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**REPORT ON THE VISIT TO THE INTEGRATED MASTER OF VETERINARY SCIENCES  
OF THE UNIVERSITY OF TRAS-OS-MONTES E ALTO DOURO, VILA REAL,  
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## **INTRODUCTION**

The University of Trás-os-Montes e Alto Douro (UTAD), situated in the city of Vila Real in northern Portugal, was established by Decree in 1986. Its organisation was modified in 2009 and it now consists of 4 Schools: Agrarian and Veterinary Sciences; Human and Social Sciences; Sciences and Technology; and Life and Environmental Sciences.

The course in Veterinary Medicine at UTAD commenced in 1987 and was evaluated by EAEVE in 1998; the current veterinary course - Integrated Master of Veterinary Medicine (IMVM) - is offered by the Department of Veterinary Sciences, within the School of Agrarian and Veterinary Sciences. The Veterinary Teaching Hospital of the University (VTH-UTAD) has an autonomous Board of Management and enjoys partial financial autonomy.

Undergraduates studying for the IMVM are closely associated with students of other disciplines as the facilities they use are common to other students of the University, rather than those of a separate Faculty. Teaching in some subjects is given in association with other courses and a number of those who teach the veterinary course also teach other courses; some are members of other Departments within the School of Agrarian and Veterinary Sciences, some are attached to other Schools.

# **1 OBJECTIVES & STRATEGY**

## **1.1 Findings**

The University of Trás-os-Montes e Alto Douro (UTAD) has a formal vision statement, but the Self-Evaluation Report (SER) prepared for this visitation does not indicate that it has formulated a concise statement of its objectives. But UTAD has recently prepared a Strategic Plan for 2011-2014 and this was made available to the Team. It makes no specific mention of the veterinary course.

The Integrated Master of Veterinary Medicine (IMVM) course states that its objective is the principles identified at Article 38.3 of Directive 2005/36/EC and summarises them as: “to provide adequate knowledge and professional skills to ensure animal and human health”, but the detailed exposition of this objective differs somewhat from those set out in Article 38.3(a) – (h) of the Directive, since the SER (para 1.1.2) describes the goals of the IMVM course as the acquisition of various skills, whilst the Directive requires that training as a veterinary surgeon shall provide an assurance that the relevant knowledge and skills have been acquired.

The SER indicates that the IMVM-UTAD curriculum is an interdisciplinary approach to prepare veterinarians in various possible ways for their professional life and includes curricular units essential for them to acquire clinical skills in relation to companion animals, exotic and wild species, sports species and zootechnical species; to acquire skills to assist nutrition and feed production businesses, producers of animal medicines and biotechnology and diagnostic companies; to acquire skills in food technology and food security; to acquire skills necessary for regulatory veterinarians; and to acquire skills for teaching and research. The SER goes on to highlight professional areas in which the IMVM-UTAD may be differentiated from other institutions – in particular, clinical exercises in wildlife animals.

A “Strategy for the Monitoring, Assessment and Improvement of Teaching” has recently been established and the SER quotes assessments by the European University Association and EAEVE as other means of assessing the achievement of the general objectives of the institution.

## **1.2 Comments**

The structure of UTAD and the place of the IMVM course within its structure does not lend itself easily to the formulation of clear objectives, either for the institution as a whole, or for its constituent parts and it may be that this has implications for the focus and direction of the IMVM course.

### **1.3 Suggestions**

It is difficult to see how specific objectives for the IMVM course can be formulated and - more importantly - implemented within the existing organisational structure of UTAD. Consideration may first need to be given to providing greater autonomy for the undergraduate veterinary courses to allow more effective veterinary leadership and management.

## **2 ORGANISATION**

### **2.1 Findings**

UTAD has no Faculties. Instead, it is organised as a series of 5 Schools and 8 Research Centres under the leadership of a Rector. The management of the University is complex and multilayered, with a central Academic Council and Management Council. Each of the 4 Schools has its own President and Assembly, a Scientific and a Pedagogical Council and a number of Departments. The School of Agrarian and Veterinary Sciences, whose President is an Associate Professor of Agronomy, has 5 Departments, of which the Veterinary Science Department is one.

The re-structuring of individual courses is the responsibility of the Scientific and Pedagogical Councils of the Schools. These bodies also approve the curricula of the courses. The Department of Veterinary Sciences contributes 3 of 10 members of the Scientific Council of its School and 2 of 12 members of its Pedagogical Council. The potential for the Director of the IMVM to achieve development of the veterinary course is therefore limited, as it depends on convincing Council members from other disciplines of the merits of the case.

The Veterinary Department has no representative on the Academic Council of UTAD, although the Rector of the University seems to have a keen interest in the veterinary course.

### **2.2 Comments**

The title of the course - “Integrated Master of Veterinary Medicine” – suggests that it is closely associated with other courses offered by UTAD; but there is a risk that this could result in some lack of focus on the specific requirements of a veterinary course which should lead to the acquisition of adequate “day-one skills” by its graduates. And the structure of UTAD, in which the veterinary undergraduate course is merely one of 15 courses offered by one of the 4 Schools of which the University is comprised, risks exacerbating this potential problem.

The SER indicates that most of the academic staff teaching the IMVM course belong to the Department of Veterinary Sciences, but staff from the other 3 Departments of the School of Agrarian and Veterinary Science – and even from other Schools - also provide teaching input. And members of the teaching staff are also associated with different research centres of UTAD.

In fact, information provided to the Team during the visit indicated that, of the 84 staff who are identified as teaching the IVMV course, 57% are veterinarians. It is recommended that 70% of the academic teaching staff should have veterinary training (SOP Annex Ia, paragraph 1.10). Also, only 56% of the teaching staff who teach the IMVM course is from the Department of Veterinary Science. It may therefore be challenging for the Director of the

IMVM course to achieve and maintain central veterinary control of the curriculum and ensure delivery of a coordinated veterinary undergraduate teaching programme (SOP annex Ia paragraph 1.2).

The Veterinary Sciences Department has a minority representation in the administration of the School of which it is a part and is not represented at all on the Academic Council of the University. This contrasts sharply with the fact that more than 40% of the students enrolled in the school are veterinary undergraduates.

### **2.3 Suggestions**

It is essential that there is central veterinary control of the IMVM course, so that there can be coordinated delivery of an appropriate undergraduate curriculum. But the present organisation of UTAD militates against it being possible for this to be achieved.

Since 40% of the students enrolled in the School of Agrarian and Veterinary Sciences are veterinary undergraduates – and demand for the veterinary courses is being maintained, while that for other courses in the School is eventually declining - a radical solution would be to establish a School of Veterinary Science by re-distributing the other 3 courses. The relationship between the IMVM course and the Veterinary Teaching Hospital would be preserved, if not enhanced, by this change.

## **3 FINANCES**

### **3.1 Findings**

Almost 70% of the University budget comes from national government and another 3% from a central Programme for Investment and Development Expenditure (PIDDAC). The University charges tuition fees, which it retains; these contribute 14% to its total budget, but there is little scope for adjusting these as they must be fixed within a narrow band set down nationally. The Management Council of UTAD allocates the budget to the various Schools according to formulae related to nationally determined ratios between the number of students and number of teachers. So, in theory, the School which hosts the IMVM should receive somewhat more funding than average, because it is recognised that the ratio between students and staff needs to be greater for a veterinary course than for other courses. It is not clear whether this happens in practice, or whether this apparent advantage is obliterated as the budget is filtered through the management hierarchy.

The President of the School is responsible for the distribution of the budget within the School; it should be noted that the School of Agrarian and Veterinary Science has 3 other Departments in addition to the Department of Veterinary Sciences and is responsible for 5 Bachelors degree courses, 7 Masters degree courses and 3 PhD courses.

The budget allocated to the School in which the IMVM course is taught is largely for running costs; the central financial services of UTAD are responsible for all major expenditure: salaries of teaching, technical and support staff; and the general running costs of the university, including energy, water and communications. Staffing needs are determined by Departments, which present any request for posts via the President of the School to the Rector of the University, who makes a decision based on the availability of funds.

The Veterinary Teaching Hospital (VTH) was built using capital provided by the predecessor body of PIDDAC and the salaries of its staff and its running costs are covered by UTAD. The VTH has one director and three vice-directors chosen by the Rector from among the teaching staff. It was not clear to the Team what are the terms of reference of the VTH management, especially whether its primary purpose is to support undergraduate teaching. The rather small income it generates, together with charges levied by the Anatomical Pathology, Parasitological and Microbiological laboratories, are retained and used to pay some technical staff of the VTH and to acquire necessary consumables.

A new Veterinary Sciences building is in the process of construction using national and EU funds. The contract for furnishing and equipping it was, at the time of the visit, out for tender; the funding for this is already available. It is hoped that this will be ready for occupation in 2013.



### **3.2 Comments**

The finances of UTAD are highly centralised and the IMVM course must compete for funds with 14 other courses in the School of Agrarian and Veterinary Sciences. Its representation in the administration of the School is small and, in the central administration of UTAD, almost non-existent. Tuition fees are standard for all students of UTAD and are retained at the central level.

Neither the Department of Veterinary Sciences nor the Veterinary Teaching Hospital can attract any research funding for themselves because research in the University is concentrated in research institutes separate from the Departments or Schools. The Director of the IMVM course has no direct budgetary responsibility and is one of only 2 voices representing the Department on the Pedagogical Council of the School. In this situation,, satisfaction by the IMVM course of the financial criteria required (SOP Annex Ia paragraph 1.3) is questionable.

Budgetary allocation to UTAD from central government last year was reduced by almost 4% over the previous year. Given the national financial situation, it is expected that this trend will continue for the next few years. There is general dissatisfaction amongst the staff of the Department and the VTH with the level of the available funding.

### **3.3 Suggestions**

The allocation of funding for the IMVM course is inextricably linked with the organisation of UTAD. Implementation of the suggestion (at paragraph 2.3 above) - that the Veterinary Sciences Department should be elevated to the status of a School - would enable a more direct and transparent budgetary pathway. In this way, not only would it be possible for the IMVM course to be better directed and more responsive to the educational needs of its students, but it would be easier to assess the financial and staffing requirements of the course and to bid for appropriate funds to satisfy them.

## 4 CURRICULUM

### 4.1 GENERAL ASPECTS

#### 4.1.1 Findings

The veterinary undergraduate course being taught at UTAD extends over 5.5 years (11 semesters). It is a “Bologna-adapted” curriculum, structured in two cycles. Basic training is provided in the first cycle (1<sup>st</sup> to 3<sup>rd</sup> year), and profession-oriented training in the second.

The general framework of the course is established by Ministerial Decree promulgated by the Portuguese Ministry of Education and Science. Within that framework, UTAD is the body in charge to establish an effective curricular programme and submit it to periodic accreditation by the national Agency for Assessment and Accreditation of Higher Education. No national accreditation is needed for minor changes (e.g., those implying less than 10% modification of the teaching time assigned to the different subject areas).

Subjects taught are ranked in core subjects, which are mandatory for all students, and elective subjects, to be chosen amongst the ones offered at IMVM level. Of a total of 330 ECTS credits (27-hour) making up the syllabus, 284 correspond to core subjects (86.1%) and 16 to electives. The core part of the syllabus comprises 12 ECTS credits of obligatory traineeship, organized in six periods of 2 ECTS credits each) from the 3<sup>rd</sup> to the 8<sup>th</sup> semester. Additional 30 ECTS credits are assigned to the Dissertation work, to be carried out in the 11<sup>th</sup> semester.

There is no Obligatory Extramural Work at IMVM-UTAD.

No structured tracking system is organized within the curriculum.

In the core part of the curriculum, EU-listed subject areas weight as follows (% of the whole training time calculated from Table 4.6 SER pp 56-58):

Subject area	% training time	% practicals
Basic subjects	2.6	53.3
Basic sciences	31.0	46.8
Clinical sciences	49.1	47.8
Animal production	9.7	46.2
Food hygiene/Public health	7.6	56.9
Professional knowledge	N.A.*	N.A.*
TOTAL	100.0	48.2

(\*) Professional knowledge could not be clearly derived from Table 4.6 of the SER. During interviews, EU-listed professional knowledge subjects were found covered in clinical subjects.

The time devoted to practical activities is reported in the right column.

#### 4.1.2 Comments

There were no major discrepancies with information reported in the SER. The curriculum seems to fulfil the EU directive 36/2005 in terms of length and contents (EU listed subjects).

Freedom by IMVM-UTAD to modify the curriculum is relatively limited, but this national law-based characteristic does not seem to imply structural difficulties in fulfilling current EU-requirements in veterinary education.

In general, the team was satisfied with the balance of the curriculum. Comments on the clinical training figures given in the SER will be reported in a later paragraph (see 4.4.2).

No evidence of unnecessary significant duplication of contents between subjects was collected by the team.

#### **4.1.3 Suggestions**

With regard to clinical training, see 4.4.3

## **4.2 BASIC SUBJECTS & BASIC SCIENCES**

### **4.2.1 Findings**

The teachers of Basic Subjects and Basic Sciences belong to ECAV and ECVA (School of Life and Environmental Sciences).

Basic Subjects are taught during the first year of the IMVM programme. There are two separate courses in Veterinary Biophysics (4 ECTS credits), and Biostatistics and Medical Information (4.5 ECTS credits). Embryology is taught in Embryology and Anatomy I. Animal Biology forms part of several of the Basic Sciences courses.

The eleven subjects listed as Basic Sciences (EC directive 2005/36/EC) are covered in 19 separate courses, all but one given during the first five semesters of the IMVM programme, while Toxicology is in the fifth year.

Basic Subjects and Sciences correspond to 92.5 ECTS credits or 28 % of the total IMVM program. The total hours of scheduled training are 1,478.5 hours (ie. 16 h/ECTS credit), of which 803.5 h are “theoretical” (54 %) and 675 h (46 %) are “practicals”. The ratio between theoretical and practical training is 1.2.

During the 15 week teaching period of each semester, a number of courses are given parallel to each other, usually with one or two hours of lectures and one practical session (2 - 3 h) per week. Most of the practical training sessions are obligatory, ie. the individual student’s recorded attendance has to be at least 70 %. Lectures are given to whole classes (up to about 100 students) while the class is divided into four to six groups for the practicals (15 – 25 students per group). Reportedly, in anatomy sessions the students work in “subgroups” of four to five persons.

A “typical” week-load (September 2012) for a student in the first two years of the IMVM programme would include 10-12 h of lectures and 14-16 h of practicals in seven different subject courses. During semesters 3 and 4 there are also elective courses (2 + 2 ECTS credits) given within Basic Sciences.

### **4.2.2 Comments**

The hours as well as the balance between practical and theoretical work seem to be adequate. The practicals in physiology, pharmacology, toxicology and microbiology also seem to be sufficient.

Group size varies between different practicals. In most cases, laboratory work is done in groups of 15 – 25 students.

The teaching staff of Basic Subjects and Sciences seems to be very motivated and well prepared. How items taught in basic sciences are brought into relation to later courses was not clear. When asked, several teachers admitted that there is no formal coordination between basic courses and later – more applied – parts of the IMVM programme. This has to be addressed, and especially so if teachers lack a veterinary background.

It was clear that all teachers make the best they can out of the teaching material of animal origin available, which, in some cases, must be judged as barely sufficient. Whole corpses for use in Anatomy are scarce, and totally lacking for equine and food producing animals. Thus, the hands-on participation by students in anatomy is at risk of being too small.

Frozen anatomy specimens are kept in ordinary household freezers in the dissection hall. Dog carcasses for dissection by students are preserved using a low percentage formaldehyde solution. As exposure to formaldehyde is a significant consideration for human health, the use should be abandoned.

Waste management is well organised, see section 6.1.1.

Teaching of bio-safety and bio-security is included in some of the Basic courses, e.g. with regard to microbiological, chemical and radiation hazards.

To a visitor used to teaching integrated subject courses (anatomy, physiology etc. of organ systems), the IMVM programme with a number of parallel subject courses seems very demanding both to students and to teachers. There is an obvious risk that a more comprehensive biomedical synthesis is replaced by fragmented presentation and knowledge of details. Some interviewed students were, however, in favour of studying several subject courses simultaneously.

#### **4.2.3 Suggestions**

No special one (but see Chapter 7).

## **4.3 ANIMAL PRODUCTION**

### **4.3.1 Findings**

The main food-producing animal species in the Tras-os-Montes and Alto Douro area are milking cows and small ruminants. Pigs are also present. Therefore, it sounds logical that the IMVM can offer a good training in such species, of course taking also into account the other main farm animals (game species, poultry, rabbits and even fish).

The SER states (p. 58) that Animal Production core subjects represent 24.5 ECTS credits, plus 4 additional ECs of the obligatory traineeships. These 28.5 ECTS credits represent the 10% of the core curriculum of the IMVM. Both periods of traineeship in Animal Production cover the knowledge of main food-producing animal species.

Concerning elective courses, there are 32 elective subjects offered from the 2<sup>nd</sup> to the 5<sup>th</sup> year of the curriculum. Of them, 8 belong to the Animal Production area: Nutrition and Feeding of Exotic Animals, Sustainable Management of Animal Effluents, Apiculture, Clinical Nutrition, Game Production, Poultry Production, Equine Production and Aquaculture.

There is an animal farm in the UTAD for practical training.

### **4.3.2 Comments**

Apart from the core subjects mentioned in the SER p. 58, other subjects can be considered relevant to the Animal Production area, namely Exognosis (breeds and morphological characteristics: 4 ECTS credits; 2<sup>nd</sup> semester) and Animal Reproduction (4 ECTS credits; 4<sup>th</sup> semester). Animal Reproduction is referred to reproductive management systems and artificial reproductive techniques (Animal Production subjects according to the Directive 2005/36/EC), being different from Reproductive Medicine I (8<sup>th</sup> semester) and Reproductive Medicine II (9<sup>th</sup> semester). Therefore, in our opinion the core curriculum of the IMVM fulfills the requirements and subjects considered in the Directive 2005/36/EC in the Animal Production field, although the number of hours of some subjects is limited, for example, Animal Nutrition and Feeding.

There is a good balance between theory and practical training in the Animal Production area. Practicals are nearly 40% of the on-site training.

Agronomy and Rural Economics are well covered with the subjects Agriculture, Ecology and Environmental Management (2<sup>nd</sup> semester) and Economics, Administration and Marketing in Animal (10<sup>th</sup> semester), respectively. Veterinary Hygiene and Biosecurity contents are covered by the subject Preventive Veterinary Medicine and Hygiene (9<sup>th</sup> semester). Waste Management is covered by the elective Sustainable Management of Animal Effluents.

Of the elective subjects offered in the field of the Animal Production area, Aquaculture, Poultry Production and Game Production have not been activated because of the lack of demand by the students.

Animal Production staff seems motivated, and the teaching of the different subjects seems well organized. There is a good cooperation for practical training between the Department of Animal Production and some teaching units of the Department of Veterinary Sciences, mainly for Physiology and Animal Reproduction. The laboratory of Animal Nutrition is well equipped both for practical training and research.

Concerning the animal farm of the UTAD, there are good facilities for practical training of the students in rabbits, broilers, hens, sheep, goats and aquaculture. The pig farm, although functional, needs to be renovated. There is no dairy cattle farm, and the old facility (useless at the moment) is expected to undergo a radical change to become a free stall farm for 35 dairy cows with milking parlor. The funds for the animal farm are provided directly by the UTAD, and the different products obtained (meat, eggs) are sold to pay the feeding of the animals. Seven qualified members of the technical staff of the UTAD are in charge of the feeding and management of the animals. The animal farm of the UTAD satisfies the EU rules of welfare for farm animals, and is more a teaching farm than a research farm, being mainly used for the traineeships I and II (Animal Production) and also for practical training of some of the subjects of the Animal Production area, including artificial insemination in pigs and rabbits.

#### **4.3.3 Suggestions**

Concerning the Animal Nutrition and Feeding subject, though 4,5 ECTS credits are hardly sufficient to cover a minimum training, Traineeships I and II seem to compensate at least in part. It would be desirable that additional curricular hours be assigned to expand training of the students in this particular subject. Moreover, Animal Nutrition is taught too early in the curriculum (4<sup>th</sup> semester). If possible, it should be moved to a subsequent semester; if not possible, a second option would be that aspects related to metabolism be taught at the very beginning of the subject Physiology II, which is also delivered in the 4<sup>th</sup> semester, in order to synchronize the teaching material with Animal Nutrition.

Practical training in poultry, rabbits, apiculture and aquaculture is more than adequate. As regards larger species, little practical training is delivered in pigs and dairy cattle. This was justified by the biosecurity concerns of external pig farmers (eg, in relation to African Swine Fever) and the lack of a dairy cattle farm at the Campus until the new facility will be finished. Although the students are exposed twice to dairy cattle farm in the subject of Medicine and Surgery for Ruminants (7<sup>th</sup> semester) and in Traineeship VI, it is recommended to increase such exposure with additional visits, organized by a teacher of the Animal Production area. Moreover, visits to an external pig farm should be obligatory in order to expose the students to the organization and management of a modern pig production plant.

Given that some electives in the Animal Production area seem of little appeal for the students, additional electives should be offered. Pig production should be the first choice, and some subjects related to nutrition of dairy cattle and pigs should also be considered.

## 4.4 CLINICAL SCIENCES

### 4.4.1 Findings

All general clinical subjects listed in the SOPs are covered. With reference to electives, see par. 4.6 of this report.

At IMVM, the complete clinical training is provided/supervised by the teaching staff, and there is no clinical extramural training. There is a functioning Veterinary Teaching Hospital (VTH), organized into a Small Animal, a Large Animal and a Wildlife Area. There are premises for hospitalization of all species and an intensive care unit for small animals. There is an ambulatory clinic mainly for production animals but also for equine outpatients. Noteworthy, at VTH there have been no consultations/hospitalization for production animals in the last three years. A 24/7 emergency service is in operation for all species (wildlife included). Two students and 2 interns have sleeping accommodation in the hospital and are available for emergency cases at night and weekends: one student and 1 intern for large animal cases and the other pair for small animal cases.

The clinical premises are identified in Fig. 6.4 and 6.5 of the SER (pp 103-104). Data on necropsy caseload and patients' flow are detailed in the SER (Tables 7.2a, 7.3, 7.4a, pp 123, 127, 129). The teaching and support staff levels are found in table 10.1 on pg 163.

Ratio 7 is well below range, indicating that clinical work (as intended in the SOPs) should be increased.

Practical training in the frame of core clinical subjects (421 hours of laboratory and desk-based work, 62 hours of non-clinical animal work and 454 hours of true clinical work) is organized in groups of 10-15 students. However, groups involved in the clinical traineeships are smaller (2 students), and additional intense training is offered to students adhering to volunteer programs at VTH. According to SER and first-hand information received from the students, a significant proportion of students (more than 50%) make use of the latter opportunity during their 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year. Participation of all students in activities involving the ambulatory clinic and hospitalized animals is mandatory though limited in time (7-10 hrs/service). Participation in the activities involving the emergency services is welcome though not mandatory.

Students are covered by liability insurance during all obligatory and voluntary activities.

Attendance of students at mandatory clinical activities is countersigned by the teachers or contracted veterinary personnel, but a readily available system for identifying individual or group deficiencies (i.e. a system to register the procedures performed) does not exist.

All clinics are operating on a system of paper based reports. An imminent shift to an electronic system was communicated to the Team, but it is not certain that students would have access to the electronic case records .



#### 4.4.2. Comments

Whilst not ideally functional in some parts (see this report, par 6.2.2), the VTH is potentially a good facility and generally adequate for the needs of the students and the patient caseload.

The atmosphere in the VTH is teaching-friendly.

The ambulatory clinic is reasonably active and of great teaching value, and compensates to some extent for the lack of consultations/hospitalization at VTH for production animals and the relative shortage of “in house” equine consultations. A way should be found to contract new teachers to strengthen the committed but also heavily challenged Large Animal staff. This would also permit an increase in the number of herd health visits to swine and poultry farms, and offer more varied experience of cattle (eg, to handle parturitions and dystocias).

The students receive adequate opportunity for developing skills in performing necropsies and basic parasitological, mycological and microbiological diagnoses.

The clinical case load for small and large animals has not increased and sometimes even diminished in recent years, mainly due to the economic downturn (see also Chapter 7 of this report). Though most ratios (R11 to R16) are in the expected range, the case load is not extensive, hence the skilful organization of teaching is fundamental to obtain the most benefit from it. The size of training groups, which is mainly larger than desirable, and the fragmented time schedule applied to most parts of clinical training (see also par 5.1.3 of this report) do not allow sufficient hands-on clinical training provision for all students. This finding was exacerbated by the absence of any available system to check the hands-on experience accumulated by the individual student or group of students. **The insufficient hand-on clinical training was ruled as a Major Deficiency at IMVM.**

It is no longer acceptable for state-of-the-art teaching clinics to operate exclusively on paper based records of patients. Such systems are not sufficiently user-friendly and their efficient use as learning tools for the students is questionable.

#### 4.4.3 Suggestions

The amount and organization of clinical work at IMVM must be urgently reviewed to compensate for insufficient hands-on clinical training provided to all students (see also par 5.1.3 of this report).

It should be mandatory for all 5<sup>th</sup> year students to rotate through the emergency services, also during Saturday afternoons and on week-ends.

IMVM should develop a system to register the exact amount of clinical exposure each student gets, possibly by introducing a students` records book.

Though all students participate in the mobile clinic, the hours of mobile clinic work are insufficient for those who do not take part in voluntary programs and/or those who are not preparing a dissertation thesis on food producing animals. IMVM is recommended to reorganize the clinical training on food producing animals so that at least 6-10 days of mobile clinic work is done by each student.

More herd health visits to intensively produced pigs and poultry are recommended.

An electronic system should be rapidly installed that will allow clinical histories and financial information to be stored together. It should also note the involvement of the students and the procedures undertaken to permit data mining of clinical material and student development to take place. Once the e-system will be installed, it would be desirable that all students and instructors attending the clinics improve their personal skills to exploit the system's full potential.

## **4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH**

### **4.5.1 Findings**

Food Technology, Food Hygiene and Veterinary Public Health are provided by the Department of Veterinary Science through the subjects Technology of Animal Production I and II (4.5 ECTS credits each), Food Hygiene and Inspection (I and II, 5 ECTS credits each) and Veterinary Public Health (5 ECTS credits). Teaching includes legislation with easy access for the students to the relevant material, and also covers animal welfare aspects specifically related to slaughter and environmental health and waste management. In addition to this teaching, veterinary public health aspects of contagious diseases are highlighted in the subject “Infectious Diseases” and the elements of risk based handling of disease are also covered in this subject.

The teaching in Technology of food of animal origin was found to be quite detailed. The reason for this is the local food-industry-structure with many small enterprises. The teaching allows the candidates to fill a position with responsibility for both safety control and quality control.

Teaching includes practical laboratory work in groups of 14 to 21 students in “Food Hygiene and Inspection” and in “Technology of animal products”, and theoretical exercises in “Food Hygiene and Inspection” and “Veterinary public health” (see SER pp. 57-58 for the number of hours). Topics are related to the understanding of meat inspection, inspection of food of animal origin, general quality and safety control, including microbiological criteria, and decision-making when working as a sanitary inspection and veterinary public health veterinarian. Students further produce selected foods to understand the most important parameters for the quality and safety of such products.

Practical training in meat inspection (pigs, cattle, poultry), food inspection (egg, fish) and audit of self control are performed in groups of 7 or 14 students in collaboration with external partners (slaughterhouses, food industry, McDonald restaurant). Forty-two teaching-hours are used for these activities, and student must participate in at least 70 % of them.

In addition to the mandatory courses, the students can choose between three elective subjects in food hygiene and inspection (see SER page 62-63). The number of students choosing these subjects in the last year was 26, 19 and 17, respectively.

Five to eight students perform their master project within food hygiene and inspection each year. The teaching staffs have observed an increased student interest in food hygiene and public health, probably due to difficulties in obtaining jobs in general practice.

There is no obligatory extramural work.

### **4.5.2 Comments**

The staff of the food hygiene, technology and public health area consists of young and enthusiastic teachers. They provide a well-structured and relevant teaching with little overlap between subjects. Brand new laboratory facilities, which are much needed, are currently in construction for the food hygiene and technology area.

The subjects cover all relevant aspects of modern food inspection, veterinary public health and a number of elements of food quality control. As such, the graduates are likely to obtain the required day one competences in this part of the course.

Practical training in meat inspection and audit of food hygiene self-control was found to be difficult to perform within the current structure with 2 hours set aside for each practical section. Students miss-out on other teaching while away on doing these activities.

#### **4.5.3 Suggestions**

Restructuring the time-plan of the practical teaching would be welcome, to make it possible for students to participate in the practical training in meat inspection and food control without having to miss-out on other teaching activities.

Given the high quality of the teaching found and the brand new laboratories facilities that will be in place within the next year, the school could consider making excellent teaching in food hygiene, technology and public health a “brand” of its offer. The school could be open for students from other veterinary schools in Portugal (and Europe) to take these subjects and do a Master’s project. A stronger emphasis on food microbiology and molecular biology techniques would be needed to achieve this.

## **4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS**

### **4.6.1 Findings**

Students are required to take 16 ECTS credits of elective subjects (4.8% of the syllabus), in form of four credits per year from the 2<sup>nd</sup> to the 5<sup>th</sup> year. Nine topics are offered in the 2<sup>nd</sup> year, 9 in the 3<sup>rd</sup>, 9 in the 4<sup>th</sup> and 7 in the 5<sup>th</sup> (SER pg. 62-63). Of the 34 topics offered, 9 are relevant to Basic Sciences, 8 to Animal Production, 3 to Food Hygiene and Technology and 14 to Clinical Sciences.

Not all topics are taught every Academic year, since a minimum number of participants is required.

### **4.6.2 Comments**

The number of electives is sufficient, but it is difficult to provide tracking (e.g. in Animal Production or Food Hygiene) from them.

### **4.6.3 Suggestions**

The Faculty should consider offering a larger variety of electives and selecting the new topics in view of implementing a future tracking system.

## **5. TEACHING QUALITY & EVALUATION**

### **5.1 TEACHING METHODOLOGY**

#### **5.1.1 Findings**

Teachers are overall motivated and dedicated to their teaching work and are, in general, open and approachable for students.

As in many other establishments in Europe, IMVM-UTAD has recently adopted a new curriculum in accordance with the European Space for Higher Education, which implies a shift from lecture dominated teaching to more problem-oriented teaching methods. The extensively used platform SIDE (an acronym for Teaching Support Information System) is important in this process as it provides a valuable intranet support for communication between teaching staff and students. Abundant teaching material, which is often posted by teachers, is freely available on SIDE hence it is not surprising that working from textbooks has become less popular amongst students.

Teaching methodology is outlined in SER (pp 83-88). Teaching is sufficiently well balanced between lectures, seminars, tutorials and practicals. Nevertheless, Ratio 7 is below range (3.20), indicating relatively unbalanced supervised practical training to the detriment of clinical work.

Specific learning objectives of the individual courses are clearly set and published via SIDE, whereas the professional competences that graduates should reach and how their acquisition is attested are less clear. Based on interviews, students are not accustomed to having the expected skills listed and countersigned on a log book or similar.

Students are exposed to handling of small or large animals since the 2<sup>nd</sup> curricular year (Traineeships I and II).

There is no Obligatory Extramural Work taken at farms, veterinary practices or in Food Hygiene/Public Health with a commercial or government organization.

Since 2011, approximately one half of 3<sup>rd</sup> to 5<sup>th</sup> year students take additional practical training (40 hours/students on average) as “volunteers” at VTH-UTAD. Volunteer students are actively involved in the management of the clinical cases.

At UTAD (IMVM is no exception) little attention has been paid so far to promote and reward teaching excellence, and there are no salary incentives in operation. Courses of innovation in learning (e.g. e-learning) have been offered to UTAD teachers in the last three years.

A system permitting students to evaluate teaching and teachers (as per guidelines of the document “Strategy for Monitoring, Evaluation and Improvement of Teaching”, approved by UTAD in 2011) was in experimental phase at the time of the visit. Approximately one third of the student

population has participated in the evaluation of teaching by filling a dedicated questionnaire. Though not high, this percentage is deemed representative.

All services related to student welfare and guidance, job placement included, are excellent. The Team was particularly impressed by the capacity and quality of the canteens and the Student's Residence it visited.

### 5.1.2 Comments

The SER (pp. 81-83) acknowledges that insufficient hands-on clinical work is provided to students, compared with laboratory and desk based work and non clinical animal work. While the Team fully supports the proposals of IMVM board for immediate correction of this deficiency, it became clear during the visit that the organization of teaching into a fragmented rigid time schedule - namely in subject units of "two hour lecture + two hours of the corresponding practical"/week - limits the necessary involvement of students in real-life clinical work at the VTH and outside farms. As a consequence, students cannot fully enjoy the (not extensive) clinical caseload in terms of case responsibility, case follow-up, interaction with clients, hands-on work in authentically small groups, etc. **In the unanimous opinion of the Team, this organizational rigidity - of which colleagues seemed to be aware - is amongst the main drivers of the perceived insufficient hands-on clinical training at IMVM, which was confirmed as major deficiency.**

The groups of students being trained in clinical work must fit the size indicated in the SOPs.

Teaching activities need good evaluation systems. It is a matter of fact that, at present, excellence in teaching is not promoted, evaluated or rewarded as it should. A University policy in this direction has been announced.

Attention of UTAD to the students' welfare related services is to be commended.

### 5.1.3 Suggestions

The Team urges IMVM to substantially modify the current rigid organization of teaching so that additional and more valuable clinical training in small groups is offered to all students. The Volunteer programmes could be replaced by more traineeships. In this context, expanding the existing "Traineeship" model and allowing for Extramural Training experiences (no matter if obligatory or not) should be seriously considered. The new training opportunities should preferably be provided in the final curricular semesters.

It should be explicitly clarified with students which professional skills IMVM commits itself to provide them. Based on detailed review, a structured system of skill-by-skill attestation should be developed.

Motivated members of the teaching staff should be given more opportunities to receive valuable training in the use of innovative teaching methods and tools, and be also given time to implement them.

The Team recommends IMVM to give full implementation to an efficient and transparent evaluation system of the teachers and subject courses by their students. Tools must be found to motivate students to participate in this process.

## **5.2 EXAMINATIONS**

### **5.2.1 Findings**

Examinations rules are set at UTAD level (Regulamento 479/2011). Exams are held at the end of each semester (14-15 weeks teaching period), during the lecture-free months of January, June and July.

Different forms of examination are used such as multiple choice questions, oral, practical and report writing. Students may chose between continuous assessment or a final exam covering the whole unit; most choose the former.

External examiners are used only for the presentation of Dissertations or Master theses; they are not routinely used for examining undergraduates.

Though only repetitions of the same exam are allowed in each academic year, the total number of retakes per subject is not limited. Moreover, there is no requirement for students to pass certain examinations before they can enroll in a related subject later in the course. Students may enroll in any curricular year with a “debt” from the previous year that cannot exceed 18 ECTS credits. Compensation of the “debt” is mandatory in the examination schedule of the individual student.

### **5.2.2 Comments**

In general, the assessment of student competences seems appropriate, and with a good use of student activities during practical lessons.

Obligatory attendance to lectures should be seen as less critical than presence at practical teaching.

Students commented that they feel over-assessed, since sometimes they have to be present at teaching (70%), and pass on reports of practical activities, and finally pass a final examination. Some students see this as a reason for the rather slow progress (average 7 years) to completion.

### **5.2.3 Suggestions**

Examination committees of professionally oriented disciplines should benefit from the presence of external examiners.



## **6 PHYSICAL FACILITIES & EQUIPMENT**

### **6.1 GENERAL ASPECTS**

#### **6.1.1 Findings**

The IMVM course is based less than 2 km south from the city center, in the main Campus of Quinta de Prados de la UTAD, an area of 85 ha. The Southern part of the Campus contains the Agrarian Sciences and Veterinary Sciences buildings, surrounded by the research-teaching farm facilities and the Veterinary Teaching Hospital (VTH), being a sort of “Agrarian Campus”, which is a strength of the UTAD in our opinion. The VTH was renovated and extended in 2009. It has 2 different facilities: the main building (Teaching Hospital) and the building of wild animals’ facilities. The VTH has individual places for hospitalization of animals of different species, mainly for small animals (dogs and cats) but also for food producing animals, horses and exotic species. Isolation facilities are also available.

The IMVM-UTAD has facilities for housing different farm animals and equines, for rearing and for teaching (and eventually research) purposes. These facilities were set up in the 70’s to provide animals for the Animal Production courses, and nowadays are used for the IMVM. There are also facilities for nutritional and carcass studies and a station for manure treatment.

Concerning the halls for lecturing, the IMVM has two large rooms with 120 and 250 seats, four medium rooms with 80-85 seats and 9 additional smaller rooms with less than 50 seats each. Most of them are located in the Agrarian Sciences building. Lecture rooms are equipped with multimedia projectors. Additionally, some portable devices are available, if necessary. Internet seems to be available in all the Campus area.

For practical teaching, there are 16 rooms (12 to 35 places), mainly located in the Agrarian Sciences building. Only one of them (hall 2: Biostatistics and Animal Breeding) is equipped with computers.

There is also a small pilot plant for meat products.

The system for waste management includes an incinerator at the VTH, the national SIRCA system for small ruminants and bovine carcasses, and private companies for different hazardous wastes produced by the laboratories.

A range of outside plants are visited during practicals of Food Hygiene and Inspection I and II. They are listed in SER pp.74-77. Seven plants are in Vila Real, others are 80 to 150 km away.

IMVM owns a 5 seat 4x4 pick-up which is operated as ambulatory clinic.

### **6.1.2 Comments**

All animals held for teaching purposes must have facilities at the highest welfare standards. The facilities of the animal farm of the UTAD do not have the accreditation according with the EU Directive 86/609 to breed and use animals for experimental and other scientific purposes.

### **6.1.3 Suggestions**

The animal farm of the UTAD should be accredited according to EU directive 86/609. To achieve this, the pig farm would probably need to be demolished; it would then be necessary to expose students to pig husbandry and medicine at farm level.

More computer rooms for practical teaching will be necessary in the future. Moreover, the maintenance and renovation of the computers should be a top priority. The virtual platform SIDE is an important teaching tool, but computer rooms remain essential for the modern teaching in life sciences.

## **6.2 CLINICAL FACILITIES & ORGANISATION**

### **6.2.1 Findings**

The VTH was renovated and extended in 2009. It has two different facilities: the main building (Teaching Hospital) and the building of wild animals' facilities (for details, see SER pp. 103-108). The VTH has individual places for hospitalization of animals of different species, mainly for pets (dogs and cats) but also for food producing animals, horses and exotic species (SER Table 6.1). Isolation facilities are available for farm animals and horses, small animals and wildlife.

The clinical haematology and biochemistry laboratory is located in the VTH. It offers service for both internal and external clients. The VTH has access to basic laboratory equipment out of hours when the labs are closed. Diagnostic services are also provided by the Histopathology and Anatomical Pathology, Microbiology and Parasitology laboratories located in the Agrarian Sciences building.

The VTH provides a 24/7 emergency service for small animals, large animals and wildlife. A 24 hour Intensive Care Unit is operated. Besides internal medicine, surgery, reproduction, anaesthesiology and diagnostic imaging, other specialist services are offered, namely: cardiology, neurology, dentistry, oncology, dermatology and ophthalmology.

There is an incinerator on site for use after necropsies and euthanasia. Waste disposal bins were available and appropriate in most cases.

Based on SER, health and safety measures are in place in the VTH and in all premises for practical work to which undergraduate students have access. Unfortunately, a number of exceptions were found (see Comments).

### **6.2.2 Comments**

The VTH is still not finished either in regard to some of the building works or with the equipment required for this to represent a hospital of high standard.

There is no MRI or CT at present though funding for this has been sought. The hydro and physiotherapy unit for equines and the octagonal flying cage in the building for wild animals are outstanding facilities.

Some of the housing for teaching and hospitalized animals was less than optimal. Some of the hospitalized patients were in smaller than ideal kennels and stables. The ceiling in part of the stables was low and could cause injury.

The equine surgical theatre has not been used frequently so far. The Team felt that the ceiling in this room was low if a large horse should be admitted. It was also felt that removal of a dead horse from the theatre would be difficult. Although the recovery room had an escape door, there was no means of assisted recovery there without staff/students being present.

There did not appear to be enough computers for student use within the Hospital though wi-fi was provided everywhere on campus.

No wash hand basins were available in the isolation areas and there was no area to change clothes and footwear when entering the large animal isolation area. No instructions for students or staff were visible in these areas as to the proper Health & Safety requirements.

The Team saw radiograph cassettes being held by hand during exposure while staff were not wearing protective gloves.

Entrance to the sterile theatre area is not controlled at present even though one of the theatres was in use.

In the necropsy room, there was no separate area for staff or students to change or shower. The entrance was also directly from the Hospital.

The VTH has no one person responsible for the pharmacy. Drugs which were out of date were found in all areas. Some items had been opened and no date was marked on these to indicate when.

In the clinics, protective clothing for large animal work did not appear to be available. Neither staff nor students were wearing protective footwear with cattle or head gear with horses.

In the small animal area, though staff and students were wearing short sleeved gowns, they had long sleeved jumpers under them thus negating the purpose.

The histopathology slide preparation area had a strong odor of formalin

The hospitalization ward for birds did not have special cages with separate air systems in case of psittacosis in any of the birds.

**The Team was concerned regarding the health and safety policies for all facilities and the adherence to them. As reported, a number of failures to comply with desirable standards were found, some of them not acceptable. The Team felt that there was insufficient awareness and maybe also insufficient teaching of bio-safety and bio-security, and that – overall - the health and safety related weaknesses were perceived as a Major Deficiency.**

### **6.2.3 Suggestions**

The Hospital as a whole needs to be finished so each area has the appropriate equipment and is set out correctly for its use. Funding needs to be found to finish the areas of the hospital now used to reach acceptable standards in all areas.

Further consideration to the type and size of patients coming into the VTH should be reviewed to ensure that suitable housing is available for all sizes.

A general review of the health and security policies for all areas should be undertaken and policies introduced where there are none to ensure the safety of staff/students and animals under their care. Biosecurity protocols for wards in general and in particular for isolation and theatre spaces need to be urgently amended to reach acceptable standards.

Ventilation of the histopathology slide preparation area should be reviewed urgently.

A responsible person should be identified to take charge of the pharmacy to ensure best practice in the use of drugs and their storage. Drugs should be centralized and not kept in areas used for recreation and sleeping.

Protective clothing policies must be clearly enunciated and adhered to. Staff must also adhere to these and be an example to the students.

## **7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN**

### **7.1 Findings**

Anatomy obtains dog cadavers (12-16 for each academic year) from public kennels, specimens from slaughterhouses and wild/exotic animals from zoos and the VTH-UTAD. UTAD has a vehicle for transport. There are also complete series of bones and skeletons at the Anatomy Museum.

Animals from a wide number of species are used in necropsies from different origins, including animals from research projects of the UTAD. Storage of cadavers and organs is mainly by refrigeration and freezing. There is a multidisciplinary approach to necropsies and each student must write a report on a PM they have carried out. The number of necropsies being carried out has reduced significantly in the last three years (dogs from 84 to 44 and cats from 33 to 11).

There is a teaching-research farm available for the practical training of the IMVM-UTAD in several aspects of the Animal Production area, but also in clinical subjects. UTAD has signed agreements with external farms to improve the practical and integrated knowledge of the students. The animal farm of the UTAD has:

- 300 broilers
- 400 hens
- 70 rabbits
- 10 sows
- 50 ewes
- 50 goats
- 5 dairy cows
- 10 beehives
- Several species of aquaculture

There are two vehicles for transportation of animals, one of them for farm animals and equines and the other one for wild animals. There is also an Ambulatory Clinic providing on-call outside services (for food producing animals, equines and wildlife), being used for the students in the clinic Traineeships V and VI, in volunteer programs and during the Dissertation work, if applicable. The service however runs 365 days a year in offering a service to clients and emergency services for wildlife collection. The Ambulatory Clinic carries out visits to approximately 200 farms a year.

The Faculty has agreements with different institutions for provision of live and dead wildlife (on average, 203 and 136 cases/year).

Many of the clinical practical classes are split between using models, cadavers and patients. There are also three teaching dogs and one teaching cat available for clinical practicals. There appears to be no shortage of cadavers for these small animal practicals.

The availability of large animals at the Campus is limited. As there is no farm on site, 10 cows have been bought in for practical classes in the semester.

Due to biosecurity and economic reasons, few farm animals are admitted to VTH and the clinical training relies on the ambulatory service. The average number of food producing animal patients is 717 a year.

Over the past few years the equine case load has been variable with an average of 116 (120 seen this year) in the clinics and 172 (143 this year) seen by the ambulatory practice.

The caseload available for teaching relating to dogs has been variable over the past three years (3097 in 2009; 3426 in 2010; 2997 in 2011) although the feline caseload is increasing (641 in 2009; 862 in 2010; 873 in 2011). The wildlife numbers remained static at approximately 200 a year.

VTH-UTAD offers an extensive wildlife service primarily for birds but also including some mammals. The students take part in this area on elective program in 8th semester, and in Traineeship VI.

For Food Hygiene, students carry out practical work in slaughterhouses for ruminants, swine and poultry, and have also access to food-processing industries, collective catering services, egg classification centres, a fish market, etc.

## 7.2 Comments

In Anatomy, whole corpses are scarce, and totally lacking for equine and food producing animals. Thus, the hands-on participation by students in anatomy is at risk of being too small.

In Pathology, all ratios fall in the acceptable range.

In Animal Production, practical training in poultry, rabbits, apiculture and aquaculture is more than adequate. Suggestions for the limited exposition of the students to pigs and dairy cattle have been exposed in 4.3.3.

Training in Food Hygiene is adequately supported by animal material.

With regard to the clinical caseload, ratios fall in the acceptable range (with the exception of poultry/rabbit cases, whereby misunderstanding in the compilation of SER Table 7.3 was likely). Food animal patients are not seen/hospitalized at the VTH-UTAD but the ambulatory clinic compensates for this to some extent (see ratio R12 in SER, p 133).

Nevertheless, the Team was concerned by; i) the high number of students seen around patients, e.g. 10 students around one spay, which may well not be in the best interest of the students or the patients; ii) the fact that the students spend only short periods of time in the clinics (the ambulatory clinic included), to enjoy the most of the available caseload; iii) the impossibility to correlate the day one skills to the individual student; iv) the reducing or static caseload in some species. The lack of clinical Traineeships in the 5th and final year is also of concern and unless students have the motivation to take part in volunteer programs, the number of animals seen/treated by students would appear to be less than optimal in the final part of their undergraduate education. **Under these circumstances, it is difficult to have confidence that all students see sufficient patients overall to ensure their competences in dealing with cases on completion of the course. This was ruled a Major Deficiency** (see also paragraphs 4.4.2 and 5.1.2 of this report).

## 7.3 Suggestions

## REVISED FINAL REPORT AS ACCEPTED BY ECOVE

The way that the clinical practicals and Traineeships are organized needs to be re-scheduled to ensure that each student can follow through cases in each discipline rather than having the snapshot which they have while attending each 2 hour visit.

The timing of the periods when students are in the Hospital needs to correlate to the busy times of the services and the fact that all services run 24/7.

A way must be found to track the acquisition of day one skills by students against the tasks undertaken in the clinical practicals and in the Traineeships.

Moving the practical clinical training into one/two lecture-free semesters would be of benefit to the students' learning experiences, and would assist also the management of the caseload.

## **8 LIBRARY & EDUCATIONAL RESOURCES**

### **8.1 Findings**

In 2000, UTAD established a Central Library (CL) in the Campus by unification of the different departmental libraries. It is hosted in a modern three-floor building and provides a wide range of services, listed in SER p. 140-141. Of special value are:

- the "Support Room for Special Reading", with facilities for people with visual and motor impairment to access computer technologies and the Internet;
- a video editing laboratory which, once a week, provides a University news broadcasting and is also in charge of producing teaching material (eg., filmed reports of surgeries, all of them available on-line for students).

The CL staff includes 18 full-time people, one of them responsible for resources dealing with veterinary education. The books and journals for veterinary students are in a dedicated section, located in the third floor of the Library. The staff periodically organizes classes for students of all grades on the use of the UTAD library system catalogue, electronic resources and bibliographic databases

Wireless connection is available in the whole library building. Authorized users (all students are included) can have access to electronic resources (databases, e-journals, e-books) from any computer in the Campus or from home.

The Library is open the whole year long from Monday to Friday from 9 to 19.30.

In the library there are rooms for a single student or for a group that can be booked for a study session.

There is a small subsidiary library in the VTH, where student have permanent access to books and journals while on clinical training.

### **8.2 Comments**

The library facilities as a whole are more than adequate and access to hard copies, e-books, e-journals is simple and complete, with subscriptions to the currently important databases and other university libraries.

Opening hours are sufficiently student friendly but all interviewed students would appreciate an extension of opening time (eg, during examination periods).

Students and teachers share materials for lessons and tutoring through the portal SIDE: this is an important resource for students, and an easy and efficient way of providing contents and being up to date. Through the library website students have access to e-books and databases of a wide collection of scientific journals.

Textbooks are not available in many copies and several appear quite aged.



### **8.3 Suggestions**

An extension of opening hours would be welcome.

Textbooks should be available in more copies and the aged ones should be renovated.

## 9 ADMISSION & ENROLMENT

### 9.1 Findings

Admission requirements for entering the IMVM-UTAD are established by the Ministry of Education and Science. Enrolment is mainly through national application, where applicants are classified according to performance in the high school and results of an admission test focused on Biology, Chemistry and Physics (two thirds and one third of the available points, respectively). However, enrolment may also be through special regimes and applications, or via transfer from other courses or Universities (see SER, Fig. 9.1 pg. 149).

Admission is regulated by a *numerus clausus* system. In the last five academic years, the admissible number of candidates for the first year has ranged from 86 to 126 (average of 105, of which 69 to 88 are through national application, and 17 to 49 through the other entry modes).

The *numerus clausus* is proposed every year by the Ministry of Education and Science, following proposal by the UTAD Rector, who - though not formally obliged to – consults the school first. The number takes into account the available facilities and staff, but also budgetary policies at the University level.

Based on feed-back by the practitioners met during the visit, the Veterinary Chambers in Portugal have little if any voice in suggesting the admissible number according to the estimated national need for veterinarians. Currently, the number of students applying for enrolment exceeds the *numerus clausus* (approximately 5 fold),

Based on interviews of the staff and students, veterinary studies are the first choice for a large majority of admitted students. All students have to pay a fee (1000 € per year on average), but there are financial aids or free tuition for economically disadvantaged students.

Based on SER Table 9.5 pg. 157, the average duration of studies can be estimated as 7.1 years. The drop-out rate is not explicitly indicated in the SER, however the average number of graduates is 55 (SER Table 9.4 pg. 156) and the average number of students enrolled is 105 (SER Table 9.2 pg. 219) so the estimated drop-out rate is 47.6%.

The Faculty has Socrates/Erasmus agreements with 25 European Faculties in 12 countries. In the year previous to the visit there were 10 incoming foreign students.

### 9.2 Comments

- Current selection procedure is very competitive, but also transparent and homogeneous at the national level. Notwithstanding, the significant drop-out rate of the student suggests that the procedure is only partially efficient in selecting applicants for long-term motivation, learning attitude and constancy in veterinary studies.

- The number of enrolled students is higher than the local Veterinary Chambers would desire, but figures were presented showing that a high percentage of graduates actually find a job as veterinarians within a reasonable time interval. Colleagues at IMVM-UTAD consider that the number of students enrolled through entry modes other than national application should be preferably limited.
- Students and teaching staff shared, with the Team, their opinions on putative causes of the suboptimal duration of studies at IMVM-UTAD. Amongst these were: the dense schedule for the students, that leads to a lack time for the necessary individual study; the overload of theory in the first curricular years; the lack of sufficient “pressure” on the students, that may retake an examination several times with virtually no time restriction; individual problems. Some of these causes may be obviously easily counteracted.
- A range of opportunities is offered to the students wishing to spend training periods in other Faculties in Europe. Due to proficiency in English by most colleagues and students, language does not seem to represent a barrier for incoming foreign students.

### **9.3 Suggestions**

In the current phase in which a new demanding curriculum is being implemented, student intake should be adapted as far as possible to the available facilities, staff and budget. Accordingly, it is recommended not to increase, and possibly reduce, the number of students admitted per year.

A reduction of the numbers of students who drop out or have a high average duration of studies should be achieved at IMVM-UTAD. Functional to these two goals is a better understanding of the underlying causes via quality assurance procedures, which have only recently been initiated.

## **10 ACADEMIC TEACHING & SUPPORT STAFF**

### **10.1 Findings**

There are two main departments providing more than 90% of the academic staff, namely the Department of Veterinary Sciences (71.5% of the FTEs), and the Department of Animal Production (20.4% of the FTEs).

Of the total 53,38 FTEs involved in veterinary training, there are only 2.3 FTEs as full professors and 3.72 as Associate professors, while most academic staff are assistant professors. Approximately 75% of the budgeted FTEs are veterinarians, as all non-budgeted ones are.

Support staff and number of undergraduate students have slightly increased in the last years, but the number of teachers has decreased because vacant posts have not been replaced due to budgetary restrictions. Staffing levels are determined by Departments and conveyed to the Rector via the School of Agrarian and Veterinary Sciences. It is up to the Rector to approve or reject the applications for increased or replacement staff, based on budget and general needs.

The selection and promotion of the teaching staff are regulated at the national level (SER pp. 165). Searches for professors are internationally advertised. It is necessary to pass an accreditation process at national level before applying for a post of full or associate professor.

Very few clinical staff have advanced Diplomas in their field of expertise.

Additional veterinary staff (interns and full-time hired veterinarians) are regularly employed from service income. At the time of the visit, 11 interns and 12 full-time veterinarians were on staff at UTAD-VTH.

### **10.2 Comments**

All students/staff ratios are in the established range, mainly due to the reasonably low number of students graduating annually. Nevertheless, ratios R1 and R3 are borderline, indicating relative shortage of academic and veterinary staff, respectively.

There is a block on the promotion of teachers to higher positions mainly for budget restrictions. To our knowledge, the imbalance between lower and higher professorial categories has no equivalent in other establishments in Europe. There are some Assistant Professors with an age close to 50. This situation, if continuing in the future, could lead to a lack of motivation by a significant proportion of the teaching staff.

The low number of Full and Associate professors in the staff may also mirror, negatively, on other organizational aspects. Although the Assistant professors are a qualified and motivated group, higher positions are essential to assure funding from research grants, and therefore a competitive training of the young PhD students to become a part of the academic staff in the future. A good PhD program can only be achieved if the academic staff is competitive to get research funding from public and private grants.

Based on current legislation, the competition for a budgeted post (Full and Associate professor) is resolved comparing the curricula of the applicants in the same area of knowledge. During interviews, the Team received complaint by some colleagues that educational needs (hence the teaching profile and professional expertise of the candidate, mainly in the clinical area) are not necessarily taken in due consideration, and that consistency of the scientific output with the offered position may also be questionable on occasion.

The Team was informed that VTH-UTAD is the only teaching hospital in Portugal that offers an internship program in the main professional areas of Small animals, Production animals and Equines, and Wildlife and exotic animals.

Support staff seems to be motivated and enough qualified.

### **10.3 Suggestions**

Current block on the promotion of Assistant professors to higher positions risks becoming a true emergency in future years. A strategy to limit prospective and unavoidable disaffection by a mass of bottle-necked teachers must be urgently developed in agreement with the Rector.

Opening of new budgeted positions would also be advisable, namely in Large Animal Medicine and Surgery to increase the potential of the ambulatory clinic activities and offer to all students valuable hand-on training in small groups.

Support for the employment of European Specialists in some fields and thus the establishment of residency programmes should be considered.

In general, teaching ability, commitment and the acquisition of teaching skills should be appropriately considered for matters of professional development and promotion.

## **11 CONTINUING EDUCATION**

### **11.1 Findings**

UTAD runs a number of continuing education courses, some by the Hospital for local practitioners and others with the students associations, AEMV and APEZ.

The number of courses (22 so far this year and 12 last year) is on the increase as the IMVM believes this is part of their strategy to the community service. It is also looked upon as being a way to build the relationship of the Hospital staff to the local community of veterinarians in order to encourage them to work in co-operation with the Hospital, so that they will send more cases to them to increase the referral caseload.

The student association run courses for students and others which attract many attendees from home and abroad (30 to 150 attendees, dependant on the type of course).

This year so far there have been four international conferences organised here.

The profits from the courses run by the students remain in their association, however they put funds into purchasing equipment for the Hospital from them.

Most of the courses run by the Hospital are free of charge, however if a charge is made and a profit made, the Hospital is allowed to keep that money and spend it according to their wishes.

### **11.2 Comments**

The student association appear to be vital to the support the CE programme for the school.

The courses cover a wide range of topics and they are agreed from listening to the local practitioners and others as to what they require and want.

Putting on courses of this type can be time consuming and the staff is to be congratulated in their efforts to increase this area of activity even though it is not counted within their teaching loads nor it is much considered for academic promotion.

### **11.3 Suggestions**

No suggestions.

## 12 POSTGRADUATE EDUCATION

### 12.1 Findings

The Department of Veterinary Sciences, UTAD has an internship programme in three main work fields (Small Animal Medicine and Surgery, 6 interns; Livestock and Equine Medicine and Surgery, 3 interns; and Wildlife and Exotic Animals, 2 interns). The duration of the internships is one year, and the students receive a salary of 640 € per month. The plan is to establish residency programmes in the future when the internship programmes have been certified by the European Board of Veterinary Specialization.

UTAD also offers:

- a Master Programme in Food Safety of two years and 120 ECTS credits, with 26 students currently enrolled. The first year and 60 ECTS correspond with the curricular units, and the second year with the Master Thesis;

- a PhD Programme in Veterinary Science of 3 years and 180 ECTS credits, with 38 students (34 of them vets) currently enrolled. 160 ECTS correspond with the Doctoral Thesis. The PhD was set up in the 2011-12 academic year, and has 4 branches: Clinical, Food Quality and Safety, Animal Health, and Biomedical Sciences. Of the 38 enrolled students, 26 come from the old PhD program.

Master's and PhD students do not receive a salary, although some of them have a fellowship (from institutions or from a Research grant/project). The main institution that supports the student fellowships is the Portuguese Foundation for Science and Technology.

On the UTAD staff, there is one Diplomate of the European College of Veterinary Parasitology, and two persons who have completed the residency period for the European College of Veterinary Neurology, and European College of Veterinary Anaesthesia and Analgesia.

### 12.2 Comments

The UTAD offer of Master courses and PhD programmes in relation to the Veterinary Sciences and Animal Science is remarkable. It is observed that, in relation to the number of senior academic staff (full professors and associate professors), the postgraduate programs offered by the Department of Veterinary Sciences are rather voluminous, especially considering the supervision of Master's and PhD degree projects and dissertations.

We consider that the percentage of veterinarians participating in the PhD Veterinary Sciences programme to be good; of 38 students enrolled in the programme 34 are veterinarians (89.5 %).

There is not a branch of Animal Production in the PhD programme of Veterinary Sciences. This is probably because the Department of Zootechnics offers a PhD programme of Animal Sciences.

The possibilities for students to successfully complete Postgraduate Studies are highly dependent on if they are able to obtain funding that will allow them to work in a full-time programme on their PhD.

The PhD students and postgraduates do not seem to have any representative organization.

### **12.3 Suggestions**

It is strongly recommended to increase the number of full and associate professors to fully develop the PhD programme of Veterinary Sciences, just implemented (academic year 2011-12).

It is strongly recommended that the Department makes a strong effort to establish programmes for resident training in clinical areas, which of course includes the recruitment and training of Diplomates. This is essential to assure the quality of clinical training for the future and to stimulate clinical research.

The creation of a formal organization for PhD and post-doctoral fellows could be useful in the future for a better recognition of their rights and concerns.

Finally, the Team want to underline that UTAD has to accept that the mid-level academic staff (assistant professors) heavily involved in undergraduate training must be given sufficient time for their own research and professional development. In parallel, UTAD should consider the need for better academic recognition of the time invested by tutors to train a postgraduate student involved in a residency training program or a PhD programme.



## **13 RESEARCH**

### **13.1 Findings**

The SER does not provide much information about the general research activity in the two main departments providing teaching staff to IMVM, and a clear research strategy is also not communicated in the SER.

During the visit, the Team was shown that 50 of 84 members of IMVM Academic staff also join Research Units (mostly though not exclusively internal to UTAD) which are evaluated by international panels and accredited by the national Foundation for Science and Technology. Of the fore mentioned 50 colleagues, 44 carry out their research work at the UTAD-Veterinary and Animal Science Research Centre (CECAV).

Interviews and publication lists indicate that relevant research of local to international breadth is carried out by several members of the Academic staff, suggesting that research-based training may be carried out and that the staff is committed to research, apparently in a cohesive way.

Though not all IMVM students are exposed to research activities, a significant proportion of them are while preparing the mandatory Dissertation thesis under the tutorship of a supervisor (usually a permanent member of the teaching staff). The dissertation may be a review or an original experimental work or a clinical activity report. In fact, about 57% (78 of 138) of the dissertations presented over the last 3 years at IMVM-UTAD were experimental. The thesis work corresponds to 810 hours (30 ECTS credits, approximately 9% of the total credits), which are due during the 11<sup>th</sup> semester. Clinical sciences is the most frequently selected topic area (59%) followed by Food Hygiene/Public Health (37%). There is only limited interest in Animal Production by IMVM students.

A limited number of state “Introduction to Research” scholarships are also available to motivated students.

### **13.2 Comments**

Students at any level would benefit from teachers who have a relevant research activity. This is also an important aspect connected to problem-solving oriented learning. Involvement of undergraduate students in research is an important element of University education but, in several establishments throughout Europe, the heavy work load does not favour this experience. The team was pleased to note that a significant proportion of students at the IMVM-UTAD is actually exposed to research work and that the teaching staff is prone to receiving and encouraging them.

### **13.3 Suggestions**

UTAD should consider the need for better academic recognition of the time invested by tutors to train an undergraduate student involved in the Dissertation thesis work.

Application of the Academic staff to European research funds should also be encouraged via a dedicated strategy.

## **EXECUTIVE SUMMARY**

This visitation report concerns the Integrated Master of Veterinary Course (IMVM) offered by the Department of Veterinary Sciences of the School of Agrarian and Veterinary Sciences of the University of Trás-os-Montes e Alto Douro (UTAD), situated in Vila Real, Portugal.

The beautiful wooded campus of UTAD is within 2 km of Vila Real, a city with a population of 50,000 people. Almost all the teaching for the IMVM takes place on the campus which, in addition to the teaching facilities for the various pre-clinical subjects of the curriculum, includes 8 research centres, a University farm and the Veterinary Teaching Hospital (VTH). Much of the undergraduate teaching is provided by staff of the Department of Veterinary Sciences, but some is provided by staff of other Departments within the School of Agrarian and Veterinary Sciences, or even of other Schools. Clinical teaching is the responsibility of the staff of the VTH. The Director of the IMVM course is an Assistant Professor of the Internal Medicine of Companion Animals. The Team had some concerns about the achievement and maintenance of central veterinary control of the undergraduate teaching programme.

Budgetary provision for the IMVM course is largely for running costs, as UTAD is responsible for the provision and maintenance of all buildings and the salaries of all University staff, including the VTH.

The undergraduate course is of 5.5 years (11 semesters), based on the Bologna model. The curriculum is established by UTAD and must be periodically accredited by an Agency of the Ministry of Education and Science. In practice, the authority of the Director of the IMVM to modify any aspect of the curriculum or to change or replace any of the teaching staff is minimal.

The course contains both core and elective subjects, the electives comprising 14% of the total; but these do not facilitate tracking. There is no provision for extramural tuition in the curriculum.

Teaching of Basic Sciences was found to be intensive and demanding for the students, though access to teaching material of animal origin was barely sufficient, leading to potential problems with hands-on training in anatomy. There was a good balance between theoretical and practical training in Animal Production, but it was felt that teaching in Animal Nutrition and Feeding was barely adequate and there was little practical training in pigs and dairy cattle. Food Hygiene and Veterinary Public Health was regarded as a strong feature of the IMVM course, which, with greater emphasis in some areas, could become a “brand” of UTAD, although it is difficult for students to experience sufficient practical training without missing other classes.

There were no specific comments about teaching methods, but the rigid organisation of the teaching schedule was identified as one of the causes of a deficit in real-life clinical work and the exposure of students to hands-on clinical training in small groups.

Examination rules are set by UTAD and exams are held at the end of each semester. A variety of assessment methods is used, including continuous assessment, which is generally preferred by students. There is no provision for external examiners in the undergraduate course.

The facilities available to the IMVM course are, potentially, close to ideal, especially since the University farm, the wildlife facility and the VTH are conveniently situated within the campus. But the pig and cattle accommodation at the farm needs to be upgraded to provide an adequate teaching

resource; meanwhile, alternative arrangements should be made to enable sufficient exposure of students to farm animals elsewhere.

The VTH was renovated and extended in 2009 and is an appreciable facility; but it has not yet been completed or equipped to a sufficiently high standard. There are also some design problems which need to be resolved. This, together with inadequate policies and procedures, has led to a major deficiency in bio-safety and biosecurity affecting staff, students and patients at the hospital.

The availability of animals and teaching materials of animal origin represents a challenge to the IMVM course. Corpses are scarce and horses and food animals are totally lacking for anatomy classes; clinical training on large animals must rely on the ambulatory clinic, or cows bought in for the University farm. The Team was concerned by:

- The large number of students (e.g. 10) being taught around a single animal;
- The short time students spend in the clinics – the ambulatory clinic included;
- The lack of a mechanism to monitor students' acquisition of first-day skills;
- A static or reducing caseload in some core species;
- The lack of clinical traineeships in Year 5.

As a result, the Team were unanimously of the view that hands-on training of students was inadequate and that not all students would deal with sufficient patients to acquire the required first-days skills on completion of the course.

The Team were impressed by the facilities available and the services offered by the Wildlife Unit (part of the VTH), but recognise that the diversity of clinical experience this offers to undergraduates must be regarded as an “add-on” to the main curriculum and does not compensate for the deficiencies of exposure to core species.

Departmental libraries at UTAD were amalgamated in 2000, so veterinary students now use the central library on the campus. Its location is convenient and it offers good facilities, but few texts seemed to have been acquired in recent years. The library staff offer courses on the use of the library and its electronic resources, and there are a number of computer workstations available to students.

Admission to the IMVM course is organised at national level and is subject to a *numerus clausus*, proposed annually by UTAD. Though it is difficult to obtain accurate figures, it is clear that the drop-out rate for the course is unacceptably high; this is in part because a number of students enter the veterinary course hoping to transfer to human medicine. The average duration of study is estimated at 7.1 years; students suggested that one reason for this suboptimal situation is that the course is very intensive and theoretical in the first few years.

There are perceived problems with the career progression of teaching staff. These are thought to be due to budgetary constraints, but their effect is that of 53.4 FTEs involved in veterinary training, only 6 are full or associate professors. Ratios of students to staff and support staff seem to be satisfactory.

UTAD runs a number of continuing education courses for local practitioners and students, some of which are part funded by student associations. And the Team regarded the number of Masters' and PhD programmes related to veterinary and animal science as remarkable, especially when considered in relation to the low number of senior academic staff.

Research activity is difficult to assess, as those teaching staff who undertake research do so through their association with one of the 8 Research Units which form part of the University, rather than through the Department.

Overall, the Visitation Team identified 2 Major Deficiencies – in bio-safety, biosecurity and health and safety procedures (Annex Ia section 1.6) and in the acquisition by students of day-one skills by involvement in hands-on clinical training (Annex Ia section 1.4.1).

## ANNEX 1 - INDICATORS

Ratio	Numerator/Denominator raw	1/Denominator	Established range of denominators	Notes
R1	53.379/481	1/9.01	8.85-10.42	borderline
R2			8.75/12.54	not applicable
R3	40.43/481	1/11.9	10.62-12.62	borderline
R4	40.43/50	1/1.24	4.91-7.21	
R5	53.379/60.096	1/1.13	0.53-2.20	
R6	1795/2111	1/1.18	0.51-0.36	
R7	514/1597	1/3.11	1.88-2.21	below range
R8	0/****	0	0.51-7.87	misinterpreted
R9	324/5499	1/16.97	Still open	
R10	420/8	1/0.02	Still open	
R11	50/0	not computable	2.47-1.73	below range
R12	50/717	1/14.43	0.51-7.87	ok
R13	50/35	1/0.7	0.20-0.09	ok
R14	50/288	1/5.76	1.78-0.92	ok
R15	50/0	not computable	0.58-0.37	probably misinterpreted
R16	50/4113	1/82.26	48.74-37.94	ok
R17	50/2	1/0.04	0.07-0.02	borderline
R18	50/69	1/1.38	0.75-0.46	ok
R19	50/122	1/2.44	0.26-0.12	ok
R20	50/128	1/2.56	1.26-0.89	ok

## **ANNEX 2 LISTING OF MAJOR DEFICIENCIES**

- 1. Insufficient hands-on clinical training,**
  - a) excessive student group size**
  - b) excessive ratio of students to clinical cases**
  - c) over-reliance on laboratory and desk-based work in place of clinical work**
  - d) non-compulsory attendance in the 24/7 emergency service**
- 2. Insufficient overall awareness, instruction and enforcement of safety and biosecurity protocols including, but not limited to, pharmacy and drug management and control;**

## **ANNEX 3 STUDENT'S REPORT**

### **STUDENT REPORT**

#### **ORGANISATION**

The Master degree in Veterinary Medicine is one of the courses provided by the university of Trás-os-Montes e Alto Douro (UTAD) and has 451 enrolled students.

The university Campus where the School of Agrarian and Veterinarian Sciences and the teaching hospital are located is close to the city centre and well served by public transport. Most of the student facilities (apartments, sports facilities and canteens) are inside or not far from the campus and all are well served by Public Transportation.

There are two large lecture halls, four medium sized and nine smaller, all equipped with multimedia projector and if necessary the faculty could provide some portable devices.

Practical and research labs seems to fulfil the needs, are all well equipped although they could be upgraded. The new building hopefully will take the place of the old labs.

The VTH was renovated 2009. It has two different facilities: the main building (Teaching Hospital) and the building of wild animals' facilities.

The VTH is still not finished, and is not fully equipped (there is no MRI or CT).

All the buildings are accessible to students during practical lectures, traineeships and voluntary activities. During the visit, the team was concerned about safety and health of the students during their rotations in the VTH. No individual protection for students or written instructions were found.

#### **ADMISSION AND ENROLMENT**

Admission to Veterinary Medicine follows national rules and students must have a scientific-humanistic high school background. The number of students enrolled each year is fixed by the university. The system in Portugal operates with regular students, who have finished the qualifying high school degree, special students from prioritized areas (army staff, children of diplomats etc.) and special students (over 23 years old without a full qualifying degree and transfer from other educations). Regular uptake takes place once a year. If an education has empty places, a supplementary uptake happens.

The uptake of regular students has been around 80 each year. In addition, the last years have seen up to 46 students admitted through other uptake rules. The majority of these are students do the Master project only.

Student and teaching staff are concerned with the number of student enrolled every year in Portugal. The system of enrolment is not so easy. To be admitted in Veterinary Medicine course you must have good notes from your National exams during the high school (Biology, Geology, chemistry, physics,

maths and Portuguese). Students of the first year are not all sure to continue with Veterinary medicine. Lots of them drop out at the end of the first year trying to get into the Human Medicine course

### **STUDENTS ACCOMODATION, SAFETY, UNION FACILITIES, SOCIAL PROGRAMMES AND SPORT**

In Vila Real's University Campus sport facilities are easily accessible to all students, that can have sport activities for free. All interviewed students seem to appreciate them a lot.

Student accommodations are all very close to the campus and well served by public transports: 530 rooms are available, in single or double accommodation. Students that want to have access to this facility must provide a certification of their family income at the beginning of the academic year.

There are three different canteens and one restaurant: all of them are accessible to students at a very affordable price.

There is a students' association, which during the year organises national and international Veterinary meetings.

The overall feeling is very cosy and nice: students seem to be generally very happy, satisfied and bond to IMVM and UTAD.

### **TEACHING METHODOLOGY AND EXAMINATIONS**

The presentations I attended during the visit suggested that the topics presented during lectures and practicals are all up to date and students appreciate teaching methods.

During practicals, students rotate in groups of 8-10 members: this, in my opinion, doesn't allow everyone to be deeply involved hands-on in the activities.

The examination method really seems to work: team activities and the following presentations are appreciated.

In my opinion the "continuous assessment" approach is one of the best ways for students to reach their goals.

### **TEACHING QUALITY AND THE ASSESSMENT THEREOF**

Students seem to appreciate the teaching methods: I reckon though, that timetable's organization could be improved with a better division between lectures and practicals. In my opinion this could help gaining more time for personal studies but, most of all, for hours to be spent at VTH.

The University quality assurance programme is not active yet, but on the way to be provided. IMVM uses a printed system at the end of each class. This method doesn't seem to achieve the expected results in terms of changes: a minor solution is the presence of students' representatives, that are in charge of collecting complaints and finding possible solutions.



## **CLINICAL LEARNING AND HANDS ON APPLICATIONS**

Despite undeniable efforts by UTAD and the faculty (the VTH has been renovated in 2009) hands on training is still lacking. Since, in my opinion, students don't spend enough time at VTH, they don't have the proper amount of hours in practical activities to reach the EAEVE hands-on required level.

Moreover, the amount of large animals cases that can be seen by students could be increased, as well as the hours spent in the mobile clinic. This could be a real help for students to get in touch with the most frequent pathologies of production animals and practice field veterinary medicine under expert supervision.

As regards equines undoubtedly there are abundant cases, but this could be related to the small equine population of the area and to the difficulty of reaching more populated regions.

## **LIBRARY**

The library is a three-floors building inside the UTAD Campus. It is easily accessible since it is open the whole week long at very flexible opening times. All interviewed students would appreciate an extension of opening times.

The veterinary part is located at the third floor: books are in Portuguese and English. What I noticed is the small number of copies and the fact that they are all quite aged. There are books written by faculty professors all available to students at a very reasonable price.

In the library there are 14 pc stations, accessible providing University credentials and rooms for a single student or for a group that can be booked for a study session.

A video editing laboratory once a week provides a University news broadcasting as well as producing filmed reports of surgeries all available for students. There is also a very good office in charge of providing assistance to students with disabilities, particularly helping whom with reading and communicating deficiencies.

"SIDE" is the portal through which students and teachers share materials for lessons and tutoring: this is one of the most important resources for students, because it is an easy and very efficient way of providing contents and being up to date. Through the library websites students have access to ebooks and databases of a wide collection of scientific journals.

Vittorio Caramello  
5th year student in Veterinary Medicine Torino

**DECISION BY ECOVE: NON-APPROVAL**