Wi-Fi coverage and access.

**Table 4.1.2.2.** Summary of lecturing seats per location.

Location	Unit/Lecturing seats			Total
	Unit A	Unit B	Unit C	
<b>Main Building</b>				
	1252	100	70	1422
<b>VTH</b>	Main			
	90			90
<b>VTF</b>	Main			
	228			228
<b>Total</b>	<b>1570</b>	<b>100</b>	<b>70</b>	<b>1740</b>

**B) group work**

Premises for working groups are in different locations within the Faculty, mostly in at the Main Building, Unit A. Premises for working groups include also the computer rooms (so called "Verderón", "Verdejo" and "Vultur" all names of birds in Spanish starting with "V" from Veterinary; see section 6.1.1), located at the ground floor of the Main Building Unit A, conveniently located close to the library-study room, and are under the management of the Dean's Office. All are fully equipped with individual PC, centralizes printer and media system and smart blackboard; VTF also has a computer room of free access for the students and for practical training. Other working group premises are at different levels (see **Table 4.1.2.2.**) and managed by the different Departments, and open for working groups of the different subjects. Equipment is standard (tables, chairs, blackboard, wi-fi access) and also the Department can provide additional equipment.

**Table 4.1.2.2.** Premises for working groups and computers rooms (also used as working group room).

Premise number	Building / Unit	Level	Patrimonial number/Name	Seats	Premise number	Building/ Unit	Level	Patrimonial number/Name	Seats
1	Main building A	1 B.1.1.	015	6	21	Main building B	0 B.1.0	044	24
2			016	15	22			057	5
3			021	15	23			ADLA Verderón	24
4			049	20	24	Main building C	2 B.2.0.	006	10
5		2 B.1.2.	008	10	25			020	6
6			022	7	26			022	8
7			040	5	27			025	25
8			045	6	28	VTH	1	013	50
9		3 B.1.3.	006	5	29		2	017	20
10			017	8	30		3	018	25
11			018	45	31		4	006	25
12			021	15	32	VTF	0	Computer room	16
13			035	14					
14			036	10					
15			043	8					
16		4 B.1.4.	021	10					
17			011	30					
18			023	3					
19			031	30					
20			ADLA Vencejo	25					
				287					172

\*Name: B.1. (fixed code) + Floor code + Location on the floor.

Examples: B.1.3.018. It is on the third floor. Ethnology Teaching Unit  
B.1.3.035. It is on the third floor. Nutrition Teaching Unit.

Total number of places in rooms for group work: 459.

### C) practical work

Practical work facilities are within the Departments and Teaching Units, and mostly are laboratories for practical training equipment with the required tools. These premises are managed and maintained by the Departments or Teaching Units. Some of them have specific requirements (Anatomy, Necropsy, Food Technology...) and infrastructure are properly identified and equipped.

**Table 4.1.2.3.** summarize the premises, including those at VTH and VTF, and more details of surface and location can be find in **Appendix 3 (maps)**.

**Table 4.1.2.3.** Premises for practical work.

Premise number	Building/ Unit	Level	Patrimonial number/Name	Seats / Places	Premise number	Building/ Unit	Level	Patrimonial number/Name	Seats/ Places
1	Main building C	Basement level 2 B2.-2.	001 to 006 Food Technology Pilot Plant	20	21	Main building A	Second floor B1.2.	047	8
2		Basement level 1 B2.-1.	005 Food Hygiene	10	22		Third floor B1.3.	022	25
3			025 Food Technology	10	23			034	15
4	Main building A	B1.-1.	013 Anatomy museum	20	24		Fourth floor B1.4.	008	10
5		Ground floor B1.0.	023 Dissection room	20	25			020	24
6			027 Necropsy room	20	26	Main building C	Ground floor B2.0	051	10
7			040	5	27			055	4
8			045	6	28			066	20
9		First floor B1.1.	012	4	29			013	15
10			013-1 013-2	3+2	30			014	25
11			014	4	31		First floor B2.1	003	10
12			020	30	32			005	20
13			039 039-1	25+1 5				008	10
14			047	10			B.1.1.051		10
15			048	10			B.1.1.055		5
16		Second floor B1.2.	017	10			Second floor B2.2	015	30
17			018	16		VTF	Main building	Merial (Animal Production)	15
18			023	20				Bayer (Animal Nutrition)	10
19			038	10				SELCO (Genetics)	10
20			046 046-1	10+1 4		VTH	Main building Third floor B1.3	018	12
								019	12
							Fourth floor B1.4	024	12
								025	2-3

\*Name: B.1. (fixed code) + Floor code + Location on the floor. Examples: B.1.3.018. It is on the third floor. Ethnology Teaching Unit; B.1.3.035. It is on the third floor. Nutrition Teaching Unit.

#### Practices can also be conducted in:

- 2 Surgical labs (for 15 students each). B1.0.023
- Large animal examination rooms (for 20 students). B1.0.083, B1.0.064
- Small animal examination room (for 20 students). B1.0.013

Total number of places in laboratories: 755

**4.1.3. Description of the premises for housing:****a) healthy animals****Table 4.1.3.1.** Premises for animal housing (in compliance with Law 53/2014, animals used in teaching are intended for scientific use)

	VTH	VTF	Total		VTH	VTF	Total
<b>Authorized Species</b>				<b>Control Systems</b>			
Rodents	X	-	1	Temperature	X	X	2
Rabbits	X	X	2	Humidity	X	X	2
Dogs	X	X	2	Light-dark cycles	X	X	2
Cats	X	-	1	Fire	X	X	2
<b>Small Ruminants</b>	-	X	1	<b>Facilities</b>			
Cattle	-	X	1	Quarantine	-	X	1
Equines	X	X	2	Laboratory	X	X	2
Swines	-	X	1	Surgery Room	X	X	2
Bees	-	X	1	Necropsy Room	X	X	2
Exotic pets and wildlife	X	-	1	Store Room	X	X	2
Poultry	-	X	1	Cleaning Room	X	X	2
Apes	-	X	1	Locker Room	X	X	2
				Level 3	-	-	0

**b) hospitalized animals****Table 4.1.3.3.** Facilities for hospitalized animals at **VTH**.

Regular Hospitalization	Species	Number of seats
	Equine	11 distributed as follows: <ul style="list-style-type: none"> <li>8 regular boxes,</li> <li>2 neonatology boxes and</li> <li>1 place in intensive care.</li> </ul>
	Dogs	9 in cages, 6 in large dog boxes.
	Cats	5 in cages
	Exotic Animals	

**d) isolated animals****Table 4.1.3.4.** Isolation facilities at **VTH**.

VTH Isolation Facilities	Species	Number of seats
	Equine	2 boxes
	Small Animals	1 room with 2 cages for cats and 1 room with 2 cages for dogs.

**Table 4.1.3.5.** Quarantine facilities at **VTF**.

VTF Quarantine Facilities	Species	Number of seats
	Pigs	30
	Equine/Cattle	4
	Small Ruminants	24
	Rabbits	20

**4.1.4. Description of the premises for:****A) clinical activities**

These activities are developed at **VTH**.

- **Small Animal Area:** Lobby, large waiting rooms for dogs and a specific room for cats, 9 consulting rooms (2 Internal Medicine, 1 Cardiorespiratory, 1 Ophthalmology, 1 Dermatology, 1 Exotic Animals, 2 Surgery, 1 Reproduction), 2 laboratories (Clinical Pathology and Reproduction Technology), 1 Pharmacy, 1 Anaesthesia room, 1 Ultrasound room, 1 X-Ray room, 1 Film reading room, 1 CT room, 1 Student General Exam room, 5 Surgery rooms (2 student and 3 regular surgery rooms), 1 Procedures room (Dentistry and Endoscopy), Sterilization area, Hospitalization area, Medicine and Surgery animals' premises.
- The **Small Animal Internal Medicine Service** includes first-opinion consultations and specialty consultations (Internal medicine).



- The **Small Animal Ophthalmology Service** includes consultations and surgery procedures.
- The **Small Animal Dermatology Service** includes consultations and minimally invasive diagnostic and therapeutic procedures.
- The **Small Animal Neurology Service** includes consultations and minimally invasive diagnostic and therapeutic procedures.
- The **Small Animal Cardio-Respiratory Service** includes consultations, echocardiography, interventional radiology and airway endoscopy diagnostic and therapeutic.
- The **Small Animal Stem Cells Service** processes all material extramurally in the LAIB (*Laboratorios de Investigación Biosanitaria*/Biosanitary Research Laboratories)
- The **Small Animal Surgery Service** includes consultations and surgery procedures of soft tissue surgery, orthopaedics, neurosurgery and dentistry.
- The **Small Animal Hospitalization, IC and ER Service** includes hospitalization, monitoring and therapeutic, blood bank and ER consultations and therapeutic 24/7/365.
- **The Large Animal Area** comprises 2 rooms for examination and specific clinical procedures, 1 radiology room, 2 induction/recovery rooms, 2 surgery rooms, 1 riding arena and 1 area for IC.
- The **Central Services Area** of the **VTH** comprises different services which are common to the small and large animal areas.
  - The **Anaesthesiology Service** performs sedations and anaesthetic procedures required by the patients (exotic, small and large animals). It is equipped with 8 Anaesthesia machines in Small Animal area (2 Anaesthesia room, 3 Surgery Rooms, 1 Procedures room, 1 X-Ray room, 1 CT room) and 1 in the Large Animal Surgery Room.
  - The **Diagnostic Imaging Service** performs radiographic, ultrasound and MRI diagnosis for the VTH patients and also receives referrals from private practices. This service facilities include 1 X-ray rooms for small animals and exotic pets, 1 X-ray room for large animals, 1 ultrasound room for small animals and 1 CT unit for small animals.
  - The **Pharmacy Service/Store** serves as the control of all medicines and drugs, fungible material, instruments, laboratory equipment, sutures and other orders requested by the different services of the VTH distributed as 1 office, 1 laboratory, 2 storage rooms.
  - The **Small Animal Reproduction Service** offers a full range of techniques to improve the reproductive performance of the VTH, ranging from artificial insemination or embryo transfer to in vitro fertilization in companion and farm animals. This service facilities includes 1 consulting room and 1 laboratory.
- **Management.** Government and administration corresponds to the **VTH** Board and to the Director, Manager and Secretary.

## B) diagnostic services including necropsy

### VTH

1. **Pathology Service** carries out pathological diagnostics of necropsies and biopsies. The facilities of the **Pathology Service** are one large Necropsy Room, a Histopathology Laboratory and one Pathology Diagnostic Room which serve for pathological diagnosis from necropsies and biopsies.
2. The **Clinical Pathology Service** carries out haematological, biochemical analysis and cytological studies, and coordinates the activity of the **VTH** emergency laboratory. It has 4 different laboratories: one for routine tests and emergency techniques and another three for more advance techniques.
3. The **Infectious-contagious Service** conducts virological, bacteriological and serological diagnoses on small, large and exotic animal as well as on livestock. Techniques available in this service are: bacteriological isolation, antibiograms, serological techniques such as ELISA, and PCR.
4. The **Clinical parasitology Service** conducts parasitological diagnosed in several species for the **VTH** and also to external practitioners.
5. Toxicology services.

## C) Food Science and Technology Department

### Food Technology Pilot Plant (FTPP)

- **FTPP** of the **FVETUM** is equipped with a complete line for dairy production (butter churner machine, cheese vats, plate heat-exchanger, freezer, fermentation tank, brine vat, pneumatic press), and a complete line for meat production (cutter, meat grinder, fine meat mincer, hydraulic sausage stuffer, slicer, burger maker, convention/steam oven, electric cookers and ripening chamber). The FPU is also equipped with a piston filler, double sealers, evaporator, rotavapor, incubation chambers, freeze dryer, vacuum/modified atmosphere packaging equipment, convection/steam oven, straight line exhaust box, autoclaves, retail displays, and general equipment such as baths, working tables, washing machine, freezers and refrigerators. In addition, we have an experimental kitchen supported with the proper equipment.

### Laboratories of Food Science and Technology Department

- Equipped with instruments and reagents for the evaluation of food composition (protein, moisture content, minerals and fat) of raw materials and final products from animals, and also to determine freshness and safety of food products. Equipments for food testing analyses in Food Safety and Quality lab are spectrometers, refractometers, Kjeldahl digester and distillator, Soxtec for automatic fat extraction, muffle furnaces, balances, precision balances, laboratory incubators,

pHmeters, homogenizers, Stomacher, and baths which allows to test microbiological and physico-chemical characteristics of foods, water and environmental hygiene.

- Our students also carry out extra-mural practical training in different slaughterhouses, food markets, food industries and reference official laboratories and catering facilities.

#### **Abattoir (APS).**

- The students attending the subject of “Hygiene, Inspection and Food Control II” carry out practices in the slaughterhouse of “CABEZO DE LA PLATA”, located 18 Km away from the Veterinary Faculty. This is one of the main slaughterhouses supplying meat to the Southeast of Spain. It has a surface of 6,500 m<sup>2</sup>, including 900 m<sup>2</sup> of cold-storage rooms. Bovine, porcine, ovine and goats are sacrificed there. It is authorised to sacrifice animal following the HALAL ritual procedure suitable for the muslim population.
- The Director of the slaughterhouse Veterinary Inspection Service is an Associated Lecturer in the “Area of Nutrition and Bromatology”, and is in charge of supervising the students’ practices, under a collaboration arrangement signed between the Veterinary Faculty and the Regional Health Council.

#### **Poultry Slaughterhouses.**

- Steps are being taken to conduct practices in the slaughterhouse of the main company of this sector in the Region “Pollos Pujante” (“Pujante’s Poultry Farm”). The premises are located in Beniel about 20 Km away from the Faculty. This agreement has been expanded and new practices are foreseen to be conducted at this place in the next academic year.

#### **Fish Markets.**

- The activities regarding the Hygiene, Inspection and Control of fish are conducted in the Central Market of Alcantarilla “Eurolonja 2000” (located 15 Km away from the Veterinary Faculty) with a surface of 10,000 m<sup>2</sup>. This is the main fish market of the Region and the second most important internal fish distribution point in Spain, just behind Madrid, with a daily volume of 20 tons of fish and seafood and a turnover of 500,000 euros a day.

#### **4.1.5. Description of the premises for:**

- **study and self-learning**
  - The **FVETUM** main building has a study room with 128 seats. The **VTF** also has a room with 35 seats available for student. WIFI access is available all around the Faculty premises.
  - No further than 5 min walk from the **FVETUM** is the University Library of the Campus. A building where there are 268 seats for study, 10 working rooms. In this library, all the books recommended are stored and students have access, and in most cases also lend, for a period of 15 days (with renewal). Scientific journals, laptops, Cd-Room and DVDs are also available for the students.
  - Additionally, all our students can use any study room in other Faculties or libraries in other campuses owned by the **UM**.
  - A complete description of the Library facilities is shown in **Chapter 6 (6.1)**.
- **catering**
  - The **FVETUM** has a canteen located in the main building, with 70 seats and an outdoor terrace with another extra 40 seats. Fresh cooked menus are served daily. Vending machines are also available in the hall of the **FVETUM** Main Building, as well as in the rest area of the **VTH**. Students are free to request the use of microwaves located in the canteen. **UM** also provides a wide range of canteens at each Faculty and centralised restaurants for lunch. Prices are economic and menus are supervised by the Food Safety and Nutrition Service of **UM**.
- **locker rooms**
  - Lockers at **FVETUM** has two main purposes, one is to be used for the students to keep their properties, and to keep street clothes to wear adequate clothes for practical training (specially for biosecurity requirements). The first ones (student’s lockers) are distributed in the corridors in the Main Building (Unit A, at Ground floor toward Unit C, at First floor before Lecture Room 1.1.). Students manage the distribution of lockers under the supervision of the Secretary of the **FVETUM**, and covers mainly to students of the last 3 academic years. Lockers for proper dress are managed by the different Departments (Anatomy and Anatomopathology) and Services (**VTH**, 2 for staff and 1 for students, and **VTF**, 2 for students, 2 for staff and 2 in the quarantine area), including shower rooms, where needed (**VTF**).
- **accommodation for on call students**
  - The **VTH** offer accommodation for 4 on call students in two bedrooms with to beds each. Besides, accommodation is also available for students in the **VTF** with a maximum capacity of 16 seats.
  - No further than 10 min walk is the Hall of Residence (*Apartamentos Campus*) where students have full equipped rooms available for rent.
- **leisure**
  - The main leisure venue for students “Centro Social” is located at 10 min walk from the **FVETUM**. There, students have plenty of resting and meeting rooms, refectory, auditorium, exhibition areas, external theater, bank, etc. Centro Social is run by the Students Union and hosts the headquarter of the Information Service for Students at the **UM**.

- The FVETUM itself has some facilities for cultural activities (Auditorium, Graduates Lecture Room, Meeting Room, etc.), student association rooms and some indoor (main hall) and outdoor rest areas ("the sustainability square" is opposite the Faculty).
- Additionally, the UM is fully equipped with infrastructure for practicing a broad list of sports, such as rugby, football, volleyball, handball, basketball, indoor football, tennis, paddle, gyms, and indoor swimming pool. There is also a wide offer of sport schools.

#### 4.1.6. Description of the vehicles used for:

Vehicles owned by FVETUM are those summarized in Table

**Table 4.1.6.** FVETUM vehicles and use.

Vehicle	Use
2 vans (8 seats each)	Students Transportation for practical training
1 VTH vehicle (small van)	Ambulatory Clinics
1 VTF vehicle (trailer)	Live Animals Transportation
1 VTF vehicle (trailer)	Cadaver Transportation
1 VTF vehicle (trailer)	Horse Transportation Van
1 VTF Land Rover	Students Transportation for practical training

#### 4.1.7. Description of the equipment used for:

##### A) teaching purposes

Every teaching room has appropriate teaching facilities: blackboards, screens, video projector, speakers, etc. Besides, videoconferencing, video recording and streaming equipment are available under request.

##### B) clinical services

**Table 4.1.7.** Equipment for clinical services.

Area	Service	Basic equipment	Specialized Equipment
<b>Small Animals Area</b>	Internal Medicine	Available	Endoscopy
	Ophthalmology	Available	Ocular ultrasound, retinography, electroretinography, slit-lamp, direct and indirect ophthalmoscopy, laser, phacoemulsificator, Surgery microscopy.
	Cardio-respiratory	Available	ECG, Echocardiography, Holter, Blood pressure Monitor (Oscillometry and Doppler), Bronchoscopy, C-Arm X Ray
	Dermatology	Available	
	Neurology	Available	
	Surgery	Available	Arthroscopy, Neurosurgery micromotor.
	Hospitalization/ER	Available	Ultrasound, 2 oxygen concentrators, 1 anaesthetic machine, 1 multiparameter monitor, Blood pressure Monitor (Doppler)
<b>Large Animals</b>		Available	Endoscopy, arthroscopy.
<b>Central Services</b>	Diagnostic Imagine	Available	1 X-ray equipment for small animal and exotic pets, 1 X-ray fixed equipment for large animals, 1 X-ray mobile equipment for large animals, 1 computerized radiography (indirect digital) system, 2 ultrasound equipment, one for small animals and other for large animals, 1 CT system (2 slices) for small animals, and 1 fluoroscopy system for radiographic diagnosis and surgical support
	Anaesthesiology	Available	Anaesthetic workstations with ventilator and ventilatory and anaesthetic gases monitoring, standard monitoring, BIS and Parasympathetic tone activity monitors
	Pharmacy	Available	Hand-operated capsule-filling machine, Precision scale, Thermostatic bath, Magnetic stirrer.
	Pathology	Available	Microscopes, including multi-head microscope with digital photography system, paraffin embedding vacuum system, tissue processing system, paraffin block preparation system, microtome, autostainer, cryostat, immunostainer, storage system for paraffin blocks and stained sections
	Clinical Pathology	Available	Haematological and biochemical analysers, ion-selective electrode analyser, gasometer, ELISA reader, spectrophotometers, centrifuges, cytocentrifuge, microscopes, refractometers, quimioluminescence reader.
	Reproduction	Available	Microscopes, endoscopy, computer sperm analyzer, incubators.
	Microbiology and Parasitology	Available	Microscopes (light, inverted and fluorescence microscopes), centrifuges, laminar vertical and linear flow hoods, incubators set at different temperatures, with and without CO <sub>2</sub> , Real Time thermocycler, electrophoretic devices, fluorimeter, a system for automatized microbial identification (i.e. Vitek, BioMérieux), autoclaves and purified and distilled water devices

#### 4.1.8. Description of the strategy and programme for maintaining and upgrading the current facilities and equipment and/or acquiring new ones.

As explained in Chapter 2, the Financial Committees of the Establishment are responsible for the strategy and the budget distribution, which is subsequently approved at different instances. The maintenance, renewal and acquisition of equipment and facilities depend on the budget availability, which, in turn, depends on the endowment that the **FVETUM** assigns to our Faculty. In addition, funds from research activities also contribute to upgrade the **FVETUM** facilities and equipment.

**VTH**, as Foundation, has its autonomy to identify by the Direction Council the main needs of renovation of new investments to up-date or acquire new equipment for new or improved clinical services and teaching. This project for renovation or new equipment is presented to the Foundation Patronate, that depending on the price of the equipment is just informed (mainly in renovation or small equipment and based on the **VTH** budget, see **Standard 2**) or asked for support. The main Patron of the Foundation is the Rector and the Vice-Rector of Economic Affairs technically study the investment to allocate it for the current or future budget. Usually this request is framed on an internal call of UM for renovation or acquisition of equipment.

**VTF** also has an investment plan defined by the Direction Council and approved by the Governing Board and based on the **VTF** budget or supported by the Vice-Rector of Economic Affairs on a regular basis within the calls of the **UM**, or extraordinary when the situation required (vg. damage caused by the heavy rain).

#### 4.1.9. Description of how and by whom changes in facilities, equipment and biosecurity procedures are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Facilities and equipment renovation or acquisition for teaching or working groups are mainly into the Faculty (Dean's Team) competences and the proposed to the **FVETUM** Committee of Infrastructure and Economic Affairs or the QA Commission, and from here to the Faculty Board for approval. These investments can be carried out with the **FVETUM** budget or apply to the **UM** calls. For practical training, the investment is decided by the Departments Councils based on their needs. In some cases, or special projects, the Departments join their requests to the Faculty due to the impact on the global teaching process (more students or subjects affected) and also mainly due to the high costs. The communication is made at the different decision bodies (Committees, Councils or Board), implemented, assessed and revised by the different Departments and the Faculty.

Regarding biosecurity procedures, the **FVETUM** follows the general rules of the **UM**, which has the Service for Labour Risk Prevention, which is uncharged of managing all the aspects of risk prevention, including training for staff and students, and the removal of biosanitary waste and hazardous chemicals. Moreover, the **FVETUM** has approved its own waste disposal protocol that complements that service (<http://www.um.es/web/veterinaria/contenido/seguridad/carteleria>).

On the other hand, there is a **Biosecurity Committee** in the **FVETUM**, which is responsible for the elaboration of specific protocols, including a document of teaching-related risk prevention. The information is public through the website and significant procedures or signalling displays are posted in the Establishment (<http://www.um.es/web/veterinaria/contenido/seguridad>). The academic year 2016-17 the **FVETUM** has begun the Centre Working Group where one of the lines of work is to reinforce and harmonization of the biosecurity protocol of **FVETUM**. To raise awareness among students, from the 1<sup>st</sup> year, receive specific mandatory training on basic risk prevention through a programme given by the supervisors of this issue both, in the **FVETUM** and in the University. Besides, students are trained on biosecurity procedures prior to any practical training activity.

#### 4.2 Comments.

- **FVETUM** in the most complex Faculty infrastructure at **UM** due to the extension and complexity of managing 3 main infrastructures. However, the Faculty has limited capacity in many aspects since the competences are centralised (University) or decentralized (Departments). The main role of the Faculty is to harmonize and maintain the needs covered and encourage for improvement looking for the higher international standards.
- Many significant changes in facilities and equipment have been made since the last EAEVE visitation, as mentioned at the Introduction section of the present SER. However, even if many facilities have been recently renewed, most of the original buildings would need improvement in order to guarantee high-quality teaching and research activities. In the last years, due to the so called "global economic crisis" has had an important impact on the slowdown of the investments since the **UM** budget also was reduced in connection with the economic situation of the Regional Government.
- The **VTH** was built in 1998 and, as a whole, the facilities are adequate for providing practical teaching to undergraduate and postgraduate students. Its structure allows teaching in different species and specialties. Nevertheless, facilities and equipment also need appropriate maintenance and replacement, which needs continuous financial support.

#### 4.3 Suggestions.

- Any improvement in the budget is needed to recover the status affected before the "economic crisis". It is important maintain the standards of quality of **FVETUM**.

- Some improvements are under construction at **VTH** such as the floor of large animals (horses), isolation units, anaesthesia induction/recovery rooms and exercise are of horses. That will give some better facilities to improve the service and teaching capacities. Regarding equipment there are a need of wide the capacities of **VTH** and acquire a Magnetic Resonance Imaging (MRI) for small and large animals. Some steps forward have been made to identify the financial sources and suppliers.
- One project under study and request (unformal) is to create a skills facility to simulate animal behavior and for a better train and where is a place **FVETUM** student practice a range of clinical skills. We are waiting for a **UM** call to purchase the dummies. The **FVETUM** will support with and extra budget together with the clinics Departments.

