

Self Evaluation Report

EAEVE Perugia, 2019


SIGILLVM GENERALE CIVITATIS TRAIECTI
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Department of Veterinary Medicine (DVM) University of Perugia (Italy)

Self Evaluation Report 2019

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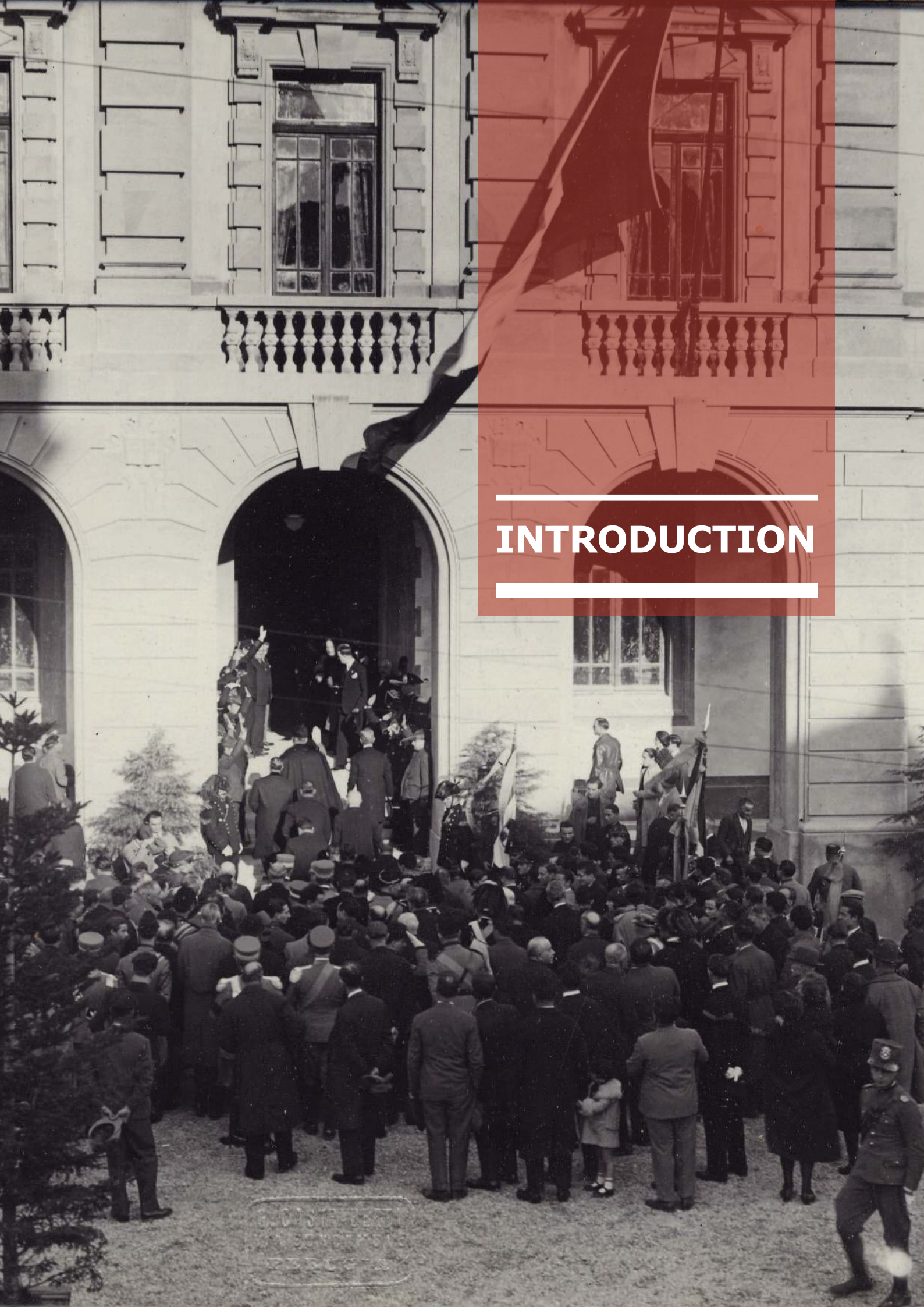
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INTRODUCTION


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Introduction

BRIEF HISTORY OF THE ESTABLISHMENT AND ITS PREVIOUS ESEVT VISITATIONS

Since 1929, the Department of Veterinary Medicine (DVM) of the University of Perugia is located in a beautiful ancient building just outside the old city walls. From the beginning of the XIX century, it has undergone a continuous evolution: a two-year course (1824), a three-year course of veterinary subjects (1862), the foundation of a Superior School of Veterinary Medicine (1864), a School of Veterinary Medicine (1924) a Faculty of Veterinary Medicine (1929), and in 2013, the Faculty was definitively transformed in the Department of Veterinary Medicine (Law n. 240, 2010) (http://www.medvet.unipg.it/en/home/story). To date, University policies have excluded moving the Department of Veterinary Medicine into a new Establishment. Hence, new adaptations and renovations to the old building have always been complex and controversial. Consequently, the addition of a new structure to implement and improve clinical work and practice was decided upon.

In 1998, the Establishment, known at that time as Faculty, was firstly evaluated by EAEVE.

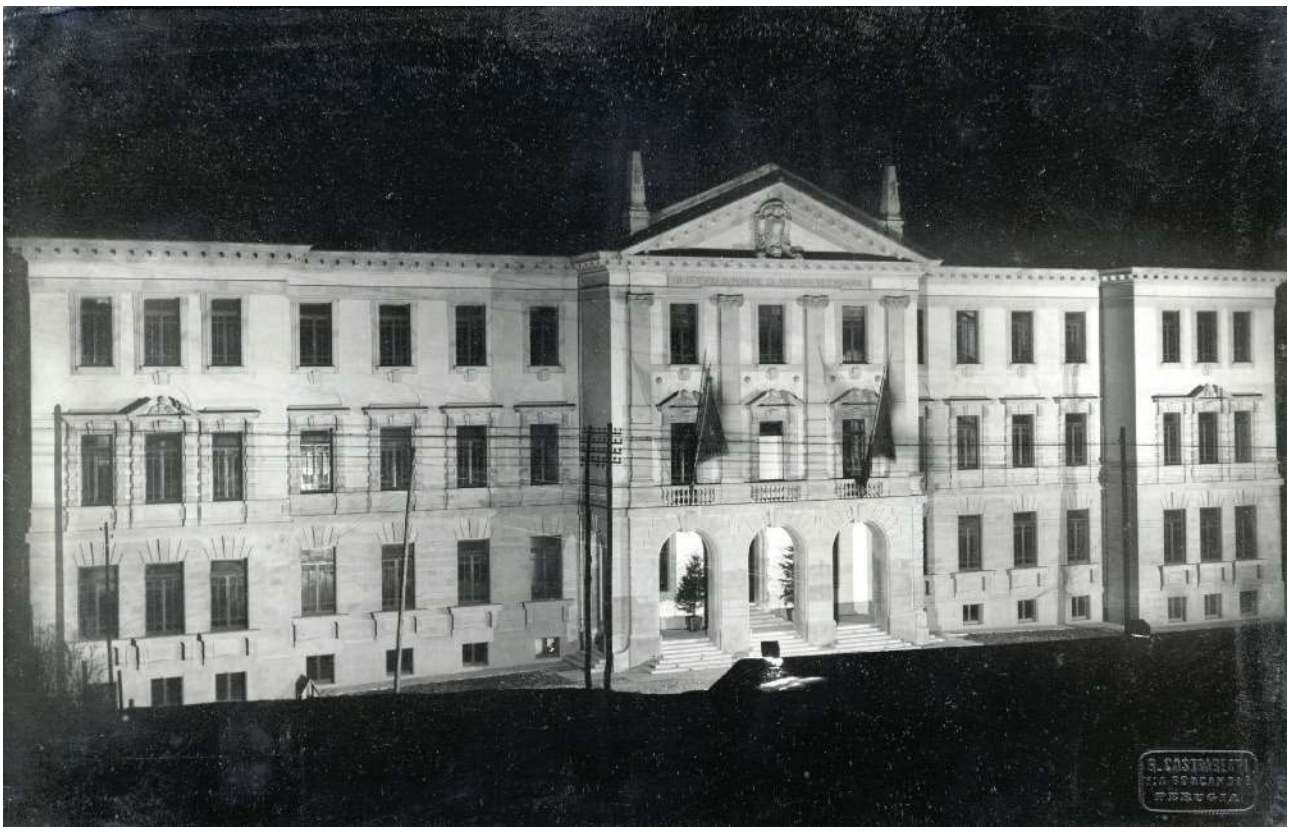
From 2006 to 2008 the Establishment was successfully evaluated by EAEVE for the second time resulting in European EAEVE certification. Since then, significant changes have been performed upon processes of Teaching Quality, procedure introduction, and improvement interventions on the facilities.

MAIN FEATURES OF THE ESTABLISHMENT

- The DVM is tightly bound to the Historical building and located in a suggestive view towards Assisi and Monte Subasio. For this reason, it is well integrated into the city and easily accessible.
- Since 2006, the DVM provides a 24/7 clinical emergency service (ES). DVM clinical activities are mainly devoted and specialised in companion animals and horses.
- The relatively low-number of students, compared to other National Universities, facilitates an efficient, well-balanced and personalised course itinerary. This condition supports informal relationships between academic staff, support staff and students hence motivating and encouraging them further in their career progression.
- The DVM significantly contributes to the Internationalization Project of the University of Perugia thanks to its high number of international incoming and outgoing bilateral Agreements.
- The DVM teaching and research activities are favoured by the close collaboration and good relations with the adjacent Istituto Zooprofilattico Sperimentale (IZS) of Umbria and Marche and with practitioners, resulting in the development and reinforcement of territorial relationships.
- The DVM is also devoted to the 3-year-degree course in Animal Productions in collaboration with the Department of Agricultural, Food and Environmental Sciences.

MAIN DEVELOPMENTS SINCE THE LAST VISITATION

- In 2013, the former 2 departments were further integrated into 1 department. This change has certainly contributed to reinforce and complete the integration of development activities and politics. Working as a single body results in teaching, research and service activities to move towards a more unambiguous mission statement of leading roles and activities of the Establishment. The previous Sections have been replaced by 4 Units and by 15 Research Teams for clinical activities and research activities, respectively (see Annex 6.10).
- The Veterinary Teaching Hospital (OVUD) has increased the number of services (blood transfusion centre, diagnostic imaging, exotic and wild animals) including diagnostic labs and has provided a single database directly accessible by students for learning activities.
- Numerous facilities have been renovated or added (see surgical rooms, imaging, blood bank) others will be improved based on financed projects (dissection rooms, pharmacy, isolation unit, teaching farm).
- In the last years, the political and economic relationship between the DVM and the Region has been implemented and strengthened resulting in additional economic agreements with practitioners, which reinforce and guarantee a 24/7 emergency service.
- The number of students has been reduced hence enhancing and improving the organisation of practical activities.
- In the last 3 Academic Years (AY), clinical rotations have been introduced as a useful instrument to increase and develop clinical practice for students having the Day One Skills as main objectives. A great effort has been made in developing clinical work into species-based clinics devoted to companion, equine, and exotic animals and food-producing animal medicine.
- The Ambulatory Clinic has been developed and supported as a useful tool for interdisciplinary practical activities on food-producing animals.
- The current PhD course has gained recognition as a high-quality level course (First Place at the University of Perugia during the 2016-2017 AY).
- Free access to scientific databases and specific training on accessibility are available to students.
- Since 2011, the DVM has been submitted to a national Quality Assessment System (QAS) in



management, research and teaching. In order to monitor the Quality Assurance (QA) process of each department, the University of Perugia provides the Evaluation Unit (Nucleo di Valutazione) (EVU) that annually refers to the Administration Council, data concerning the use of resources with reference to the objectives which the University defines every three years as reported in the 3-year Strategic Plans (https://www.unipg.it/files/pagine/535/Linee_progr_ann_e_trienn_2016-2018.pdf, https://www.unipg.it/files/pagine/1321/allegato_p_3_-_sub_a_da_-pubb.pdf, https://www.unipg.it/files/pagine/1321/documento_di_programmazione_triennale_2016_2018.pdf). The introduction of QA procedures during the graduating itinerary has contributed to creating a control system including weakness reports and action proposals to improve courses and practical activities (see Standard 11 and Appendix 4).

- In the last years some efforts have been made to integrate and coordinate different subjects in a "top-down" pattern in order to remove overlaps or deficiencies, and, at the same time, to create useful links among interrelated subjects.
- By means of the 24/7 ES, the level of hospitalisation has been increased providing a greater caseload and continuity in student training opportunities throughout their entire course of study. Much more attention has been dedicated to caseload and hands-on teaching of clinical aspects concerning obstetrics and reproduction, especially in food animals during Ambulatory Clinics. The latter has developed further in the past years thus enabling familiarity on farms and farm practice on a regular basis. Today, External Practical Training (EPT) that actively involves students in food-producing animal medicine and nutrition, public health, farm economy and management further supports farm practice.
- The new national enrolment system (Law n. 240, 2010) obliges selection of candidates who possess a high scientific and professional profile (see NSQ). In addition, to improve teaching quality in veterinary medicine, part of the academic staff has attended recurrent courses in communication techniques and teaching strategies organized by the University of Perugia.
- Over recent years, the University of Perugia has activated Strategic 4-year plans on Research (2016-2019) supporting and promoting interdisciplinary research work (https://www.unipg.it/files/pagine/1321/sub_lett_c_all_punto_4_da_-pub.pdf)
- A high drive towards internationalisation has been introduced resulting in a large number of Erasmus European and Extra-European Bilateral Agreements and incoming and outgoing Erasmus students (see Appendix 6.5).
- days of extra-mural practical activities, aimed to increase and improve hands-on activities for students in food-producing animals.
- Groups of no more than 12 students have been planned for practical preclinical activities.
- Groups of no more than 6 students (2-6) have been programmed for clinical training.
- A number of subjects (Anatomy, Clinical subjects, Toxicology) have been differently addressed to small and large animals, and more specific

subjects have been introduced on animal welfare and laboratory animals.

MAIN CHANGES IN THE STUDY PROGRAMME

In the last years, the Degree Course Council (DCC) aimed to reduce the study load for each student, efficiently increase practical clinical activities and, facilitate career progression. Subsequently, numerous changes have taken place:

- The teaching activity/self-directed learning rate for 130 ECTS (characterising subjects) has been reduced from 15/10 hours to 13/12 hours resulting in an effort to systematically support self-directed activities. In addition, the academic staff consistently provides online teaching material on the UniStudium platform (https://www.unistudium.unipg.it)
- The Degree Course has been spread to include the Year 5/1st semester so as to reduce academic load and increase self-directed learning time.
- Since 2015, Clinical Rotations have been introduced in the Year 3/2nd semester, and in the Year 4/1st and 2nd semester. Parasitology and Pathology have been included in Professional Practical Training (PPT).
- During the last Academic Year, EPT has been introduced and scheduled as 7.5 ECTS corresponding to 45 days of extra-mural practical activities, aimed to increase and improve hands-on activities for students in food-producing animals.
- Groups of no more than 12 students have been planned for practical preclinical activities.
- Groups of no more than 6 students (2-6) have been programmed for clinical training.
- A number of subjects (Anatomy, Clinical subjects, Toxicology) have been differently addressed to small and large animals, and more specific subjects have been introduced on animal welfare and laboratory animals.

MAJOR PROBLEMS ENCOUNTERED BY THE ESTABLISHMENT

Renovation of facilities

The decision to confirm the present site of the DVM has been a challenge and represents a significant barrier by the Establishment in renovating facilities and adapting laboratory and practical activities to an old building.

Public resources

In addition, in the last 10 years, the many efforts to improve the main and most expensive equipment and facilities (primarily dedicated to dissection and food animal hospitalisation) have unfortunately coincided with the severe international/national and regional economic crisis and the 2016 earthquake emergency. Consequently, the MIUR has reduced funding for public universities and Regional and University politics have had other priorities such as the dramatic events correlated with the 2016 earthquake.

Facilities to students

The Establishment is renovating and improving facilities for students primarily in the food services, meeting, and locker areas. Restoration for students and staff is presently available in the adjacent Department of Agriculture, Food and Environmental Sciences, and the canteen within the Agrarian Dormitory.

New enrolment and career and progression

Student enrolment may be concluded by the MIUR when teaching activities of IS/1Y have started or are almost finished producing adverse effects on first-year career progression.

Practical activities organisation

The Italian University System grants the possibility for outside prescribed time students (Fuori Corso) to partake in the degree course without time limitations. This factor prevents the yearly prediction of an accurate number of students. However, to guarantee teams with a number of students between 6/12 in clinical and preclinical practical activities, a strict priority is given to regular students.

Politics of University and Department investments

Although veterinary training is recognised by the authorities of the University of Perugia as being one of the most expensive, resources are not always sufficient. For this reason and compared to the past, Establishment politics is relying more on Departmental income for teaching supports and facilities.

VERSION AND DATE OF THE ESEVT SOP WHICH IS VALID FOR THE VISITATION:

- Uppsala May 2016



1.

OBJECTIVES AND ORGANIZATION


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1.1. Factual information

1.1.1 DETAILS OF THE ESTABLISHMENT

i.e. official name, address, phone number, Email and website addresses, Head of Establishment, name and degrees of the person(s) responsible for the professional, ethical, and academic affairs of the VTH, official authority overseeing the Establishment

Name of the Establishment: Department of Veterinary Medicine

Address: Via S. Costanzo 4 – 06126 – Perugia

Phone number: (39) 0755857760

Email: dipartimento.medvet@unipg.it

PEC: dipartimento.medvet@cert.unipg.it

Website address: http://www.medvet.unipg.it

Head of Establishment: Luca Mechelli (Full professor)

Name of person responsible for the VTH (Professional, ethical and academic affairs): Francesco Porciello (Full professor)

Official Authority overseeing the Establishment: Rector of the University of Perugia - Franco Moriconi (Full professor)

1.1.2 SUMMARY OF THE ESTABLISHMENT'S STRATEGIC PLAN WITH AN UNDATED SWOT *(STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS)* THE MISSION AND THE OBJECTIVES

The actual Strategic Plan (SP) is based on the Head's elective programme presented in November 2016 (2016-2019), at the beginning of his mandate. This programme includes a number of actions planned to improve Establishment quality and performance in the three main fields of its mission: Teaching, Research and Third mission, in accordance to the Strategic Plan lines of the University of Perugia (https://www.unipg.it/files/pagine/1321/documento_di_programmazione_triennale_2016_2018.pdf) and Ethics Code (https://www.unipg.it/files/pagine/115/codice-etico.pdf).

Mission Statement

The DVM mission is to provide and produce knowledge and competencies in the field of Veterinary Science, necessary to develop high-level practitioners involved in sanitary assistance and welfare for animals, public health, environment defence and productions. It is firmly based on the awareness that the DC in Veterinary Medicine belongs to the highest educational standards. It aims to be consistent with the objectives and quality standards of ESEVT.

Vision

The DVM wishes to contribute to the development of our society through high-quality teaching, fundamental and applied research, internationalisation and close synergy with Public Health, environment and the productive world.

Teaching actions:

1. To improve and support the quality, attraction to and the efficiency of the Veterinary Medicine DC
2. To improve and support teaching facilities
3. To promote high-standard, international teaching

Research actions:

1. To promote and support research training for young people
2. To support and improve the main DVM research lines (equine science, oncology, animal productions, companion animal medicine)
3. To improve facilities and equipment for research
4. To enrol young researchers based on their scientific competencies
5. To give much more exposure to DVM research activities, to attract national and international funding for research and to promote international scientific relationships

Third mission (transfer of technology and knowledge):

1. To promote and improve activities with social implications (veterinary assistance and advice) support the growth of University Veterinary Teaching Hospital (OVUD) and its facilities
2. To promote and improve research result transfer through local assistance and research activities
3. To promote lifelong training and learning for public and private practitioners
4. To publicise activities performed at the DVM by organising activities open to students of primary and secondary schools
5. To be an active part in job placement for young graduated students.

STRENGTHS	WEAKNESSES
TEACHING	
Long historical tradition	The position of the Establishment does not allow future expansive development
Advantageous position to find accommodation and services for student	The old building partially impedes property renovations because of architectural obligations.
Services for students provided by the Establishment and University	Late final ranking list flow and enrolment for 1Y students
VTH and AZD belong to the Establishment	Late student enrolment by MIUR
Innovative and updated degree course curriculum	Unpredictable number of outside prescribed time students (FC)
A high percentage of veterinarians in the AS	Average duration of veterinary studies
QA system for teaching conforming to PDCA cycle	Progressive increasing of the age median for permanent AS members
Theoretical/practical activities ratio conforming to European standards	Rather demanding teaching load
Good quality teaching facilities	Strict obligation in curriculum assessment from MIUR
Sufficient caseload provided by OVUD for practical clinical activities	VTH facilities for food-producing animals
High number of selected young practitioners working at VTH as temporary AS	Number of necropsies especially for food-producing animals
High number of agreements for extra-mural clinical practical activities on food-producing animals	Number of AS members with international certificates
Constant and broad involvement of students in the DVM committees and management	High cost of the Veterinary Medicine DC
Excellent ranking position of Veterinary Medicine DC at the University of Perugia	Lack of instruments against non-compliant AS and SS
High number of candidates participating in the admission test compared to the given positions (10:1)	
High international mobility (incoming and outgoing) for students (Erasmus)	
RESEARCH	
High quality of scientific publications	Inadequate economic support by the MIUR
Presence of 2 Centres of Research joining together a large number of researchers	Very bureaucratized Public Administration
Excellent collaboration and relationship between DVM and IZS	Limited specific expertise for technicians and administrative staff
DVM Delegate for Research working on optimising resources and research activities	Few resources to improve facilities and equipment
DVM research as a part of the National VQR QA-system	Lack of a DVM office dedicated to research
THIRD MISSION	
Transfer of knowledge and veterinary medicine expertise using advanced diagnostic investigation methods and therapeutic protocols	Insufficient rate between veterinarians and support staff in VTH activities
Extensive veterinary and public health assistance in the territory	Difficulty in internal and external communication
Availability of services for specific National Certifications	Limited professional training for SS

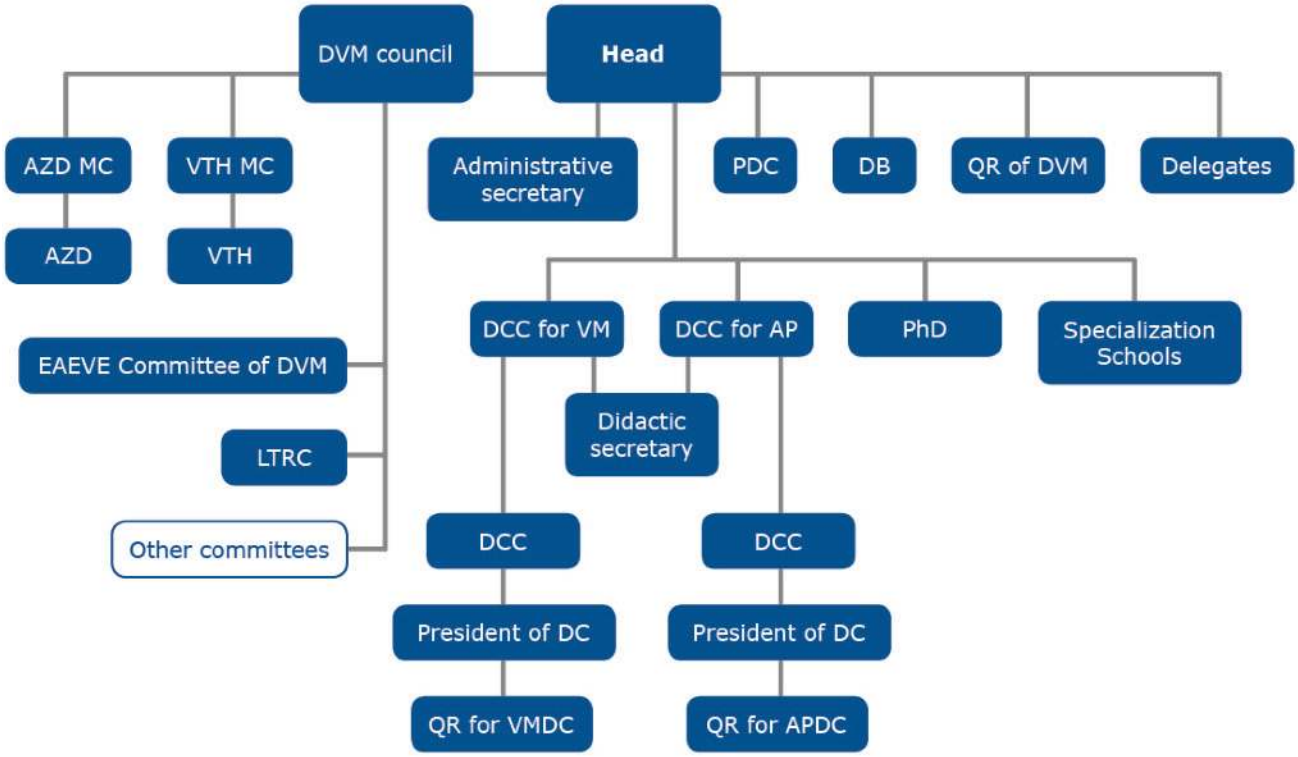
Support of VTH activities and projects involving public health by local institutions	
OPPORTUNITIES	**THREATS**
TEACHING	
Merging of the 2 Departments	The decreasing number of students tends to increase the cost of veterinary education
Improvement and development of DVM and AZD facilities	The decreasing number of students in supporting VTH activities
Increasing of VTH activities and caseload	Unpredictable number of enrolled students per AY assigned by MIUR
Consolidated 24/7 Emergency Service	Building affected by age deterioration issues
Introduction of a innovate database (SIOVUD)	University finance management not always conforming to DVM teaching needs
Assessed External Practical Training activities	Inadequate increase of annual budget by the University to support facilities
High number of bilateral agreements for extra-mural activities concerning food-producing animals	Long lead-time procedures to modify Didactic System
Proper training and involvement of students in research activities	Heavy didactic load for the AS
Activation of multimedia teaching room and initialisation in multimedia-teaching activities	Slow renewing of AS and SS members
Efficient support for students and academic staff through library promoting e-learning modules	
The progressive decreasing number of enrolled students per year	
RESEARCH	
Improving DVM ranking position at University resulting in higher resources for research by the University	Difficulties to access National and International funding for research
Start-up of a DVM internal competitive system in attributing funding for fundamental research	Difficulties in supporting research editing and equipment improvement
High revenues coming from research activities performed by the Establishment	High number of small laboratories to support
Pig and equine hospitalisation facilities for research purposes	Involvement of some AS in University institutional roles
Transfusion centre and blood bank	The reduced stabilisation (by law) of junior researchers
Laboratory of Stem cells	
Laboratory for shared use (see Molecular Biology Lab)	
THIRD MISSION	
Increasing specialised veterinary assistance for practitioners and animal owners	Difficulties in renewing human resources (permanent technicians) working at OVUD
Increasing number of agreements in OVUD for young graduate students and practitioners	Low institutional budget for improvement and replacement of equipment and maintenance
Startup of facility centralisation and computerisation of procedures	
High part of VTH incomes dedicated to improving clinical teaching and equipment	

1.1.3 SUMMARY OF THE ESTABLISHMENT'S OPERATING PLAN WITH TIMEFRAME AND INDICATORS OF ACHIEVEMENT OF OBJECTIVES

ACTION	TIMEFRAME
TEACHING ACTIONS	
Being consistent with PDCA cycle supporting constant checking based on teaching evaluation by students	2017
Provide many more procedures available for students, AS and SS	2016-2019
Continuous checking and renewal of Syllabus	2016-2019
Promote multimedia teaching rooms	2018
Improve DVM multimedia tools through a dedicated delegate	2016-2019
Increase practical training especially for food-producing animals (EPT)	2018
Renovation of Equine Service	2017
Provide dressing rooms and toilets for dissection rooms	2018
Renovation of SA isolation unit	2019
Renovation of LA isolation unit	2019
Provide a VTH Pharmacy	2019
Improve teaching facilities at VTH and AZD	2018-2019
Increase VTH services	2016-2019
Enrol many more practitioners in the AS	2019
Increase the number of international agreements for teaching exchanges	2016-2019
Promote teaching internationalisation of high level	2018
Improve DVM recreation premises for students	2018
Improve feedback by stakeholders	2019
Organise activities open to students of secondary schools	2017
RESEARCH ACTIONS	
Provide seminars for research as training tools	2016-2019
Promote Games of Research to advertise DVM research activities	2016-2019
Support main DVM research lines	2016-2019
Increase scientific publications	2016-2019
Enrol young researchers having assessed scientific competencies	2018-2019
Promote exposure of DVM research activities to attract national and international funding	2016-2019
Provide DVM internal selection of projects devoted to basic research supported by the University	2016-2019
Increase the number of international agreements for research exchanges	2016-2019
Promote collaboration among internal and external Research Groups	2016-2019
Be an active part of TUCEP through the dedicated delegate	2016-2019
THIRD MISSION	
Renovate and enrich web site	2019
Increase lifelong learning actions	2016-2019
Advertise activities performed at DVM	2016-2019
Promote job placement for young graduate students	2018
Increase VTH services for the Region and national territory	2016-2019

Support the collaboration agreement with local institutions (Region, IZS, Professional Orders)	2016-2019
Promote and improve DVM image and visibility through the dedicated delegate	2016-2019

1.1.4 ORGANISATION CHART *(DIAGRAM)* OF THE ESTABLISHMENT



Legend

DVM = Department of Veterinary Medicine
DC = Degree Course
VTH = Veterinary Teaching Hospital
AZD = Teaching Farm
MC = Management Committee

MB = Management Board
QR = Quality Responsible
DB = Department Board
PDC = Peer Didactic Committee
LTRC = Local Territory-Relationship Committee

DCC = Degree Course Council
VM = Veterinary Medicine
AP = Animal Productions
DC = Degree Course

1.1.5 LIST OF DEPARTMENTS/UNITS/ CLINICS AND COUNCILS/BOARDS/ COMMITTEES WITH A VERY BRIEF DESCRIPTION OF THEIR COMPOSITION/ FUNCTION/RESPONSIBILITIES

The Establishment includes the unique Department of Veterinary Medicine.

The DVM Regulation provides for:

Department Council (DC) plans human resources, approves financial statements, and defines teaching and research actions and proposals from DCC, departmental board (DB), Local Territorial Relationship Committee

(LTRC) and DVM delegates. It is officiated by the Head and is composed by all professors and researchers of the DVM, the Administrative Secretary, representatives of support staff (15% of AS) and students (15% of AS)(see Appendix 4.2).

Department Board (DB) develops actions and strategies to be discussed by the DC and co-operates with Head in conducting DC resolutions. It is composed by Head, vice-Head, 6 representatives of the AS (2 full professors, 2 associated professors and 2 researchers), and a representative of the SS (see Appendix 4.2).

Peer Didactic Committee (PDC) guarantees teaching QA and promotes and evaluates actions to improve the QA process consistent with the results expected by the Teaching Strategic Plan (TSP). It is composed of 14 members, including 7 AS members and 7 students, respectively (see Appendix 4.2).

Degree Course Council (DCC) in Veterinary Medicine discusses actions proposed by the PDC and any other proposal coming from its members. It is officiated by the DC President and is composed of all DC teachers and students (15% of previous)(see Appendix 4.2).

Local Territory-Relationship Committee (LTRC) studies and evaluates the role of DVM in



the territory and manages the relationship with the Regional Veterinary and Health Institutions. LTRC is composed by Head, DC President, VTH Responsible, the Presidents of Veterinary Professional Associations for Perugia and Terni, the General Director of IZS of Umbria and Marche, the regional person in charge of Public Health, and a DC student representative.

DVM EAEVE Committee checks the alignment of the curriculum to the ESEVT Day One Competences and standards. It is composed of the Coordinator, Head, 5 members of the AS, and 3 students.

Erasmus Committee defines international agreements for student and teacher exchanges and provides Learning and Teaching agreements. It is composed by the Coordinator, 4 AS members and the DC President.

VTH is composed of 4 Units:

- Internal Medicine Unit
- Surgery Unit
- Obstetric Unit
- Laboratory Diagnostic Unit

All Units include some specialised services (See Standard 5)

VTH Management Committee (MC) is composed of the VTH Responsible in charge, the Administrative Secretary, the Responsible in charge for each Unit, and 1 representative of the SS. It cooperates with VTH Responsible in the management of VTH activities and services and defines aims and objectives for VTH (see Appendix 4.2).

VTH Committee for Procedures assesses, revises and improves clinical procedures in accordance with VTH Responsible in charge for each Unit. It is composed of the Coordinator, 6 members of permanent AS, and 2 members of temporary AS.

AZD Management Board coordinates teaching activities and the use of facilities, promotes relationships with teaching and scientific facilities of the University, defines criteria for the expenditures and examines requirements for improvement of premises and equipment. It is composed by the DVM Head, the Health Responsible, the Zootechnical Responsible, 1 member and the President for each DVM DCC, 1 student for each DC, and 1 AZD SS representative (see Appendix 4.2).

1.1.6 DESCRIPTION OF HOW *(PROCEDURES)* AND BY WHOM (*DESCRIPTION OF THE COMMITTEE STRUCTURE)* THE STRATEGIC PLAN AND THE ORGANISATION OF THE ESTABLISHMENT ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, ASSESSED AND REVISED

The Strategic Plan covers almost entirely the duration of the Head mandate (3 years). It is based on the elective programme of the Head presented

at the beginning of the mandate, and it is automatically approved during Election Day and communicated at DVMC. During each mandate, the Head accepts suggestions or requests made by all staff working at the Establishment, aiming to improve and develop DVM activities. All actions enriching the SP is submitted to the discussion of DB and addressed to AZD or the VTH Management Committee for AZD and VTH issues, respectively, in order to produce shared actions. The latter are then discussed for final approval at the DVMC. Regarding building, teaching and expenditure issues not provided by DVM autonomously, planned actions are submitted to the University Management Council and the Academic Senate for final approval. The approved actions are finally communicated at the DVMC.

1.2 Comments

The presence of 13 DVMs in Italy makes competition, regarding development and attraction, among the SPs very challenging and not always adequate with reduced economic resources from the MIUR and Universities themselves.

The QA system introduced in past years has undoubtedly contributed to defining, more clearly, the Establishment's mission and objectives into a continuous and progressive development plan for facilities and activities.

1.3 Suggestions for improvement

DVM and University SPs should aim to proceed and reinforce the following actions:

- Improve DVM food-producing animal caseload and facilities
- Oppose development policies for AS and SS to the decreased number of enrolled students in order to support VTH activities
- Keep into account the high cost of veterinary medicine instruction
- Stabilise junior researchers into constantly assessing teaching and research activities.



2.

FINANCES


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2.1. Factual information

2.1.1 DESCRIPTION OF THE GLOBAL FINANCIAL PROCESS OF THE ESTABLISHMENT

The global financial and administrative process of the Establishment and of the entire University of Perugia aims to guarantee public objectives in research, teaching, technology and knowledge transfer, both in the short and long term. In addition, it safeguards the principles of neutrality, efficiency and effectiveness in the use of financial resources.

The MIUR annually provides an Ordinary Functioning Budget (FFO) of which approximately 80% is employed for the salaries of university employees (AS, SS).

Part of the remaining amount is equally divided among the 16 Departments except for an honour portion attributed on the basis of VQR results and Periodic Evaluations in teaching, research, commercial activities and QA given by the National Agency for the Evaluation of the University System and Research (ANVUR).

The Establishment annually receives about 40.000 euros allocated to the DVM FFO for general services. The revenues from commercial activities (third party) are independently managed by the Establishment, as defined by the University GG. About 50% of the incomes are dedicated to supporting teaching, research and clinical activities. About 45% is used to incentivize academic and support staff in supporting and improving commercial activities. The remaining 5% is due to the University of Perugia.

VTH (OVUD) annually receives 20.000 euros on behalf of the University for clinical purposes. Clinical activities aimed at teaching and research are also supported by about 50% of VTH incomes. OVUD provides equipment, consumer products, and salary for temporary academic staff working at different VTH services.

The Teaching farm (AZD) annually receives 15.000,00 euros from the University as an FFO. On the other hand, AZD supports itself by hay production in about 6ha and the sale of cattle and cows. Economic incentives are not provided for AZD employees. Funded research activities performed at AZD contribute to support the teaching farm (consumer products, animal feed, drugs, equipment improvement).

The Financial Year (FY) starts on 1st January and ends on 31st December. By 30th March, the DVMC evaluates the global financial management of the previous FY and approves the Closing Accounts, which will be part of the Unique Account of the University.

15% of DVM revenues coming from technological agreements are due to the Establishment to support DVM General Services.

5% of the annual tuition fee for graduate students attending masters is given to the Establishment.

2.1.2 DEGREE OF AUTONOMY OF THE ESTABLISHMENT ON THE FINANCIAL PROCESS

The Establishment independently manages funds from its financial statement. It annually reports an estimated financial statement for the next FY reporting the estimated expenditures planned to assure a good functioning of the DVM and performance of all departmental activities. During the FY, the planned budget can be modified according to the needs emerging from institutional and commercial activities. In fact, the final financial statement assessment and potential changes are due by the DVMC.

Table 2.1.1 Annual Expenditure* during the last 3 academic years (in Euros)

AREA OF EXPENDITURE	01.01.2017 31.12.2017	01.01.2016 31.12.2016	01.01.2015 31.12.2015	MEAN
Personnel	606.334,00	743.472,00	624.089,00	657.965
Operating costs	953.787,00	975.739,00	940.908,00	956.811
Maintenance costs	21.944,00	55.172,00	73.058,00	50.058
Equipment	152.876,00	112.432,00	50.000,00	105.102
Total expenditure	**1.734.941,00**	**1.886.815,00**	**1.688.055,00**	**1.769.937**

*The Financial Year is from 1st January to 31st December

Table 2.1.2 Annual Revenues during the last 3 academic years (in Euros)

REVENUE SOURCE	01.01.2017 31.12.2017	01.01.2016 31.12.2016	01.01.2015 31.12.2015	MEAN
Public authorities	75000	75000	75000	75.000
Tuition fee[1] (standard students)	0	0	0	0
Tuition fee (full students)	0	0	0	0
Clinical services	927.909,00	898.883,00	910.358,00	912.383
Diagnostic services	100.463,00	106.443,00	129.164,00	112.023
Other services	80.941,00	115.462,00	107.620,00	101.341
Research grants	614.448,00	584.272,00	724.960,00	641.226
Lifelong learning (2)	32.700,00	38.535,00	37.759,00	36.331
Donations	60.810,00	232.151,00	70.650,00	121.200
Other sources**	4.518,00	9.063,00	4.205,00	5.928
Total revenues	**1.821.789,00**	**1.984.809,00**	**1.984.716,00**	**1.930.438**

[1]Tuition fees are due to the University of Perugia.

Table 2.1.3 Annual balance between expenditures and revenues (in Euros)

ACADEMIC YEAR	TOTAL EXPENDITURES	TOTAL REVENUES	BALANCE***
2015-2016 (2015)	1.688.055,00	2.059.716,00	371.661,00
2016-2017 (2016)	1.886.815,00	2.059.809,00	172.994,00
2017-2018* (2017)	1.734.941,00	1.896.789,00	161.848,00

***Total revenues minus total expenditures.

2.1.3 % OF OVERHEAD TO BE PAID TO THE OFFICIAL AUTHORITY OVERSEEING THE ESTABLISHMENT ON REVENUES FROM SERVICES AND RESEARCH GRANTS

Research activities. The percentage on revenues from research grants is not due to the University. All revenues from research are collected by the Establishment (Authors of research) and reinvested in performing the funded research activities. The principal investigator for the research revenues is the person in charge of the research project.

Commercial activities. Based on art.11 of GG of the University, the Establishment consigns the following amounts to the University:

- 3% to the Common Funds of the University
- 2% for Research Purposes
- 5% for General University Services.

The Common Funds of the University is divided among support staff not directly involved in commercial activities.

As for post-graduate training, such as masters, 10% of the annual tuition fee, for those attending students, is due to the University.

2.1.4 ANNUAL TUITION FEE FOR NATIONAL AND INTERNATIONAL STUDENTS

The MIUR does not classify full-fee students. All students are "standard students". The annual tuition fee is defined by singular Universities.

The University of Perugia provides 17 income bracket classes: the first (0-10.000 euros) where tuition fee is 366,00 euros to the 17th (> 100.000 euros) where tuition fee is 2.096,00 euros. Moreover, from 2016, special advantages and exemptions have been provided for students coming from areas affected by earthquakes.

Tuition fee increases yearly for those students outside the prescribed time.

International students enrolled in the DC are considered "standard students". Those belonging to specific programs (see Erasmus) follow financial agreements between the MIUR and International Countries.

Annual tuition fee for graduate students is independently defined by the Master Councils. Generally, it ranges from 2.500 to 6.000 euros.



2.1.5 ESTIMATION OF THE UTILITIES *(E.G. WATER, ELECTRICITY, GAS, FUEL)* AND OTHER EXPENDITURES DIRECTLY PAID BY THE OFFICIAL AUTHORITY AND NOT INCLUDED IN THE EXPENDITURE TABLES

Expenditures directly paid by the University (**2017**)

Water	€ 47.300,00
Electricity	€ 223.800,00
Heating	€ 192.300,00
Waste disposal	€ 90.000,00
Cleaning services	€ 204.867,00
Building maintenance	€ 99.924,00

2.1.6 LIST OF THE ON-GOING AND PLANNED MAJOR INVESTMENTS FOR DEVELOPING, IMPROVING AND/OR REFURBISHING FACILITIES AND EQUIPMENT, AND ORIGIN OF THE FUNDING

To improve and encourage the developing of DVM facilities, The Establishment has planned the following major investments:

1. Computed Tomography (TC) by DVM revenues from services (232.000,00 euros) (achieved in 2018)
2. Stainless steel equipment for the clinic and surgery rooms of VTH by DVM revenues from-services (50.000,00 euros) (achieved in 2018)
3. N.2 cages for wild animals funded by the Regione Umbria (20.000,00 euros)
4. N.14 Personal Computers for the student study room by DVM FFO (8.000 euros) (achieved in 2018)
5. Electronic time-table achieving DVM activities (2.500,00 euros) (funded by DVM FFO)
6. Renovation of the intensive care unit for large animals (project approved and financed by the University)(see Appendix 3.8b)
7. AZD rebuilding (project approved and financed by the University)(see Appendix 3.8l)
8. Dressing rooms and toilets for dissection rooms (project approved and financed by the University) (see Appendix 3.8e, 3.8g)
9. Unique Pharmacy and Chemotherapy unit at VTH (project approved and financed by the University) (see Appendix 3.8d)
10. Airing system for SA surgery unit (a project partially financed by the University) (see Appendix 3.8f)
11. Renovation of SA Surgery Unit in accordance with security standards (completion of the previous project – in the approval process)
12. Isolation ward for small animals (project approved and financed by the University) (see Appendix 3.8d)
13. A thermic power station (project financed by the University) (see Appendix 3.8c)

2.1.7 PROSPECTED EXPENDITURES AND REVENUES FOR THE NEXT 3 ACADEMIC YEARS

ACADEMIC YEAR	TOTAL EXPENDITURES	TOTAL REVENUES	BALANCE***
2018-2019[1]	1.945.000,00	2.055.000,00	110.000,00
2019-2020[2]	1.985.000,00	2.065.000,00	80.000,00
2020-2021[3]	1.930.000,00	2.000.000,00	70.000,00

[1]from 1st January to 31st Dec 2018; [2]from 1st January to 31st Dec 2019; [3]from 1st January to Dec 31st, 2020. ***Total revenues minus total expenditures.

2.1.8 DESCRIPTION OF HOW (PROCEDURES) AND BY WHO (DESCRIPTION OF THE COMMITTEE STRUCTURE) EXPENDITURES, INVESTMENTS AND REVENUES ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

Teachers in charge who work at the Establishment promote and require expenditures addressed to teaching, research and commercial activities. The Administrative Secretary directly authorize expenditures < 20.000 euros. He/She authorizes expenditures > 20.000 euros through the procedure "determina di affidamento" (art. 11 del decreto legislativo n. 163/06 e s.m.) approved by the DVMC.

Revenues from research projects and agreements independently proposed by the academic staff are approved by the DVMC. Revenues from the services activated at VTH are approved by the DVMC and included in the Establishment Balance sheet entry.

All procedures for expenditures are published in the University website (see "Bandi di gara" and "Amministrazione trasparente"). The approvals by the DVMC are published in its website (see "Consessi –DVMC Minutes).

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By 30th March, the DVMC evaluates the global financial management of the previous year and approves the Closing Accounts, which will be part of the Unique Account of the University. At this time, the Financial Exercise for the previous year is definitively closed.

2.2 Comments

The endowment the Establishment annually receives from the University of Perugia is just sufficient for DVM general student services. This endowment is similarly attributed to all 16 departments.

The VTH employs almost all incomes to improve clinical teaching and equipment. A significant part of revenues comes from research activities performed by the Establishment.

In our Country, the Public Administration is deeply bureaucratized. Unfortunately, this condition tends to delay activities and investments, and the process to improve facilities is very slow.

2.3 Suggestions

The DC in Veterinary Medicine is one of the most expensive. The annual endowment received from the University is insufficient to promote the growth of the DVM and should be differentiated from other departmental endowments.



3.

CURRICULUM


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3.1 Factual information

3.1.1 DESCRIPTION OF THE EDUCATIONAL AIMS AND STRATEGIES IN ORDER TO PROPOSE A COHESIVE FRAMEWORK AND ACHIEVE THE LEARNING OUTCOME

The educational aims of the one-cycle, Veterinary Medicine Degree course (LM42) consist in acquiring extensive basic scientific knowledge, practical training and technical abilities to satisfactorily qualify students in the different areas of the veterinary profession. These objectives must respond to the evolving requirements associated with continuing scientific and technological progress and should favour the integration of students into the social/occupational framework of our Country and the European Union (European Directive 2005/36/CE).

The educational aims are all purposed to enable students to become accustomed in aspects related to:

- Diagnosis, care and prevention of animal diseases, with particular attention to food-producing animals and pets;
- Welfare safeguard of food animals, pets, athletic animals, laboratory animals;
- Safeguard of Public Health related to zoonosis and consumption of animal food not adequately produced, transformed and conserved;
- Support for industries involved in animal product manufacturing;
- Environmental impact related to farm and livestock industries

Numerous and various actions are planned and proposed to promote a cohesive framework and achievements of learning outcomes:

- The official Peer Didactic Committee (PDC) of the Establishment and Degree Course Council DCC provide an annual evaluation of single courses and the overall framework cohesiveness as well as discussing difficulties in students' careers and prompt course completion. The PDC is due to check subjects and distribute teaching with final approval of the DCC and DVM Council (DVMC). In this context, the evaluation reports made by students are an essential part of the process.
- All teaching activities are strictly scheduled as a result of an active supervision action by the Semester Coordinator Team (SCT).
- Meetings with stakeholders and practitioners in different areas of the veterinary profession are planned, together with students and academic staff, to discuss, modify and revise educational objectives and to update Day One Skills.
- Interviews and meetings with external practitioners belonging to the Official State Examination Board (OSEB) are planned to identify main deficiencies and failure of the learning outcome.
- The Establishment studies the annual report by the National Quality Assurance Systems (ANVUR, Almalaurea, Universitaly) that provide information about the professional employment of Italian veterinary medicine graduates and the validity of the DVM course of Perugia in terms of economic outcome and appreciation of specific educational training and learning.

3.1.2 DESCRIPTION OF LEGAL CONSTRAINTS IMPOSED ON THE CURRICULUM BY NATIONAL/REGIONAL LEGISLATIONS AND THE DEGREE OF AUTONOMY THAT THE ESTABLISHMENT HAS TO CHANGE THE CURRICULUM

The present curriculum in the Veterinary Medicine Degree Course (DC) adopted by the Establishment is due to the last Italian Ministerial Decree n.270, 22 October 2004 (MD 270), in accordance with MD 17/2010, European guideline 78/IO27/CEE, law n.264, 2 August 1999, MD 4 October 2000 and 28 November 2000. It includes measures provided by the previous MD 509 of 2009.

Based on national legislation, and according to EU directive 36/2005 the curriculum consists in 300 ECTS distributed in 5 years, with a mean workload per year of 60 ECTS. Moreover, national legislation obliges us to distribute the 300 ECTS over a maximum of 30 exams. Finally, the curriculum must be accomplished within 5 years (10 semesters), including Professional Practical Training (PPT) activities.

In addition, national legislation defines the number of ECTS attributed to the different classes of subjects.

Nonetheless, national legislation enables the Establishment to define subjects and relevant learning skills, number of ECTS as well as preparatory subjects. The Establishment also establishes procedures and participation in learning assessment, final testing, teaching evaluation and certification of ECTS acquired in different Degree Courses and Universities. Furthermore, the Establishment determines elective teaching activities based on academic staff proposals. Finally, the Establishment decides on the ratio of lectures/practical activities and self-directed learning per each ECTS.

3.1.3 DESCRIPTION OF HOW CURRICULUM OVERLAPS, REDUNDANCIES, OMISSIONS AND LACK OF CONSISTENCY, TRANSVERSALITY AND/OR INTEGRATION OF THE CURRICULUM ARE IDENTIFIED AND CORRECTED

The PDC, supported by the member in charge of Quality Assurance (QA), analyses and discusses all questions and issues concerning the curriculum as referred by the students and academic staff.

The PDC student representatives actively participate in the QA System (QAS) of the Veterinary Medicine Degree course reporting critical issues, suggestions and advice on all teaching aspects.

In order to identify and correct eventual misinterpretations and deficiencies of the curriculum, various instruments have been activated and used:

- Regular meetings involving academic staff members of core subjects to discuss curricular programmes and highlight overlapping, redundancies or omissions, and provide a transversal teaching integration. The last meetings date back to 2015 ("Incontri di Filiera" – Supply Chain Meetings)(SCMs).
- Students also denounce potential overlaps, redundancies, omissions or lack of transversal and integrated teaching in the curriculum through the online evaluation model (see Appendix 6.1d) completed at the end of each course. The same instrument, along with a report by students in PDC, is employed to verify the effects of curriculum revisions and updating. Furthermore, at the end of each semester, the PDC carefully assesses the results of student evaluations and discusses critical issues with the involved teachers. A mailbox has been made available for students. They may contribute anonymous suggestions or complaints concerning the curriculum, facilities and welfare assurance.
- Teachers who have an evaluation vote < 6 are required to produce a report indicating the measures they intend to take to resolve the exposed critical issues.
- Once a year the department also organises a meeting with the Local Territorial Relationship Committee (LTRC) to ascertain that educational aims and objectives are consistent and updated to professional and territorial changes.
- Since 2016-2017 AY an annual meeting with stakeholders (practitioners and National Public Health System vets), members of the Official State Examination Board, contributes in identifying possible learning and Day One Competences deficiencies or teaching omissions found in young professionals who graduated from the DVM.
- After each EPT turn, the EPT providers are called to define the level of training, interest, and commitment of the students they have supervised.
- Local Territorial Relationship Committee (LTRC) and the annual reports by Alma Laurea and Universality generally assess the degree of satisfaction by external stakeholders.
- A number of subjects have been differentiated by species.

All the data and potential issues revealed by the above instruments are addressed to the PDC to be discussed and submitted to corrective actions and communicated to the DCC and DVMC for final approval.

3.1.4 DESCRIPTION OF THE CORE CLINICAL EXERCISES/PRACTICALS/SEMINARS BEFORE THE START OF CLINICAL ROTATIONS

Year 1. Starting from Year 1/2nd semester students are instructed on handling animals, assessing cardiovascular, respiratory, gastrointestinal systems, performing diagnostic procedures and activities in different disciplines.

In particular, during Year 1/2nd semester, students attend the course "basic green week" consisting of activities undertaken at the teaching farm (AZD) (max 8/group). They acquire basic knowledge of management and handling of farm animals, including feeding and grooming activities.

Year 2. During Year 2/2nd semester, students attend the course "advanced green week" consisting of activities undertaken at the teaching farm (AZD) (max 8/group). They acquire basic knowledge on the management of farm animals for reproduction and monitoring of health status including blood samples, stools collection and swabs for lab exams.

Year 3. During Year 3 core clinical exercises/practicals/seminars are required in Pharmacology and Veterinary Toxicology (groups of max 12 students perform analytical determinations of xenobiotic addressed to clinical cases), Veterinary Pathological Anatomy (students perform dissections, and interactive slide discussions addressed to clinical cases), Veterinary Semeiotics, Veterinary Surgical Pathology, and Clinical Biochemistry.

Years 4 and 5. During Year 4 and 5/1st semester, all clinical subjects provide practical activities (no more than 12 students/group) concerning interactive sessions or clinical solving-problem workgroups.
(see Teaching Plans in Appendix 6.2)

3.1.5 DESCRIPTION (TIMING, GROUP SIZE PER TEACHER, …) OF THE CORE CLINICAL ROTATIONS AND EMERGENCY SERVICES (BOTH INTRAMURAL VHT AND AMBULATORY CLINICS) AND THE DIRECT INVOLVEMENT OF UNDERGRADUATE STUDENTS (RESPONSIBILITIES, HAND-ON VERSUS OBSERVATION, REPORT WRITING, …)

The core clinical rotations start from Year 3/2nd semester. They include "rotazioni cliniche", Ambulatory Clinics, Basic and Advanced Red Weeks, and Professional Practical Training.

The "rotazioni cliniche" are scheduled from Year 3/2nd semester of the course. Students are divided into 11/12 groups of a maximum of 6 students and are assigned to the teacher and medical teams of the corresponding clinical/diagnostic area. They attend a daily activity at the VTH, involving clinical services and laboratory diagnostic services (the IV Unit). After any clinical rotation/subject each student provides at least one report of a case he/she followed during his/her activity.



The "rotazioni cliniche" at the IV Unit include practical activities referring to clinical cases on infectious disease, diagnostic pathology, and avian pathology. They perform virological, bacteriological and biomolecular investigations, as well as bacterial typing and diagnostic staining, setting and interpreting antimicrobial sensitivity tests. They also perform necropsies, write the gross pathology report and diagnosis, perform anatomic sample trimming and histological stains as well as histological examination and final diagnosis.

In avian pathology, students practice both in clinical and diagnostic approaches in poultry diseases and the application of therapeutic vaccination protocols. As for the VTH exotic animal service, avian pathology "rotazioni cliniche" are also performed on unconventional birds.

All clinical rotations on companion animals are carried out at the VTH from Year 3/2nd semester, when students begin working in the diagnostic and clinical activities of referred or hospitalised animals, including non-conventional pets, rotating during the morning once or twice a week. They also take part in 2 working-sessions at the central lab of the VTH analysing samples taken from the hospitalised patients or private clinics for clinical-pathology evaluations.

Students perform daily routines in the clinical services together with clinical staff during clinical, diagnostic, therapeutic, or surgical activities as well as actively participating in animal handling and care of hospitalised patients, ultrasound and x-ray examinations, surgical scrub and surgery, and anaesthetic management.

During the Year 4/2nd semester, students also attend the "rotazioni cliniche" on Animal Welfare Health Indicators on hospitalised small, large and food-producing animals.

Ensuing any clinical rotation/subject, each student presents at least one report of a case that he/she has followed during his/her activity.

During Year 3/2nd semester **Basic Red Week** is performed at the VTH. Under academic staff supervision, students directly take part in hands-on, clinical-diagnostic, and therapeutic activities. They further acquire practical skills in interacting with owners, in collecting history and in the practice of physical examinations of both SA and LA. This course is intended to provide first, full immersion in clinical activity within a hospital environment. Teams of 2 students work in 3 daily shifts from 8:00 to 17:00 (25h), from Monday to Friday. The minimum-learning aim of the course is the ability to use clinical methodologies and perform general objective examinations on animals.

Moreover, during Year 4/2nd semester an additional **Advanced Red Week** is performed at the VTH. Under the supervision of academic staff, students practice clinical-diagnostic activities on VTH patients, including visiting patients, diagnostic examinations, clinical treatments, emergency management in the 24/7, and monitoring clinical status of hospitalised animals. Activities are different depending on the shift. For each student, a morning shift (8:00 to 16:00 pm), an afternoon shift (16:00 to 24:00), and a night shift (24:00 to 8:00 am) (25h) are due.

Each student is asked to report all of his/her activity and the sequence of each animal in the examination/clinical procedure. This "reporting exercise" must be transferred into the informatics system of the VTH (SIOVUD).

Clinical Rotations on food-producing animals are carried out from Year 3/2nd semester at the VTH on hospitalised animals or at the teaching farm (AZD). Clinical rotations on food-producing animals are also performed as Ambulatory Clinics as an extra-mural service**.** After any clinical rotation/subject each student provides at least one report of a case he/she has followed during his/her activity (see Appendix 6.1b).

Involvement in the **VTH "rotazioni cliniche"** increases progressively regarding rotating hours during the morning (from 26h/student during Year 3/2nd semester to 109h/student during Year 4/1st and 2nd semesters; to 52h/student during Year 5/1st semester).

Ambulatory clinics consist in 5h (from 8.00 to 13:00) for 5 days (25h) of clinical activities per each team (no > 6 students) at different farms (large and small ruminants, swine). During Ambulatory Clinics students perform general and particular examinations of gastro-enteric, respiratory, musculoskeletal, and cutaneous systems, rectal palpation and ultrasound of the reproductive tract. Once again, after any clinical rotation/subject each student provides at least one report of a case he/she followed during his/her activity (see Appendix 6.1c).

In the Year 4/2nd semester students attend Practical Training on **Parasitology and Veterinary Pathological Anatomy**, for a total of 25h and 50h, respectively. Any student team (no > 6) attends the Parasitology and Pathology Service during summer shifts, ranging from May to September.

During Year 5, students are involved in 6 months of **Professional Practical Training (PPT),** consisting in 30 ECTS, including 22.5 ECTS performed in practical activities carried out at the VTH, and the remaining 7.5 ECTS in EPT. VTH PPT involves all clinical services of the central VTH Units (internal medicine, surgery, obstetrics), animal production, food quality and health safety, and avian pathology. The EPT is devoted explicitly to clinical activities in food-producing animals, animal production and management, and slaughterhouse activities. To practice PPT, students must have passed all the Year 1, 2, 3 and 4 exams, except for "Legal Veterinary Medicine, Animal Protection Legislation and Deontology Animal Welfare Health Indicators". The DC plans 3 shifts of PPT starting from Year 5/II Semester (from 8 January to 6 July, from 4 April to 30 September, from 3 September to 1 March, respectively) and students choose 1 shift according to their convocation date. Each PPT team includes no > 4 students for clinical activities and avian pathology, and no > 8 students for animal production and food quality and health safety. At the VTH, students attend Units and Emergency Service activities including 3 night shifts.

Regarding clinical activities performed at the VTH, including Emergency Service, the aim is to provide autonomy of judgment, communication abilities and "transversal" competencies:

1. Communicate with owner;
2. Interact and communicate with medical staff;
3. Collect a patient history;
4. Complete a report and draw-up a clinical record;
5. Make a medical prescription;
6. Understand and apply a standard operating procedure;
7. Use technological tools to obtain, process, share and communicate updated scientific and health information;
8. Know items in order to write an invoice for health provisions;
9. Know chief administrative and medical-legal aspects and normative references of the profession of the veterinary surgeon (medicines, animal health protection and health, registry, occupational activity, responsibility and professional ethics).

http://www.medvet.unipg.it/files/lm-42/tpa/tabella_date_tirocinio_2017_18.pdf

(See Standard 5.1.7 and 5.1.8) (see Teaching Plans in Appendix 6.2)

3.1.6 DESCRIPTION (*TIMING, GROUP SIZE PER TEACHER, …)* OF TEACHING IN SLAUGHTERHOUSES AND PREMISES FOR THE PRODUCTION, PROCESSING, DISTRIBUTION/SALE OR CONSUMPTION OF FOOD OF ANIMAL ORIGIN

Students must achieve a good understanding of the methods and aims concerning *pre-* and *post-mortem* sanitary inspection of animals for slaughter. They must know the fundamentals of hygiene and food of animal origin technologies applied to production and the introduction into the food market. Furthermore, they learn criteria, methods and techniques concerning tests aimed at assessing conditions of the products mentioned above and the scientific bases of the relationship between food and human health. Students must also obtain a good knowledge of sanitary and quality certifications in compliance with the laws in effect and public health requirements.

Slaughterhouse activities. A substantial part of the teaching is directly held at the slaughterhouse and premises for production, processing and distribution of food.

In particular, all practical classes on meat hygiene are carried out at the public slaughterhouse of Perugia. This allows the students to perform theoretical and practical activities under the supervision of academic staff in collaboration with the

veterinary staff working in the plant. The plant incorporates a 30-seat classroom (see Standard 4).

Students are usually divided into small groups of 8-10. Each session lasts 1 hour and is repeated every other day by 1 lecturer with the assistance of 1 veterinarian of the Public Health Service, up to completion of the requisite number of hours.

Foodstuff Processing Units. Various foodstuff processing plants (e.g. fishery, meat, and milk plants) are involved in teaching the production of food of animal origin (See Appendix 6.3). Practical classes are organised every week, either at these premises or in the pilot plant of the Establishment (Building D). For practical work, student teams are composed of 8-10 units. The practical work is repeated every hour based on the scheduled teaching activities.

Each student is involved in visits to a dairy production plant, a meat processing plant and a fish processing plant, for the evaluation of the processing technology adopted, the hygienic requisites of the structures and equipment, and the implementation of the HACCP system.

The visited Plants change according to the needs and availability of the producers.

During year 4-1st semester, students are involved twice in rotations on Inspection, certification and control of food of animal origin from 8:00 to 13:00.

3.1.7 DESCRIPTION OF THE SELECTION PROCEDURE OF ELECTIVES BY STUDENTS AND THE DEGREE OF FREEDOM IN THEIR CHOICE (*E.G. WHAT HAPPENS WHEN TOO MANY STUDENTS SELECT ONE SPECIFIC TRACK)*

In the current curriculum, Electives (Elective Teaching Activities (ADE)) are aimed at the acquisition of specific professional skills. One ADE corresponds to one ECTS. A total of 8 ECTS are dedicated to the ADE. These 8 ECTS are divided as follows:

- 3 ECTS of Self-Directed Learning activity (SDL, maximum number of students allowed: 50), or ECM (Lifelong Learning in Medicine) courses for Veterinarians;
- 1 ECTS of Practical Activities (P, maximum number of students allowed: 10) and 4 ECTS of Clinical Activities (CP, maximum number of students allowed: 6) in the Establishment facilities or agreed private practices.

For all types of ADEs, 1 ECTS is equivalent to 25 hours of theoretical or practical lessons.

Students must attend 2 ADEs in Year 3, 2 ADEs in Year 4, and 4 ADEs in Year 5. Admission is online, and admission criteria are on a first-come-first-served basis.

However, in the current year, we are transitioning from the former type of elective activities (CIPs) to the new type (ADEs). Contrarily to the ADEs, in the old curriculum, CIPs were all concentrated in the 5th year. Therefore, in the current academic year 2017-2018, students may select among 11 ADEs given in Year 3, 10 ADEs given in Year 4 and 26 CIPs given in Year 5.

The schedule of the offered Electives is available on:

3rd year: http://www.medvet.unipg.it/files/lm-42/orario_lezioni/2017-2018/08_-_ade_1_e_2_semestre_iii_anno_2017_-_2018.pdf

4th year: http://www.medvet.unipg.it/files/lm-42/orario_lezioni/2017-2018/11_-_ade_1_e_2_semestre_iv_anno_2017_-_2018.pdf

5th year: http://www.medvet.unipg.it/files/lm-42/orario_lezioni/2017-2018/13_-_calendario_cip_2017_2018_con_pausa.pdf

3.1.8 DESCRIPTION OF THE ORGANISATION, SELECTION PROCEDURES AND SUPERVISION OF THE EPT

Since the 2017-2018 AY, PPT provides the EPT accounting for 7.5/30 ECTS specifically dedicated to food-producing animals. The 7.5 ECTS dedicated to EPT include 2.5 ECTS on slaughterhouse activities, 2.5 ECTS on Animal production (husbandry), and the remaining 2.5 ECTS on clinical practice.

EPT is supervised by practitioners (EPT providers) working in the agreed farms and slaughterhouses. The EPT activities are regulated by specific rules approved by the DCC e DVMC. A specific Committee in charge organises EPT. It is composed by DC President, the coordinator, 1 teacher in charge of any SSD (surgery, obstetrics, internal medicine, avian pathology, animal husbandry and food and hygiene safety) involved in PPT, a Year 4 and a Year 5 student.

The functions of the EPT Committee are as follows:

- Plan student needs, offering a wide collaborating premise range.
- Define selection criteria of both EPT providers and external farms and facilities;
- Suggest EPT providers and external premises for final agreement confirmation by the Head;
- Mediate and solve potential conflicts related to EPT;
- Confirm sufficient premises quality to guarantee a correct learning process;
- Take part in the evaluation processes of EPT providers and premises reported by students;

To select EPT providers, the EPT Committee organises a series of meetings with practitioners working with food-producing animals for at least 10 years; during individual interviews, EPT providers are tested on:

- Main animal species of interest;

- Number of farms covered and the mean number of animals per farm;
- Number of clinical caseloads;
- Number of daily availability for teaching purposes;
- Number of students which can be supervised daily;
- Location of activities and distance from the Establishment;

Based on the above criteria, to date, 7 practitioners are enrolled in EPT: 6 of them are mainly dedicated to bovine, 2 to pigs, 1 to small ruminants.

EPT rotations are planned according to the external practitioner's schedule and are available on the Establishment's website (see http://www.-medvet.unipg.it/files/lm-42/tpa/tabella_date_tirocinio_2017_18.pdf).

All practical activities conforming to EPT subjects and carried out during an Erasmus programme or, professional, practical training in agreement with EPT guidelines of the Establishment, are recognised.

3.1.9 Description of the procedures (*e.g. logbooks*) used to ascertain the achievement of each core practical/clinical activity (*pre-clinical, clinical, ambulatory clinics, EPT*) by each student

The Establishment provides students with a personal Logbook defining the Day One Skills (DOS) (see Appendix 6.1a). In this document, teachers certify that students have acquired specific skills during preclinical, practical/clinical activities performed in the Establishment, or extra-murally, under the supervision of academic staff or EPT providers. Consequently, the logbook represents the primary procedure to ascertain the achievement of each core practical/clinical activity. The Student must acquire learning and practice in all DOS reported in the logbook, and academic staff must provide the opportunity for each student to practice the skills as stated within the logbook.

More specifically, concerning "rotazioni cliniche" and Ambulatory Clinics, at the end of each rotation, students must present 1 clinical report on a patient/group of patients directly attended to by them, with details about the clinical activities carried out, and discussions based on the literature (see Appendix 6.1b). Finally, all additional practical/clinical competencies are evaluated during curricular exams and the Official State Examination.

3.1.10 DESCRIPTION OF HOW (PROCEDURES) AND BY WHOM (DESCRIPTION OF THE COMMITTEE STRUCTURE) CORE CURRICULUM IS DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

In Italy, all the veterinary medicine establishments are governed by the same MIUR regulation (http://www.miur.gov.it). To provide homogeneity and consistency in veterinary education, the curriculum of the Veterinary Medicine Degree Course (DC) complies with both European directives 2005/36 and national norms assuring the necessary qualifications for the practice of the veterinary profession (DM 509/1999, as amended by DM 270/2004 and DM 16/3/2007). The VMDP is a single-cycle degree (300 ECTS) belonging to class LM-42. Laws and norms establish a general framework (i.e. minimum amount of ECTS for each subject area).

In accordance with national guidelines, each Establishment regulates its core curriculum through the Didactic System (DM) and Didactic Guidelines (DG).

All curriculum variations are proposed and evaluated by PDC in compliance with ministerial tables (DM 270/2004), European Directive 2005/36 and, most recently, Standard Operating Procedure (SOP) of ESEVT.

The PDC receives suggestions, complaints, corrective actions presented by academic staff and students through their representative members. In some cases, specific requests and issues may also be personally presented by the authors invited to PDC. PDC also collects new inputs and requests reported by stakeholders (LTRC) or other committees working for learning affairs (e.g. EPT Committee, Committee of Official State Examination). PDC is composed of 14 members, including 7 academic staff-members and 7 students, respectively. The PDC works and documents are presented to the DC President who provides to call the DCC for discussion and final approval. In the improvement, revising and implementing process of the Degree Course, student evaluation modules and analysis of student career progression play an essential role. Learning outcomes and student career are annually monitored by the Evaluation Unit (EVU) of the University of Perugia (see Standard 11).

The DCC is called approximately every three months, except in the case of emergency actions or specific university deadlines. The DCC President, at least 4 days prior, sends the proposals to the DCC for a thorough examination and consideration. Minor modifications reported in the Didactic Guidelines (excluding changes in the number of ECTS) require the approval of the Academic Senate. Significant changes modifying the Didactic System require the approval of the National University Council (CUN). The last implementation of the DG occurred in 2014, and the last implementation of the DS occurred as of 2017-2018 AY.

All modifications and improvements are communicated to all parties through concise actions:

- Publication on the Department and University websites;
- Use of social networks;
- Organisation of free meetings and student conferences;

- Changes in Syllabus.

3.2 Comments

- Lectures within the degree course have been extended to Y 5/1st semester. However, the DC, including thesis and the 6-month PPT remain too compressed.
- In past AYs lectures of characterizing subjects have been reduced (260h less) contributing to a lighter teaching load.
- Since 2015-2016 AY the Establishment has introduced "rotazioni cliniche" and rotations in Emergency Service to increase and improve practical/clinical activities.
- In the past AY, the Establishment has introduced structured EPT as a significant supplement for food-producing animal practice in the curriculum.
- In the last AYs, the number of unrolled students has been significantly reduced thus allowing us to have teams of no more than 12 or 6 students, for practical and clinical activities, respectively. As for the number of students attending practical activities, a small amount of unpredictability remains due to outside prescribed time student status permitted by Italian laws.
- To successfully attain significant and improving changes to the Didactic System requires long lead-time procedures.
- In the last AY, the degree course offered at the Establishment of Perugia rates in the 6th position out of 13 Italian DVMs with an 85/100 attributable to excellent actions of internationalisation dedicated to students and teachers (http://www.censis.it/17?shadow_pubblicazione=120582).

3.3 Suggestions and Improvements

- In the past AYs, many efforts have been made to reduce teaching load for lectures. Further review of subject content should be carried out to improve this process.
- Many efforts have also been made to structure EPT dedicated to food-producing animals. The process should be implemented introducing and structuring EPT for small animals as well.
- The didactic load is somewhat arduous for academic staff too. New enrolments should be planned in a short lead-time in the next Strategic Plan of the Establishment.

Table 3.1.1 Curriculum hours in each academic year for each student.
A B C D E F G H. A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: total

2017-2018 AY	A	B	C	D	E	F	G	H
Year 1	464	3	810	60	41	0	0	1378
Year 2	462.5	7	681	185	25	2	0	1362.5
Year 3	501.5	24	561	107	53	61.5	0	1308
Year 4	512.5	10	546	45	57.5	223.5	28	1422.5
Year 5	122	0	295.5	0	49.5	583.5	0	1105.5

Tab. 3.1.2 Curriculum hours in EU-listed subjects taken by each student (excluded the Elective subjects)

EU LISTED SUBJECTS								
BASIC SUBJECTS	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Medical physics	43	0	75	7	0	0	0	125
Chemistry (inorganic and organic sections)	26	0	45	4	0	0	0	75
Animal biology, zoology and cell biology	43	0	75	7	0	0	0	125
Feed plant biology and toxic plants	34	0	60	6	0	0	0	100
Biomedical statistics	26	0	45	4	0	0	0	75
Anatomy, histology and embryology	189	0	330	15	16	0	0	550
Physiology	138	7	240	13	0	2	0	400
Biochemistry	112	0	195	18	0	0	0	325
General and molecular genetics	70	0	114	16	0	0	0	200
Pharmacology, pharmacy and pharmacotherapy	54	16	72	8	0	0	0	150
Pathology	72	0	96	32	0	0	0	200
Toxicology	36	8	48	8	0	0	0	100
Parasitology	81	0	108	36	0	0	0	225
Microbiology	25	0	40	10	0	0	0	75
Immunology	20	0	20	10	0	0	0	50
Epidemiology	18	0	24	8	0	0	0	50
Professional communication	0	0	0	0	0	0	0	0
Professional ethics	0	0	0	0	0	0	0	0
Animal ethology	18	0	30	8	0	0	0	56
Animal welfare	27	0	36	4	0	8	0	75
Animal nutrition	81	0	108	36	0	0	0	225
	1113	**31**	**1761**	**250**	**16**	**10**	**0**	**3181**
CLINICAL SCIENCES	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Obstetrics, reproduction and reproductive disorders	112	0	135	2	17,5	33,5	0	300
Diagnostic pathology	162	0	207	5	41	76	0	491
Medicine and surgery including anaesthesiology	107	0	111	0	14,5	42,5	0	275
Clinical practical training in all common domestic animal species	0	0	0	0	0	362,5	0	362,5
Preventive medicine	27	0	36	6	3	3	0	75
Diagnostic imaging	74	0	99	0	11	25	0	209
State veterinary services and public health	9	0	12	1	33,25	1	0	56,25
Veterinary legislation, forensic medicine and certification	0	0	0	0	0	0	0	0
Therapy in all common domestic animal species	0	0	0	0	0	0	0	0
Propaedeutics of all common domestic animal species	126	0	168	0	22	34	0	350
	617	**0**	**768**	**14**	**42,25**	**577,5**	**0**	

ANIMAL PRODUCTION	A	B	C	D	E	F	G	H
Animal Production and breeding	18	0	24	8	93,75	0	0	143,75
Economics	17	0	30	3	0	0	0	50
Animal husbandry	45	0	60	20	143,75	0	0	268,75
Herd health management	72	0	96	13	44,25	31	0	256,25
	152	**0**	**210**	**44**	**281,75**	**31**	**0**	
FOOD SAFETY AND QUALITY	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Inspection and control of food and feed	32	5	37,5	8,5	0	0	0	83
Food hygiene and food microbiology	45	0	50	20	0	0	0	115
Practical work in places for slaughtering and food processing plants	32	5	100	8,5	0	0	0	145,5
Food technology including analytical chemistry	27	0	0	12	0	0	0	39
	136	**10**	**137,5**	**49**	**0**	**0**	**0**	**382,5**
PROFESSIONAL KNOWLEDGE	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Professional ethics & behaviour	3,5	0	0	0	0	0	0	3,5
Veterinary legislation	58	0	0	0	4,5	8	0	70,5
Veterinary certification and report writing	4,5	0	0	6	0	0	0	10,5
Communication skills	0	0	0	32	0	25	0	57
Practice management & business	20	3	0	0	0	0	0	23
Information literacy & data management	1,5	0	0	6	0	0	0	7,5
	87,5	**3**	**0**	**44**	**4,5**	**33**	**0**	**172**

Table 3.1.3 Curriculum hours taken in electives for each student.
A B C D E F G H. A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: total

2017-2018 AY	A	B	C	D	E	F	G	H
Basic Sciences	0	50	0	50	0	0	0	100
Clinical Sciences	0	0	0	0	0	690	0	690
Animal Production	0	50	0	0	50	0	0	50
Food Safety and Quality	0	25	0	0	0	0	0	25
Professional Knowledge	0	0	0	0	0	25	0	25

Table 3.1.4 Curriculum days of External Practical Training (EPT) for each student

SUBJECTS	MINIMUM DURATION (WEEKS)	YEAR OF PROGRAMME
Production animals (pre-clinical)	2	5
Companion animals (pre-clinical)	0	-
Production animals (clinical)	2	5
Companion animals (clinical)	0	-
FSQ & VPH	2	5
Others	-	-

Table 3.1.5 Clinical rotations under academic staff supervision (excluding EPT)

TYPES	LIST OF CLINICAL ROTATIONS (DISCIPLINES/SPECIES)	DURATION (HOURS/ WEEKS)	YEAR OF PROGRAMME
INTRA-MURAL (VTH AND AZD)			
Internal Medicine	Laboratory Diagnostic	7h/student	Y3/2nd sem
	Special Pathology and Internal Medicine I	24h/student	Y4/1st sem
	Professional Practical Training	3w/student	Y5/2nd sem
Surgery	SA and LA Semeiotics and surgical pathology	7h/student	Y3/2nd sem
	Semeiotics and surgical pathology (including Veterinary Radiology & Nuclear Medicine)	18h/student	Y4/1st sem
	SA and LA Clinical Surgery I (including Anaesthesiology and Imaging)	19h/student	Y4/2nd sem
	SA and LA Clinical surgery II (including orthopaedic, emergency surgery)	30.5h/student	Y5/1st sem
	Professional Practical Training: SA LA	(4w/student) 1 w/student 2 w/student	Y5th/2nd sem
Obstetrics & Gynecology	Veterinary Obstetrics & Gynaecology I (including Artificial insemination, Andrology and Neonatology)	21h/student	Y4/2nd sem
	Veterinary Obstetrics & Gynecology II (including Imaging in Veterinary Gynaecology and Obstetrics)	21.5h/student	Y5/1st sem
	Professional Practical Training	1.5 w/student	Y5 /2nd sem
Advanced Red Week	Emergency service	1w (25h)/student	Y4/2nd sem
Laboratory Diagnostic	Infectious diseases	8h/student	Y3/2nd sem
	Pathological Anatomy II	4h/student	
	Pathological Anatomy III	9h/student	Y4/1st sem
	Avian pathology	4h/student	Y4/2nd sem
FSQ & VPH			
	Food Inspection and Certification of Meat and Production Units	10h/student	Y4/1st sem

Electives	Emergency service	1w(25h)/student	Y4/2nd sem
Others (specify)			
	*Pathological Anatomy	1/2* (50h/ student)	Y4/1st sem Y4/2nd sem
	Parasitology	1w (25h)/student	Y4/2nd sem
	°Health indicators for animal welfare	4h/student	Y4/2nd sem
Internship	Internal Medicine	No <	
	Surgery	No <	
	Obstetric	No <	
INTRA-MURAL CLINICAL ROTATIONS			
Ambulatory clinics	Food-producing animals Internal Medicine, Surgery and Breeding	1w(25h)/student 1w(25h)/student	Y4/1st sem Y4/2nd sem

*Up to 2016-17 AY, students were involved for 2 weeks (5 h/day: 2 days during Y4/1st semester, 3 days during Y4/2nd semester and 5 days during 4Y summer shift). Currently, they are involved for 1 week (10 h/day) from 8 am to 6 pm (4Y/2nd sem).
°from 2017-2018 AY

Table 3.1.6 Optional courses proposed to students (not compulsory).
A B C D E F G H. A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: to

2017-2018 ACADEMIC YEAR - SUBJECTS	A	B	C	D	E	F	G	H
5TH YEAR								
1	Management of electronic databases	3		3				



4.

FACILITIES AND EQUIPMENT


SIGILLVM GENERALE CIVITATIS TRAIECTI
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4.1 Factual information

4.1.1 DESCRIPTION OF THE LOCATION AND ORGANISATION OF THE FACILITIES USED FOR THE VETERINARY CURRICULUM

The DVM is located on a 5-hectare hillside site close to the historical centre of Perugia and to the freeway E45. The DVM includes 5 Poles: Main building (Old Building – Building A), VTH (Building B), Teaching Pole (Building C), Administrative Pole, and the Food Science & Technology and Nutrition building (Building D). The first 4 poles are in proximity, while Building D is housed on the opposite side of the road from the main campus.

In the same area, the following institutions may also be found: Department of Agricultural, Food and Environmental Sciences, Istituto Zooprofilattico Sperimentale of Umbria and Marche (IZS), Food Science & Technology and Nutrition Department, the Botanical Garden, as well as the student's residence (Agrarian Dormitory) and canteen.

The DVM also includes a Teaching Farm (AZD) located in Sant'Angelo di Celle (PG), 15 km away. In addition, the University of Perugia through the Foundation of Agriculture Education (Fondazione per l'Istruzione Agraria), provides additional farms for extra-mural teaching activities:

- Casalina (18 km away), with a bovine farm
- St. Apollinare (20 km away) with a bovine farm
- Vestricciano (5 km away) with rabbit and poultry enclosures (see Appendix 3.9).

The students may easily walk to reach the DVM from the surrounding housing area. A bus stop is located 100 meters from the main building providing a direct public connection with local bus routes.

Table 4.1.1 DVM building and facilities (for the detailed maps see Appendix 3)

BUILDING	SURFACE (SQM)/ N° FLOORS	FACILITIES
Main building (Building A)	7,600 / 5	**Basement floor.** University Centre of Electronic Microscopy of the University, Biochemistry and proteomic Unit, students' lockers, 3 teaching labs, labs related to the VTH (see later). **Ground floor.** Reception, offices and meeting rooms/library of Obstetrics & Gynaecology, Surgery & Radiodiagnostic Units, Basic Anatomy dissection room, kitchen and rest room for students and staff. **First floor.** Auditorium, offices, meeting rooms/library and related didactic labs of Microbiology & Infectious Diseases Service, Anatomy, Pharmacology, Nutrition & Genetic Units. **Second floor.** Offices, meeting rooms and related labs/ library of Pathology, Physiology Units. **Third floor.** Offices, meeting room and related labs of the Parasitology Service, Laboratory of Ethology and Animal Welfare (LEBA)
Veterinary Teaching Hospital (VTH) (Building B)	4,000 / 3	**Basement floor.** Warehouse and garage, students' bedrooms and changing rooms, wild animals premises (ongoing implementation). **Ground floor.** Front desk, clinical services (Obstetrics, LA Surgery, Internal Medicine, Emergency service, Imaging Diagnostic) including shelters and stables, farriery room, medical staff eating area and kitchen, two bedrooms. (Future implementation: SA isolation, central pharmacy chemotherapy premises). **Vocabolo Pilo.** Four stables for ruminants **First floor.** SA Surgery and related kennels, 4 Haematology labs.
Food Science & Technology and Nutrition (Building D)	465 / 3	**Basement floor.** 5 labs, 1 laundry **Ground floor.** Auditorium and 2 labs **First floor.** Offices, meeting room and library, 3 labs
Cloister and garden	2,500	Resting zone with benches and meadow

Parking areas	2,004 645 617 745	Main Building VTH + Vocabolo Pilo Teaching Pole Food Science & Technology and Nutrition

4.1.2 DESCRIPTION (PLACE, NAME, SURFACE, EQUIPMENT) OF THE PREMISES FOR: -) LECTURING AND GROUP WORK (SEMINARS, TUTORIALS)

Table 4.1.2 Premise for lecturing and group work.

LECTURING			
NAME	**SURFACE (SQM)**	**PLACES**	**EQUIPMENT***
Room I	66	48	AA, C
Room II	113	100	AA/C/FV/ OP
Room III	114	100	AA/AC
Room IV	67	14	AC/C
Room V	113	123	AA/AC/C/MS/OP
Room VI	58	63	AA/AC/C/OP/V
Room VIII	58	15	AC/C/ microscopes
Room IX	60	56	AA/AC/C/OP/V
Room Barboni	205	176	AA/V/MS
Auditorium	147	156	AA/AC/C/P
Auditorium Food Science & Technology and Nutrition	185	216	AA/C
GROUP WORK°			
Beghelli room 3.0	80	40	2 Interactive whiteboards 20 tablets
CARREL room	14	6	----------

*All classrooms have Wi-Fi coverage, Wheelchair accessibility and primary media devices (PC, beamer, screen), additional equipment is reported: AA: audio amplification system, AC: air conditioning, C: Chalkboard, FV: film viewer, MS: motorized screen, OP: overhead projector, P: printer, V: VHS
°Almost every Unit provides a meeting room with wi-fi available for staff members, or for student group work activities.

-) practical work (laboratories, rooms for clinical skills, room with dummies)

The DVM accounts for several rooms dedicated to the practical training of multiple disciplines. As for clinical activities, teachers reserve a suitable room of his/her VTH Unit according to subject and needs, including hands-on home-made dummies (see Standard 5). On the contrary, specific work on dummies for anatomy purposes is performed in Room IX. Practical surgical activities are also carried out by simulation on organs or cadavers in selected rooms of the VTH (e.g. dissection rooms, former LA surgery room).

Table 4.1.3 Premises for practical work

PREMISES (SQM/N°PLACES)	EQUIPMENT	LOCATION
BUILDING A		
Teaching Lab 1 (39.5/18)	1 counter, 6 optic microscopes (1 with incorporated digital camera), 1 computer + screen, 1 TV LCD on the wall connected to the central microscope	Basement floor
Teaching Lab 2 (20.5/12)	1 counter, 1 pH meter, 1 thermostat bath, 1 analytic scale, 1 spectrophotometer	
Teaching Lab 3 (30.5/14)	1 counter, 1 centrifuge, 1 vortex, 1 electrophoresis vertical and horizontal	
Infectious disease Lab: Bacteriology Unit 1 (28/5) Bacteriology Unit 2 (23.5/5)	1 hood for biological risk, counters, centrifuge, deep freezer -80, thermostats and refrigerators, microscopes	
Biochemistry Lab: Clinical biochemistry Unit (24.5/3) Proteomic Unit (22/5) Cellular biochemistry Unit (12/2)	2 counters, 2 centrifuges, 1 HPLC, 1 spectrophotometer, 1 ultrasonic bath sonicator, 1 chemical hood	
	2 counters, 1 analytical balance, 3 Tilting shakers, Electrophoresis devices, 1 isoelectrophocusing, 1 thermomixer, 1 mini centrifuge, 1 thermostatic bath	
	1 counter, 1 analytical balance, 1 cell CO_2 incubator, 1 centrifuge, 1 ELISA device, 1 laminar flow hood, 1 ultrasonic probe Sonicator	
Basic Anatomy Room (57.5/10)	3 small tables, dissection instruments, 1 refrigerator room	Ground floor
Pharmacology and toxicology Lab (43/12)	Counters, washbasins, 1 Double-sided agitator, 1 Refrigerant centrifuge, 1 Bench top and 1 field microcentrifuge, 2 VORTEX, 1 Magnetic stirrer, 2 pH meters, 1 Sonicator, 2 Two rotating evaporation systems, 1 Ultrasound bath, 1 thermostatic bath, 1 Technical scale, 1 Analytical balance, 1 OSTERIZER homogeniser, 2 ULTRATURRAX homogenisers HPLC system with autosampler, Fluorimeter and diode array, UV cabinet, 1 analytical grade II analyser, well freezer and a glassware washer.	First floor
Internal medicine teaching lab (27/5)	Biochemical machinery (FUJIFILM DRI-CHEM 4000), Blood count machine (ANIMAL BLOOD COUNTER SCIL), Centrifuge, 2 desks, 1 computer, 6 microscopes	
Hematology and clinical chemistry lab: Blood bank (15/4)	Blood bank refrigerator, Refrigerator, 1 deep freezer (-30 ° C), 1 freezer (-4 ° C)	
Hematology lab (42/5)	2 desks, 2 computers, Centrifuge (NEYA 8), Blood count machine (SYSMEX XT-1800i), Staining machine with May Grunwald Giemsa method (AEROSPRAY SLIDE STAINER), 2 cabinets, Workbench, Cytospin Machinery (CELLSPIN I THARMAC), Microscope, Urine analysis machine (URITEK TC-101 TECO DIAGNOSTIC USA), 1 washbasin	
Clinical chemistry Unit 1 (23/3)	Biochemical machine (HITACHI AUTOMATIC ANALYSER 904), 1 desk, 2 computers, 1 sink, Electrophoresis and electrophoresis plate staining machine (HYDRASYS LC), Electrophoresis plate reading machine (EPSON PERFECTION V700 PHOTO), Electrolyte measuring machine (I-SMART 30 VET), Refrigerator	

Clinical chemistry Unit 2 (21.5/3)	1 computer & screen, Microscope, Chemical hood, 1 work table, 1 refrigerator	
Molecular biology Lab 1 (74/5)	2 hoods for biological risk, 1 counter, thermostats and refrigerators 2 chemical hoods, 4 thermocirculator centrifuges, Electrophoresis devices, image collector and transilluminator	
Molecular biology Lab 2 (32/5)		
Infectious disease Lab: Virology Unit (39.5/3)		
Basic Anatomy teaching room (42/25)	13 tables, 40 chairs, 12 microscopes, Skeletons and limbs phantom	
Histology, electronic microscopy and image analysis Lab: Electronic microscopy and images analysis Unit (22/3)	Ultramicrotome, Fluorescence photomicroscopes, Optical microscope, Bench-top chemical hood, Heating plate, Heating plate with magnetic stirrer, Cutting-blades for glass, Vibroslice microtome, Computer, Digital color printer, cabinet and furniture, Chairs / Stools, Tables / counters, Sink, Bunsen burner	
Histology, histochemistry and immunohistochemistry Unit (39/5)	2 counters, thermostatic incubator, microwave, analytic scales, pHmeter, stereoscopy, microscope, refrigerator/deep freezer, chemical hood secuflow, Heather for paraffin	
Cell bio-morphology Unit (20/2)	BSC Class II biological hood, Refrigerated counter centrifuge, Vortex, Incubator, Deep-Freezer, Fridge, Inverted microscope, Tables / counters, Cabinets	
Animal Feed Analysis Lab: Chromatography Unit (21.5/6)	2 counters, Furnishings (2 desks, 2 cabinets and 3 wall units), Computers, Analytical scale, 1 stove Anaerobic hood Thermo Forma, Atomic absorption spectrometer Varian	
Chemical analysis Unit (12/4)	1 counter, Furnishings (2 shelf tables, 1 hanging cabinet), Chemical hood, Homogenizer for pbi hay, Cyclotec pbi, Muffle, Soxtec system pbi, Soxhlet, Digestion system pbi, Fibertec system, Kjltec system pbi, 3 heating magnetic plates, Analytical scale	
Biotechnology Lab (14.5/2)	3 counters, Furnishings, Horizontal laminar flow hood, Osmometers, CO_2 incubators, Centrifuge, Microscope	
Teaching lab: clinical analyses (36/8)	4 counters, 1 hanging cabinet, Chemical hood, Acid-base cabinet, Rotavapor, Spectrophotometer Varian, Microscope, HPLC, Gas Chromatograph, Computers, 1 heating magnetic plate, pH-meter -80 freezer	
Teaching room animal productions (29.5/25)	2 tables with seats, 1 desk, Furnishings with teaching material and library, 1 computer	
Veterinary Pathology: Teaching Lab (78.5/48)	Screen and beamer, computer, blackboard	Second floor
Teaching Lab (17.5/15)	10-head microscope, digital camera and connected screen	
Anatomo-Histopathology lab: Histopathology & Neuropathology unit 1 (38/4)	Counters, 2 sliding microtomes, 1 histology cold plate, 1 thermostatic bath, 1 refrigerator (+4°C), 1 histology slide drying oven, 1 flammable cabinet, 1 laboratory fume hood, 1 automatic staining workstation, 1 computer and screen	

Histopathology & Neuropathology unit 2 (23.5/2)	1 counter, 1 laboratory fume hood for trimming, 1 automatic tissue processor, 1 laboratory fume hood, 1 tissue embedding workstation, 1 formalin storage cabinet, 1 acid/base storage cabinet, 1 flammable cabinet	
Immunohistochemistry unit (22.5/4)	1 counter, 1 laboratory fume hood, 1 acid/base storage cabinet, 1 refrigerator (+4°C), 1 freezer (-20°C), 1 microwave oven, 1 thermostatic bath, 1 magnetic stirrer (hot plate), 1 vortex, 1 table top centrifuge, 1 mini centrifuge, 1 microscope, 1 analytical balance,1 pH meter, 1 drying oven	
Physiology lab: RIA unit (22.5/3)	Electrophoresis power supply, Trans sidelight, Digi Doc Bio Rad, Thermo Fisher Scientific centrifuge, Vortex velp, Minicentrifuge (n° 2), Thermostat	
Physiologic biotechnologies unit (45/4)	2 MiniSpin Eppendorf (n ° 2), Multi Spin 12 (No. 2), Stuart spinner, Real Time PCR Step One Plu Bio Rads Applied Biosystem, Real Time PCR iCycler, Dlab Thermoblock, Biosan centrifuge	
Parasitology lab: Teaching room (75/24)	1 counter, 4 optical microscopes, 1 stereomicroscope, 1 video projector, 1 overhead projector, 1 cabinet with macroscopic preparations of helminths and arthropods for educational purposes	Third floor
Entomologic Diagnostic Unit (23.5/3)	1 counter, 1 optical microscope, 1 stereomicroscope, 1 deep freezer	
Serology/mycology Diagnostic Unit (27.5/5)	1 double counter, 1 optical microscope, 1 image acquisition system connected to a 1 fluorescence optical microscope server, 1 refrigerator, 3 freezers, 1 thermostat for serological reactions, 1 thermostat for mycology, 1 laminar flow hood, 1 centrifuge, 2 magnetic stirrers, 1 microcentrifuge, 1 pH meter, 1 vortex, 1 bain-marie, 1 stirrer for ELISA plates	
Diagnostic coprological unit (23.5/4)	2 counters, 3 optical microscopes, 1 centrifuge, 1 centrifuge for ELISA, 1 refrigerator/freezer, 1 thermostat, 1 electronic scale, 1 magnetic stirrer	
Molecular diagnostic Unit (23.5/4)	Chemical hood, UV hood, Water bath, Thermal block, Microwave oven, Trans sidelight, Image collector cycler, Spectrophotometer, n. 2 chambers for electrophoretic run, Precision balance, Microcentrifuge, Refrigerator, Horizontal deep-freezer, 2 workbenches, Vortex	
Physiology Lab: Ethology and Animal welfare Unit (LEBA 1) (18.6/2) Ethology and animal welfare unit (LEBA 2) (27/4)	Furnitures and desks, 2 computers, 2 cameras, 2 video cameras, Videorecorder, Libraries	
BUILDING D		
Bacteriology unit (44/6) Media preparation lab (22/3) Histology unit (20.5/3) Technology lab (22/3) Pilot plant (25/6)	Counters, 5 thermostats, water bath, stomacher, microscope, microwave, scale Counters, hood, stirrer, scale Cryostat Seasoning cell Cold room, 2 deep freezer -80, counters, cutter, food filler, cabinets	Basement Floor
Molecular biology unit (22.5/5)	Hood, refrigerator, thermal cycler, counters	Ground floor

Didactic room (44/16) Teaching lab (45.5/16) Chemistry 1 unit (42.5/10) Chemistry 2 unit (23/4)	Hood and library Tables, furniture, centrifuge, gas chromatograph kjeldal, thermostat, oven, acids and bases cabinet, anti-burst cabinets, hood	Second floor
TEACHING POLE		
Pathological Anatomy dissection room (124/20)	6 tables (including a large table and 5 small tables) 1 digital camera, 1 rotating blade saw, 1 band bone-saw, 1 electric saw for slaughter, 1 vapor cleaner machine, dissection instruments, 1 refrigerator room	Ground floor
Room IV (computer) (67/14)	14 computers & screens, 1 beamer, 1 multifunctional printer, 1 overhead projector	First floor
Room VIII (microscopes) (58/30)	30 optical microscopes, 1 optical microscope with digital camera, 4 screen/TV for real time images projection, 1 overhead projector	Second floor
Dummies Lab (Room IX) (60/56)	chicken, pig, bovine, sheep, equine limbs, reproductive tract for stallion, bull and cow, two fetuses in uterus	

4.1.3 DESCRIPTION OF THE PREMISES FOR HOUSING:

Table 4.1.3 Premises for animal housing (number, size, species)

PREMISES	N°	AREA (SQM)
HEALTHY ANIMALS		
Horse fenced area with shed (DVM) Horse paddocks (DVM)	1 4	38,400 100
Horse stalls (AZD) Horse paddocks (AZD)	2 2	97.5 2,100
Sand ring	1	69.5
Rubber ring	1	76.5
Corridor for lameness evaluation	1	65
Small ruminant stall (AZD) Small ruminant paddocks (AZD)	1 6	570 5,233
Cow stalls (DVM) Cow stalls (AZD) Bovine paddocks	1 1 4	100 570 591
Pig sheds (AZD) Pig outdoor sheds	1 4	82.5 345.5
Total	**30**	**48,400,5**
HOSPITALIZED ANIMALS		
Equines hospitalization	1/12	101.7
Equines intensive care area (equipped with video cameras for remote control)	1/3 (with possible partition mare/foal)	36
Small animal hospitalization: Cats ward	2/10 (7 VTH, 3 surgery)	11 (VTH) 19 (surgery)

Small animal hospitalization: Dogs ward	3/26 (15 VTH, 4 obstetric, 7 surgery)	40 (VTH) 19 (surgery) 10 (obstetric)
Small animal intensive care	1/7	22.5
Wild animals	1/3	21.5
Exotics animals ward	1/3	11
Ruminants hospitalization	1/4	100
Pigs hospitalization	1/3 (up to 10 animals for research purposes)	30
Total	**12/71**	**421.7**
ISOLATED ANIMALS		
Equine	1/2	32.5
Small ruminants	1/3	25.5
Bovines	1/2	28
Small animals	1/14	16.5
Total	**4/21**	**102.5**

4.1.4 DESCRIPTION (NUMBER, SIZE, EQUIPMENT, SPECIES, DISCIPLINES) OF THE PREMISES FOR:

Basic equipment such as table, cabinet for drugs and/or materials for first treatment or diagnostic samples, is available in each room dedicated to clinical activities (diagnostic or consultation). For ancillary diagnostic instruments see Table 4.1.7.

Table 4.1.4 Premises for clinical activities, diagnostic services, FSQ & VPH, and others.

a) Clinical activities

	N°	AREA (SQM)	SPECIES	TEACHING ACTIVITIES
FRONT OFFICE AREA				
First opinion consultation rooms	3	47.5	Companion animals	Companion animal clinics, "rotazioni cliniche", basic red week, advanced red week
First opinion consultation room	1	11	Exotic pets, small wild animals	Companion animal clinics, basic red week, advanced red week
Intensive Care Small Animal	1	22.5	Companion animals	Companion animal clinics, basic red week, advanced red week, PPT
Consultation rooms	2	59.5	Equine	Large animal clinics, basic red week, advanced red week, Clinical rotations, PTT
INTERNAL MEDICINE UNIT				
Specialty consultation rooms	2	44	Companion animals	Basic red week, advanced red week, "rotazioni cliniche", companion animal clinics, PTT

Ethology and Animal Welfare Lab (LEBA)	1	18.6	Companion animals	Animal Ethology and Welfare
OBSTETRICS AND GYNECOLOGY UNIT				
Consultation room	1	13.5	Companion animals	Obstetrics & gynecology and andrological practical activities, "rotazioni cliniche" PTT (Emergency Service)
Room for artificial insemination	1	16	Companion animals	
Surgery rooms	1 (1)	10 (8)	Companion animals (Companion Animals / Exotics)	
Unit of assisted reproduction 2 (AZD)	1	12.5	Large Animals	
SURGERY UNIT				
Ophthalmology and otolaryngology	1	22.5	Companion animals	Surgery subjects including anesthesiology, "rotazioni cliniche", PTT
Surgical consultation room	1	26.5	Companion animals	
Treatment and wound dressing room	1	12	Companion animals	
Anesthesia preparation room	1	10.5	Companion animals	
Surgery rooms	3	60	Companion animals	
Anesthesia & recovery boxes	2	20	Equines and large animals	Surgery subjects including anesthesiology, "rotazioni cliniche", PTT
Surgery rooms	2	69.5	Equines and large animals	
Farrier room	1	37	Equines	
Total	**27**	**521.1**		

b) Diagnostic services

SERVICE	N°	AREA (SQM)	SPECIES	DISCIPLINES
Radiology room	1	17	Companion animals, exotics	Imaging diagnostic Surgery subjects "rotazioni cliniche" PTT
Radiology and ultrasound room	1	38	Large animals	
CT room	1	34.5	Multispecies	
X-Ray processing visualization room	1	8.5	Multispecies	
Ultrasonography room for Reproductive performance	1	16	Companion animals	Obstetrics & gynecology and andrology subjects "rotazioni cliniche" PTT
Cytology Lab for reproduction	1	7	Companion animals	
Ultrasonography/Cardiology	1	24.5	Companion animals	Internal medicine subjects "rotazioni cliniche" PTT
Dermatology/Endocrinology	1	19.5		
Endoscopy room	2	25	Companion animals	
Haematology	1	14	Multispecies	
Hematology, clinical biochemistry and clinical cytology Lab	4	101.5	Multispecies	
Necropsy room	1	124	Multispecies	Pathology disciplines
Histopathology and neuropathology labs	2	61.5	Multispecies	

Immunohistochemistry lab	1	22.5	Multispecies	
Bacteriology and virology labs	3	91	Multispecies	Infectious disease and microbiology subjects
Clinical Veterinary Biochemistry Lab	1	24.5	Multispecies	Chemistry and Biochemistry disciplines
Parasitology & Mycology labs	4	98	Multispecies	Parasitology disciplines
Total	**27**	**722**		

The diagnostic services of the DVM are used either for clinical and teaching purposes.
Additional services are given for specific National Certifications:
1. Diagnosis of hip and elbow dysplasia;
2. Diagnostic Control of Dog and Cat Cardiopathies for the National Observatory;
3.Health assessment of the equine assigned to reproduction for Warmblood, Thoroughbred, Standard-bred, Anglo-Arab, Arabian Horse;
4. Processing and updating genetic indexes for the Italian Sport horse;
5. Italian Stallion approval on the Stud-Book sBs.

c) FSQ & VPH (slaughterhouse, foodstuff processing units)

	PREMISES
SLAUGHTERHOUSE	Municipal Slaughterhouse of Ponte S. Giovanni (8 km from DVM). Species: bovine/solipeds (40/30 bovine/solpeds/hour), Pigs: 90 swine/hour, Small ruminants: 80 sheep/goats/hour.
FOODSTUFF PROCESSING UNITS	As above

4.1.5 DESCRIPTION OF THE PREMISES FOR STUDY AND SELF-LEARNING, CATERING, LOCKER ROOMS, ACCOMMODATION FOR ON-CALL STUDENTS, LEISURE

PREMISE	BRIEF DESCRIPTION
Study and self learning*	The DVM provides 5 study and self-learning premises for 42 places for individual learning
Catering	The DVM provides 4 vending machine points located at the Teaching Pole, the Main Building, the VTH Front Desk and the third floor of the main building (Veterinary Pathology Service). An additional eating area with a kitchen is available on the ground floor of the main building.
Locker rooms (/n° lockers)	VTH Basement floor: 3/86 VTH Ground floor - LA surgery (2) VTH First floor VTH- SA surgery (1/11) Basement floor of the main building (1/24) Basic Anatomy room: (1) Pathologic Anatomy room (1/40) At FSQ & VPH: 1/30 lockers with 1 shower AZD: (1)
Accommodation for on call students	At the VTH: 2 rest rooms with 2 and 4 beds, respectively, 6 toilets and 8 showers. At the AZD: 2 rest rooms with 2 beds each, 3 toilets and 2 showers.
Leisure	The DVM provides outdoor spaces equipped with benches, tables and gazebos. The University provides additional leisures: - sports facilities (CUS) (https://www.cusperugia.it). -7 infrastructures spaces, for study and cultural aggregation (www.unipg.it/servizi/spazi-di-aggregazione-e-studio-in-autogestione-sasa) - cultural activities and special services provided by ADISU (Agency for the Right to University Studies of Umbria) (www.adisu.umbria.it).

* Numerous premises for study and self-learning is available in all Units.

4.1.6 DESCRIPTION OF THE VEHICLES USED FOR:

Students transportation and Ambulatory clinics	1 Renault Trafic (6 seats) 1 Opel Vivaro (6 seats)
Live animals transportation	none
Cadavers and organs transportation	1 Giotti Victoria - Gladiator + forklift Still R20-16 1 Fiat Fiorino (2 seats) 1 Fiat Doblo (2 seats)

4.1.7 DESCRIPTION OF THE EQUIPMENT USED FOR TEACHING PURPOSES & CLINICAL SERVICES.
TEACHING PURPOSES:

All classrooms have appropriate audio-visual equipment, and the necessary software, blackboards, Internet connection for video conferences and/or streaming meetings.

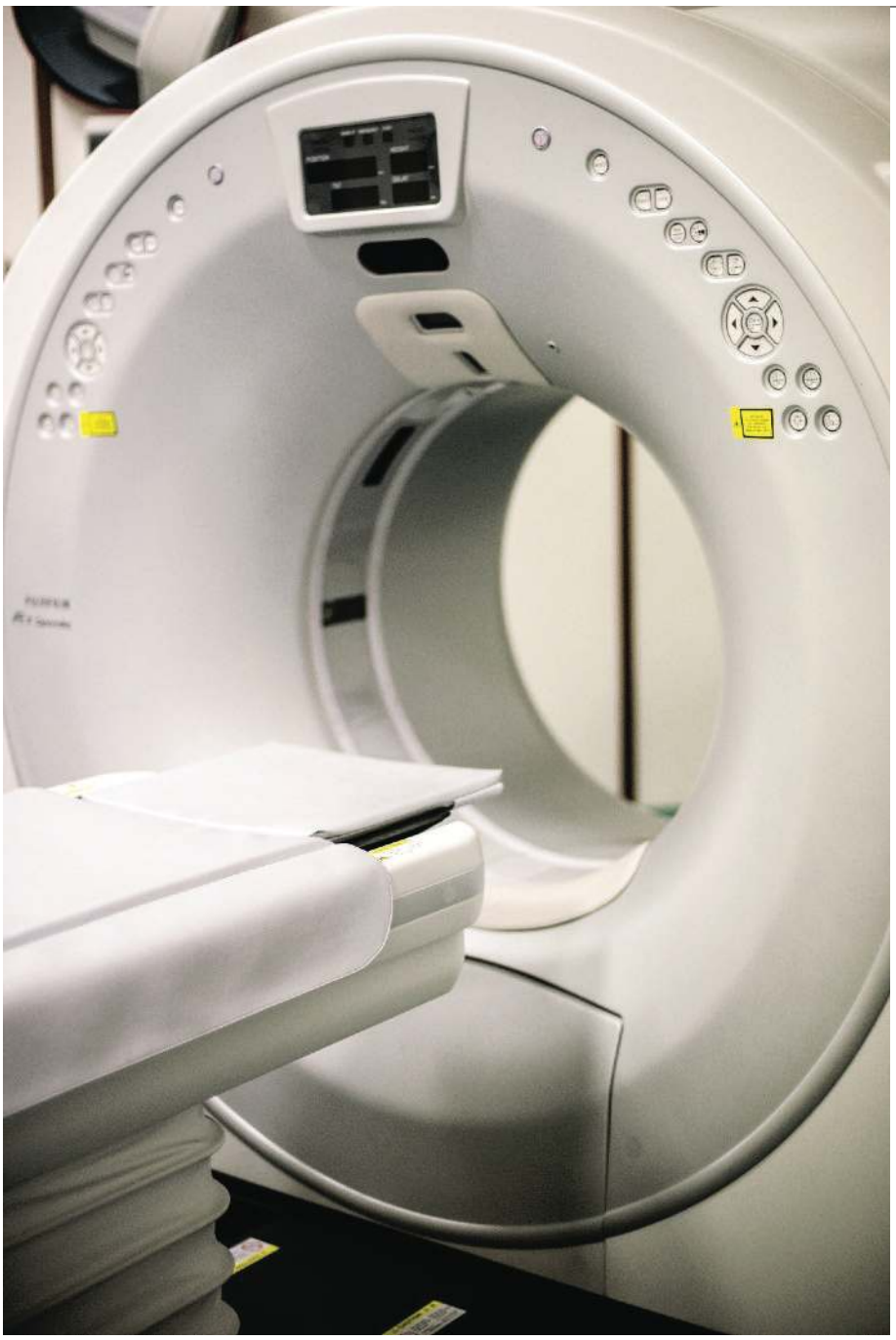
All the equipment available in the VTH has a dual purpose and is used both in teaching and clinical services. Students attending clinical rotations in the different Units use rooms and tables for examination of animals, operating rooms and instruments for surgical procedures, as well as microscopes for diagnostic purposes (for details see Table 4.1.2b, 4.1.4, and 4.1.7). Most of the rooms used for clinical/diagnostic/surgical purposes are equipped with a large screen on the wall aimed to facilitate the visualisation of the procedures by a group of students and possible recording for further teaching use.

The Surgery, Internal Medicine and Obstetrics Units are provided with standard equipment for routine diagnostic examination and surgery, state-of-the-art endoscopy equipment, implant systems for fracture fixation, including fluoroscopy, and ultrasound machines.

Table 4.1.7 Clinical services – specialised equipment used in clinical services (internal medicine, surgery, obstetrics):

LIST OF ESSENTIAL EQUIPMENT USED FOR CLINICAL SERVICES	N°
Computed Tomography (Fujifilm SCT Speedia)	1
X-ray apparatus	2
Portable X-ray apparatus	1
Digital acquisition system: CR (Fujifilm) DR (Fujifilm)	 1 1
Potter-bucky diaphragm (radiology)	1
FluoroScan	1
Ultrasound apparatus	10
Electrocardiograph device	4
Anaesthetic workstation	10
Anaesthetic workstation with ventilator	5
Oxygen concentrator	3
Cardiorespiratory monitor	9
Portable monitor: pulsoxymeter + ECG (Mindray) pulsoxymeter + capnograph (Mindray)	 2 2
Defibrillator (Schiller)	1
Surgical microscope (Moeller-Wedel)	1
Portable surgical vacuum cleaner Centralized vacuum system	5 2

Infusion syringe pumps	11
Peristaltic pumps	20
Surgical oscillating saw	2
Surgical drilling air and electrical	3
Hip replacement system	1
Video-assisted surgical equipment for arthroscopy, thoracoscopy, laparoscopy, hysteroscopy	3
Ophthalmo/Oto-scope set (Welch Allin) Loupes (Keeler) Fissure lamp (Keeler & Shin Nippon) Tonopen (Reichart) TonoVet Tonometer Schioetz Phacoemulsification system (Bausch & Lomb Millenium) Ocular Computer Tomographic Scan (OCT EnFace) Electro Retinography (EBN)	3 1 2 1 1 1 1 1 1
Otoscope set (Welch Allin) Video Otoscope (FireFly) Otoscope videoendoscope set (Storz) Potentials evokes response recorder (Amplaid)	1 1 1 1
Electromyography (EBN)	1
Pneumatic Burr for neurosurgery (Synthes)	1
Pneumatic Burr for arthroscopy (Dyonix)	1
Vessel sealing device (Ligasure - WalleyLab))	1
Electrocautery system	5
Diode laser surgery device (Mediclase)	1
Dynamic respiratory endoscopy for horses	1
Video Endoscope tower	4
Portable endoscope	1
Treadmill	1
Autoclave	2
Surgical tables	7
Clippers	15
Incubator nursery (Atom Fisher & Paykel)	2
Portable milking machine	1
Portable Bloodgas analyzer	1
Refractometer	3
Microcentrifuge	5
Rapid lactate measure device	2
Rapid glucose measure device	4



4.1.8 DESCRIPTION OF THE STRATEGY AND PROGRAMME FOR MAINTAINING AND UPGRADING THE CURRENT FACILITIES AND EQUIPMENT AND/OR ACQUIRING NEW ONES.

Essential maintaining and upgrading of the current laboratory and VTH equipment are planned, decided and economically sustained by each Unit. On the contrary, the Establishment supports the acquisition (see Standard 2), based on budget availability and DB reported priority, of expensive equipment used in multidisciplinary contexts, that contributes to the improvement of teaching, research and clinical activities.

Since 2017, part of the Annual Funds for Basic Research assigned by the University is devolved to the purchase of equipment for multidisciplinary use.

4.1.9 DESCRIPTION OF HOW AND BY WHOM CHANGES IN FACILITIES, EQUIPMENT AND BIOSECURITY PROCEDURES ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED.

Concerning main changes and improvements in facilities, the coordinators in charge of each Unit are called upon to contribute to the production of a 3-Year Request Document based on needs assessment. The document is produced by the Head and sent to the Development, Building and Security Area of the University.

As for biosecurity facilities, equipment and procedures (see Standard 11), the University Security Office is officially appointed to periodically produce a risk analysis for the DVM (sse Appendix 6.10). Consequently, it is communicated to the DC and published on the website. First-year students are aware of potential risks, and risk prevention. They attend and follow specific mandatory training. The remaining students are updated on security procedures as per publishing on UniStudium (see Standard 11).

Academic and support staffs are similarly trained in biosecurity procedures and attend specific courses. Based on formal risk analysis, any Unit updating facilities and equipment are dependent upon budget availability (see 4.1.8). For major updating and implementation of biosecurity procedures, specific actions are requested through the University Security Office.

Removal of bio-sanitary wastes and hazardous chemicals is due by the University.

The DVM Delegate for Security plays a vital role in revising and implementing facilities, equipment and biosecurity procedures in collaboration with the Security Office. Academic and support staffs take part in this process through personal or Unit complaints and requests.

4.2 Comments

The location of the Establishment facilitates access by car for clients coming from both outside and inside the city. Moreover, its position makes finding accommodation, first necessities and general services easy for students.

Owners of large animals who wish to leave their van may do so in a parking area at Vocabolo Pilo. However, the limited space availability negatively hampers functionality and future expansive projects of the DVM.

In the last 10 years, economical issues as well as recent earthquakes that have struck Central Italy, have all contributed to the delay of renovations and implementation of premises and facilities. The merging of previous departments into the current DVM has undoubtedly contributed to optimise, and share premises and equipment.

Since the merge, a number of facilities have been renovated and improved, or introduced (2 LA Surgical Rooms, the Equine Intensive Care Unit, the pig and equine hospitalization for experimental research purposes, the Obstetrics & Gynaecology Unit, recreation premises for students and VTH staff, Laboratory of Stem cell culture, stables for hospitalized small and large ruminants (Vocabolo Pilo).

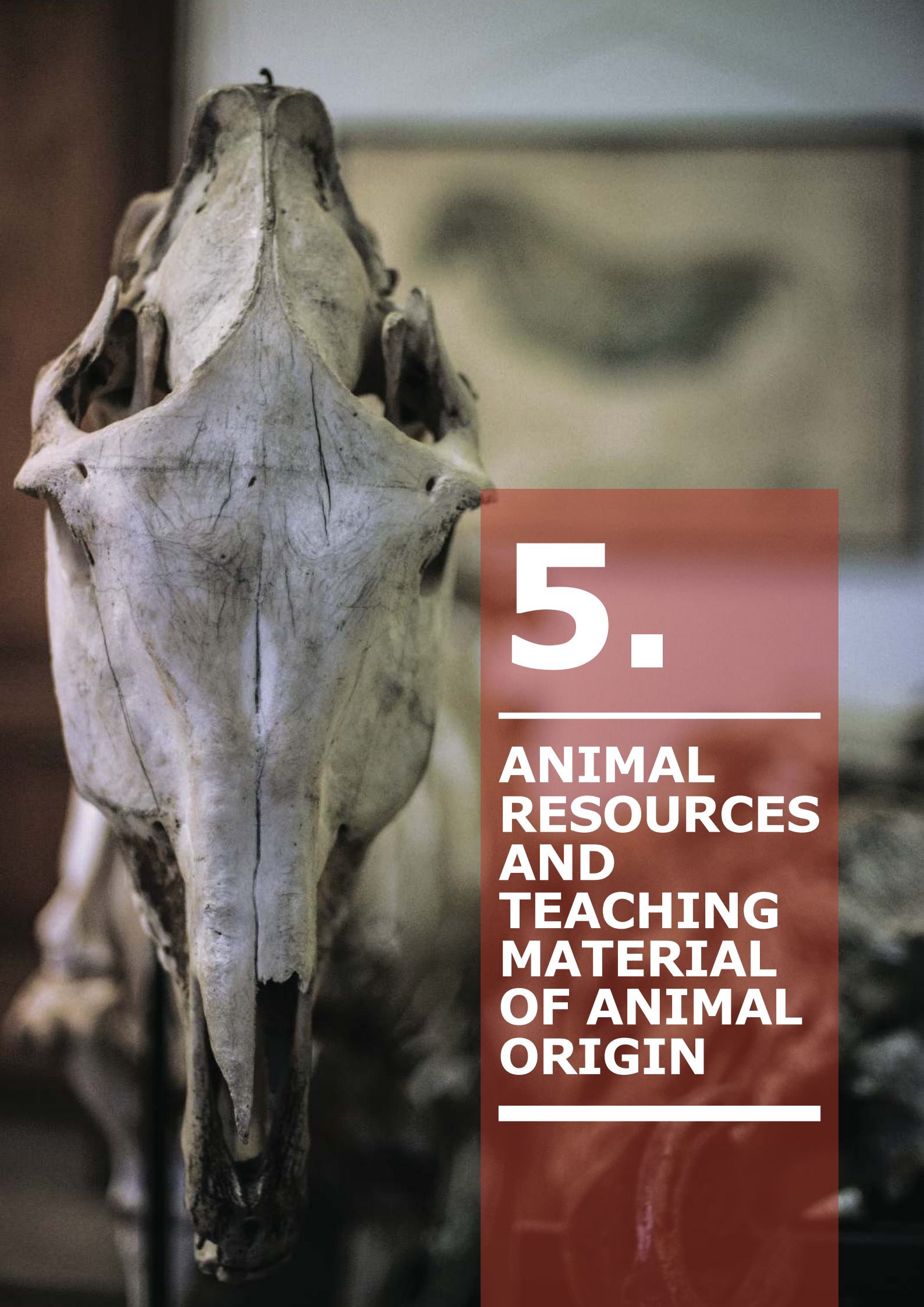
For some identified facilities, DVM has obtained renovating projects financed by the University, which will start shortly (see Appendix 3.8).

A vaster laboratory (Molecular Biology Lab) was funded for shared use in genetic and biomolecular technologies.

Complete compliance with all legislation on health, safety and biosecurity is partially impeded due to the fact that the majority of facilities are situated in the old building and therefore regulated by historical building rules.

4.3 Suggestions for improvement

- Vehicles for student transportation and Ambulatory Clinics should be implemented and differentiated
- We still lack adequacy for live animal transportation
- Stables for hospitalised small and large ruminants at Vocabolo Pilo should be renovated and improved
- SA Surgery Unit should be renovated in accordance with security standards
- The Molecular Biology Lab should be implemented.
- Recreation facilities for students and DVM staff could still be improved. However, students can have access to recreation activities and facilities in the vicinities of DVM.
- A more obvious strategy and programme for maintaining and upgrading buildings and equipment should be considered.



5.

ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN


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5.1 Factual information

5.1.1 DESCRIPTION OF THE GLOBAL STRATEGY OF THE ESTABLISHMENT ABOUT THE USE OF ANIMALS AND MATERIAL OF ANIMAL ORIGIN FOR THE ACQUISITION BY EACH STUDENT OF DAY ONE COMPETENCES

Based on the official curriculum of the DC approved by DG, the primary goal of the DVM is to provide an adequate and active hands-on preclinical and clinical training to students so that Day One Competencies may be acquired. In this context, the presence of a 24/7 emergency service (ES) in OVUD and close collaborations with public facilities (IZS, USL) represents, without a doubt, a stable outset for our strategy. It aims to maintain regular clinical activities providing a range of professional aspects, increasing the number of animals and materials of animal origin and providing a balance among different species.

To assure the availability of animals and material of animal origin for teaching, in the past years the global strategy has been to develop the following actions:

1. **To increase OVUD services and specialities.** To date, OVUD provides approximately 30 services with some including more specific tests and investigations opened to external practitioners and stakeholders (see Timetable of VTH Services below). This action has been supported by the engagement of practitioners, in some cases having a recognised, specific clinical profile.
2. The takeover of the teaching farm AZD
3. **To define agreements with several farms and practitioners**, as EPT providers and temporary academic staff working at VTH or Ambulatory Clinics.

More specifically, for core practical activity, the collection of animals or materials of animal origin is provided as follows:

Preclinical training. The DVM renews and increases the number of agreements with external public facilities (e.g. IZS, slaughterhouse) and collaborations with practitioners. To provide preclinical training planned during Green Week activities and various subjects (i.e. Anatomy, Physiology, Animal Production, Toxicology, Parasitology and Infectious disease), AZD remains the primary source dedicated to pre-clinical activities on ruminants and pigs.

Casalina (130 bovines), Vestricciano (130 rabbits, 100 chickens) and St. Apollinare (90 bovines) of the University of Perugia, contribute to assure food-producing animals.

2. **Clinical training.** OVUD remains the primary source of small animals and horses for clinical training. In the past years, clinical training is equally guaranteed on exotic, wild and food-producing animals owing to specific services opened in the VTH supported by agreements with expert practitioners and public institutions (USL) as well as the essential support of the Umbria Region. The OVUD provides continuous activities also based on 24/7 ES, which has increased both the first-opinion and referral caseload. AZD remains a vital source dedicated to clinical training on ruminants and pigs in association with some private farms for Ambulatory Clinics and EPT. To this intent, the DVM has engaged 3 practitioners with a multidisciplinary clinical profile thus enabling an integrated training in Large Animal Internal Medicine, Surgery and Reproduction. Moreover, agreements with 7 practitioners support the activation of EPT on food-producing animals.

Materials of animal origin. Some teachers provide animal cadavers or tissues in order to practice surgical knot applications, diagnostic injections, bone fracture reductions, Xray scans, videofluoroscopies or ultrasound scans. In addition, the DVM supplies laminated pelvic and forelimb bones for dysplasia evaluation. Moreover, individual teachers independently and according to need, make animal dummies to simulate clinical procedures such as intravenous access, cardiopulmonary resuscitation, cardiac massage, tracheal otube insertion for small animal emergency service and critical care.

Animal dummies. The DVM provides laminated models of pig, sheep, bovine, horse, and poultry for teaching Anatomy. Laminated models of the reproductive tract for stallion, bull and cow, two foetuses in uterus are also available. An extensive series of bones and animal skeletons are accessible and used for osteology training by students.

5.1.2 DESCRIPTION OF THE SPECIFIC STRATEGY OF THE ESTABLISHMENT IN ORDER TO ENSURE THAT EACH STUDENT RECEIVES THE RELEVANT CORE CLINICAL TRAINING BEFORE GRADUATION, E.G. NUMBERS OF PATIENTS EXAMINED/ TREATED BY EACH STUDENT, BALANCE BETWEEN SPECIES, BALANCE BETWEEN CLINICAL DISCIPLINES, BALANCE BETWEEN FIRST OPINION AND REFERRAL CASES, BALANCE BETWEEN ACUTE AND CHRONIC CASES, BALANCE BETWEEN CONSULTATIONS (ONE-DAY CLINIC) AND HOSPITALIZATIONS, BALANCE BETWEEN INDIVIDUAL MEDICINE AND POPULATION MEDICINE

Practical activities and clinical training on material of animal origin are stated by the official curriculum of the DVM. The organisation is planned and discussed within the PDC, DCC and DVMC based on specific requests brought forth by training supervisors and students in accordance with primary goals of the DC (see Standard 5.1.1). Strategies to assure a patient caseload sufficient for teaching are then achieved by the OVUD Management Committee (MC) and each specific VTH service.

Number of patients examined/treated by each student. The PDC and DVMC guarantee that students receive adequate practical training

and acquire clinical Day One Competencies, through client portfolio or agreements with public (IZS, USL, slaughterhouse, public kennels) or private facilities (farms, practitioners, clinics).

To date, the number of intra-mural cases is adequate to warrant a core practical activity for small animals and horses (see ESEVT Indicators). AZD, extra-mural activities and EPT assure core clinical training in food-producing animals.

Balance between species. The primary expertise of clinical activities performed at OVUD concern conventional companion animals including the horse. Nevertheless, in the past years, the OVUD has introduced an exotic and wild animal service as well as a food-producing animal service resulting in incrementing the range of species available for teaching. Regarding food-producing species, the vast range of collaborations and agreements with farms and practitioners has contributed to a favourable balance among species for use in core clinical training.

Balance between clinical disciplines. OVUD guarantees a right balance between clinical disciplines due to the high number of activated services, some of them in collaboration with agreed specialised practitioners. The full capacity 24/7 emergency service is also essential in providing a more professional application for teaching and clinical core for each student. Percentages of emergency service account for about 20%, 30%, and 6%, for canine, feline and equine total caseload, respectively. As expected, clinical training referred to food-producing animals is oriented in reproductive and metabolic aspects more than surgery and emergency affections.

Balance between first opinion and referral cases. Regarding the Internal Medicine Service, about 60% of small and 100% exotic animals are referred as first-opinion cases, respectively, hence allowing adequate training in clinical approaches of the most common diseases at the beginning of the diagnostic procedure. As for the Small Animal Surgery Service, about 90-95% of small animals are referred as first-opinion cases, hence allowing adequate training in the surgery caseload for the most common diseases, from the beginning of the diagnostic procedure.

With regards to the specialised Services, the average of referred cases from practitioners is about 45% of the total caseload, mainly including Hematology, Gastroenterology, Cardiology, Dermatology, Ophthalmology, Odontostomatology, Reproduction, Diagnostic procedures (Ultrasonography, Radiology, Endoscopy, Endocrinology and Histopathology).

Caseload on Equine Medicine and Surgery Service is almost entirely of first opinion (90%). For this service, 35% - 40% of cases are represented by emergencies; generally, they require surgery and subsequent hospitalisation, thus allowing students to take part, on a daily basis, in therapy administration and follow-up evaluation. A range from 65% to 85% of food-producing animals is submitted to the OVUD as first opinion patients generally dedicated to teaching.

Balance between acute and chronic cases differs significantly depending on animal species. For small animals, the percentage of chronic cases is higher than in acute cases, accounting for about 60%. Central chronic diseases include arthropathies, endocrine dysfunctions, skin diseases, cardiac deficits, respiratory, renal, hepatic, gastroenteric diseases and chronic infectious diseases.

Conversely, prevalent acute diseases submitted to ES include colics, bone fractures, thoracic and abdominal trauma, gastric torsion, intestinal volvulus, dystocia, cesarean section, poisoning, neonatal diseases and acute infectious diseases. As for the equine clinic, almost 40% of the caseload consists of acute diseases.

Balance between consultations (one-day clinic) and hospitalisations. With regard to the balance between **consultations** (one-day clinic) and **hospitalisations**, 80% of small animals are attended to in daily consultations and 20% in hospitalisation. Diversely, 90% of horses necessitate hospitalisation.

A balance between **individual medicine and population medicine** (management, infectious diseases, nutrition) is close to being guaranteed for food-producing animals. As for companion animals, approximately 80% rely on individual medicine while 20% rely on clinical activities (see National Certification in Timetable VTH Service).

5.1.3 DESCRIPTION OF THE ORGANISATION AND MANAGEMENT OF THE TEACHING FARM(S) AND THE INVOLVEMENT OF STUDENTS IN ITS RUNNING (E.G. BIRTHS, MILKING, FEEDING, …)

The teaching Farm (AZD) of DVM is located 15 km away from the Department and consists in cowsheds, sheepfolds, pigpens and stables. It is managed by the DVM Head and supported by the Management Committee. They guarantee hygiene, animal welfare and bioethic-rules application, organise and coordinate the use of services and facilities for teaching and research as well as define the Financial Plan. Finances are administered directly by the DVM Administrative staff. A specific Health Committee, elected by the AZD MC, organises all health actions (see AZD Guidelines – Appendix 4.2).

Students performing Green weeks (Year 1/2ndS and Year 2/2ndS), ambulatory clinics (Y4), preclinical activities, Rotazioni Cliniche and PPT on food-producing animals are involved in AZD activities under the supervision of academic staff.

Sheep Unit. AZD provides a small ruminant stall and five paddocks for sheep for an annual estimated total of 52 ewes, 30 lambs, and 5 rams.

Swine Unit. AZD provides 5 indoor sheds and 4 outdoor sheds for pigs. At present, pigs total 3



sows and relative piglets (currently 10), and 1 boar.

Bovine Unit. AZD provides 1 stall and 4 bovine paddocks for a total of 19 Marchigiana beef cows and 9 calves.

Equine Unit. AZD provides 2 horse stalls and 3 horse paddocks for a total of 4 mares and 1 stallion.

During practical training, students from different years perform clinical procedures, handling techniques, evaluate behaviour, feeding and welfare, vaccinations, estrus detection pregnancy diagnosis and monitoring, piglet orchiectomy, farrowing assistance, insemination, good breeding practices in addition to neonatal first care and assistance. Furthermore, they carry out milking and udder hygiene, growth and body condition evaluation, feet management, hay evaluation, simulation of artificial insemination, breeding soundness evaluation, semen collection, diagnostic procedures analysis, therapy administration, blood collection and parasitic examination.

Casalina provides 130 Italian Friesians with relative calves. Students from different years are involved both in preclinical and extra-mural clinical activities under the supervision of a practitioner or teacher. They evaluate animal behaviour, estrus detection, feeding and welfare. In addition, they perform handling techniques, blood sample collection, simulation of artificial insemination, pregnancy diagnosis, calving assistance and first neonatal care.

Vestricciano supplies approximately 130 rabbits and 100 chickens. Students attending dedicated elective subjects on rabbit livestock train in the evaluation of the estrus cycle, semen sampling and evaluation, artificial insemination, pregnancy diagnosis, body condition score evaluation, venous catheter application and blood sampling.

St. Apollinare provides 80 bovines. It mainly supports preclinical and zootechnical activities.

Additional external farms and facilities contribute to completing training in food-producing animals owing to agreements with the Establishment (see Appendix 6.3).

5.1.4 DESCRIPTION OF THE ORGANISATION AND MANAGEMENT OF THE VTH AND AMBULATORY CLINICS (OPENING HOURS AND DAYS, ON-DUTY AND ON-CALL SERVICES, GENERAL CONSULTATIONS, LIST OF SPECIALISED CONSULTATIONS, HOSPITALISATIONS, EMERGENCIES AND INTENSIVE CARE)

All activities performed at the OVUD represent an outstanding opportunity for students to develop practical and clinical training with companion animals, horses, exotic and food-producing animals (see Timetable of VTH Services).

General consultations take place during working days from 8:30 to 13:00 and from 15:00 to 17:00. In case of necessity, animals are addressed to a specialised consultation service. Animals requiring **hospitalisation** are directed to a specific ordinary or intensive care service.

Opening hours and days. OVUD is open to the public on a 24/7 schedule. In addition to daytime and working ambulatory clinics, it furnishes the Emergency Service.

Opening hours of the OVUD are from 8:30 to 13:00. and from 15:00 to 17:00, from Monday to Friday. Outside regular working hours, animals are admitted to the 24/7 Emergency Service.

On-duty and on-call services.
Three Units manage the Small Animal Services: Internal Medicine, Obstetrics and Gynecology, and Surgery (see Standard 4). During regular opening hours, incoming patients are firstly evaluated by

students, which report history and perform a general physical evaluation under the supervision of the academic staff. Then, the patient is referred to the required Service for diagnostic evaluations and treatment progression.

Food-producing animal Unit. Food producing animals are managed by 7 dedicated academic staff members covering internal medicine, surgery and obstetric services. This Unit works on a 24/7 schedule.

Equine Unit. Managed by 12 dedicated academic staff members covering all the reported services.

EMERGENCY SERVICE

During the emergency service, clinical activities are performed by the on-duty academic staff members in charge of clinical emergencies. In case of necessity, ES involves an on-call surgeon/anaesthetist/specialists.

Each ES team for small animals includes 2 academic staff members, supported by 2 on-call specialists. For **Equine ES**, 4 on-duty academic staff members are involved, supported by 8 on-call specialists. 1-2 internship students, 1-2 students attending PPT, and voluntary post-graduate students generally support each ES unit.

5.1.5 DESCRIPTION OF HOW THE CADAVERS AND MATERIAL OF ANIMAL ORIGIN FOR TRAINING IN ANATOMY AND PATHOLOGY ARE OBTAINED, STORED AND DESTROYED

Anatomy. Fresh viscera are generally used for practical training in Anatomy. Food-producing animal viscera derive mainly from the local slaughterhouse. Normal organs from dogs, cats and horses come from dead animals from the OVUD previously submitted to authorised dissection, are also used.

Chickens, rabbits and hares are collected from private farms. Dead animals and fresh materials of animal origin are collected once a week during teaching activities and stored in a freezing room (+4°C) located in the anatomical classroom (Old Building). Students examine this material under academic staff supervision.

The Normal Anatomy Unit provides several complete skeletons of main domestic animals along with isolated bones. As for myology, dry preparations of joints and muscles are also available.

Practical training in anatomical subjects is also carried out on histologic slides. A slide cabinet stores about 2.000 slides for teaching purposes.

Students may examine this material alone or under academic staff supervision in a special microscope room equipped with 30 microscopes plus 1 connected to a full-screen TV (Teaching Pole).

Pathology. On the subject of Pathology training, carcasses of small animals and horses come from the OVUD and private veterinary facilities, as well as from owners for diagnostic purposes.

For food-producing animals, viscera are collected from the local slaughterhouse (mainly bovine and swine) once a week during teaching activities and stored in a freezing room (+4°C) located in the Pathologic Anatomy dissection room (Teaching Pole) until use during pathology training. They have accounted for 2,685 Kg in 2015-2016 AY, 2,385 Kg in 2016-2017 AY, and 2,010 Kg in 2017-2018 AY. Periodically, dog and cat cadavers are collected from private clinics and frozen (-20°C) for teaching purposes.

Cadavers used for pathology training come from different sources:

- Dead animals hospitalised in OVUD, for which owners required a necropsy

- Dead animals from practitioners, veterinary clinics or farms as referred cases for diagnostic and teaching purposes

- Dead animals referred by the owners for diagnostic purposes

- Dead avian and rabbits from farms for diagnostic and teaching demands

- Wild mammals sent from the conventionalised USL

- Dead animals addressed to IZS, which allows students to participate in necropsies under the supervision of academic staff

- Fieldwork necropsies performed at farms.

An authorised private company (Umbra Service SRL SS 3 Flaminia Km 158 – 06034 Foligno Perugia) paid by the University adequately provides the disposal of cadavers and viscera every week, upon request.

The Service of Veterinary Pathology provides a vast array of over 200,000 histologic slides obtained from necropsies and biopsy samples. This stored material is available to students through an electronic system (Filemaker since 2005, SIO-VUD since 2017) and may be used for any teaching purpose.

5.1.6 DESCRIPTION OF THE GROUP SIZE FOR THE DIFFERENT TYPES OF CLINICAL TRAINING (BOTH INTRA-MURALLY AND EXTRA-MURALLY)

Students are divided into groups of different sizes based on the type of clinical work.

"Rotazioni cliniche" and professional practical training (PPT) in companion animals and equine patients are carried out exclusively as intra-mural activities at the OVUD (except for Erasmus students). "Rotazioni cliniche" and PPT on food-producing animals are carried out both intra-murally and extra-murally, at the AZD or university and private farms, respectively, under the supervision of academic staff. The student groups rotate in different clinical services hence preventing overlapping. Furthermore, according to teaching demands, each student group may be further divided.

Ambulatory clinics involve 12 teams with 6 students each, working 5 consecutive days in extramural clinical work on food-producing animals through on-call services by farmers or food-producing animal practitioners.

Due to the significantly decreased number of students enrolled in the past AYs, group size for PPT has tended to be a maximum of 5 units.

CLINICAL ROTATION SERVICES	NO. OF GROUPS WORKING SIMULTANEOUSLY IN THE SAME ACTIVITY	NO. STUDENTS-TO-TEACHER (AND PER CLINICAL CASE, IF APPROPRIATE)
Clinical rotation	1/3	max 6:1
Ambulatory Clinic	1	max 6:1
Red weeks	1/2	max 4:1
Pathology training	1	max 6:1
Parasitology training	1	max 6:1
Professional Practical training	1/2	max 5:1

5.1.7 DESCRIPTION OF THE HANDS-ON INVOLVEMENT OF STUDENTS IN CLINICAL PROCEDURES IN THE DIFFERENT SPECIES, I.E. CLINICAL EXAMINATION, DIAGNOSTIC TESTS, BLOOD SAMPLING, TREATMENT, NURSING AND CRITICAL CARE, ANESTHESIA, ROUTINE SURGERY, EUTHANASIA, NECROPSY, REPORT WRITING, CLIENT COMMUNICATION, BIOSECURITY PROCEDURES, (BOTH INTRA-MURALLY AND EXTRA-MURALLY)

The academic staff involves all the students in the different clinical procedures carried out both in the OVUD and extra-murally.

They consist of:

- Acquiring recent and remote history
- Performing complete and particular physical examinations, including gastroenteric, neurologic, orthopaedic, lameness, genital tract, and ophthalmologic exams, depending on the clinical case
- Evaluating body condition and welfare status in food-producing animals
- Producing lists of clinical diseases, differential diagnoses, treatment protocols, and preventive approaches
- Communicating with the owner
- Providing diagnostic procedures such as fine-needle aspiration cytology, blood and urine sample collection, skin scraping, electrocardiogram, coprological examination, estrous detection by colpocytology, progesterone assay
- Assisting in diagnostic and therapeutic procedures, such as endoscopic protocols, ultrasounds, radiology, skin biopsies, drug administration, euthanasia, semen analysis
- Writing medical reports
- Performing different therapeutic procedures such as placement of IV catheters, fluid therapy, drug administration via different routes, placement of urinary catheters, wound cleaning, and post-surgical care monitoring
- Appling biosecurity procedures
- Participation in surgery preparation (surgical material, room and patient)
- Spaying and neutering
- Performing basic surgery
- Suturing surgical wounds
- Evaluating pre-anaesthesia status
- Participating in the choice of anaesthetic protocol, administering anaesthetics (IM or IV route, monitoring anaesthesia, and assisting in the recovery of the anaesthetic patient
- Carrying out necropsies and associated reports, discussing macroscopic findings and determining relationships with the clinical and histological findings.
- Performing rectal palpations in horse and bovine
- Performing basic reproductive procedures in large animals such as oestrous detection and monitoring by ultrasound, semen collection and evaluation, oestrous manipulation, pregnancy diagnosis, calving, lambing and kidding assistance
- Applying mastitis control protocols in ruminant dairy farms.

(see Logbook, Appendix 6.1a)

5.1.8 DESCRIPTION OF THE PROCEDURES USED TO ALLOW THE STUDENTS TO SPEND EXTENDED PERIODS IN DISCUSSION, THINKING AND READING TO DEEPEN THEIR UNDERSTANDING OF THE CASE AND ITS MANAGEMENT

Generally, at the beginning of each daily clinical activity, the supervising academic staff members in various activities, briefly expose the history of both the hospitalised patients and the appointed cases. Together with the students, they discuss

and plan different diagnostic and therapeutic procedures — some teachers supply lecture notes or scientific papers for case management. Similarly, students are expected to discuss the case and planned diagnostic, as well as the therapeutic approaches decided upon. At the end of each "rotazione clinica", students singularly, or in groups, select and describe a report concerning a case/group of animals that have attended directly. This work method validates students' acquired abilities in active participation. In addition, competencies in critically assessing and discussing signs and differential diagnoses, based on information available through SIOVUD Software and literature are evidenced as well.

As regards to necropsy procedures, students have carcasses and slaughterhouse organs available and perform the routine procedure of autopsy, under the supervision of the academic staff. For viscera, students are invited in an extensive discussion of a diagnostic algorithm for basic lesions in order to define a morphological diagnosis and name of disease when possible. For necropsy cases, students are advised on history, differential diagnoses, diagnostic procedures and therapies performed before death. Then they discuss and report the gross lesions observed during necropsy, providing the suspected diagnosis. They are also called upon to compare gross lesions and reports with histological findings or, vice versa, the histological findings and gross lesions and the clinical case reported in the SIOVUD. Finally, they conclude the case by discussing potential etiopathogenesis of the abnormal features. Selected papers, given by the academic staff, contribute to deepen their understanding and to enrich the discussion.

5.1.9 DESCRIPTION OF THE PATIENT RECORD SYSTEM AND HOW IT IS USED TO EFFICIENTLY SUPPORT THE TEACHING, RESEARCH, AND SERVICE PROGRAMMES OF THE ESTABLISHMENT

Since August 2017, the Establishment has adopted a new electronic record system software SIOVUD, that includes all the services operating in OVUD. SIOVUD collects medical data, estimates billing and prescriptions. It is available to both the academic staff and students, through personal credentials (username and password), and runs on numerous PCs located in the administration pole and all clinical and diagnostic services of the VTH. The electronic system provides a Medical area, a Teaching area and a Research area. The first, consists in a medical archive collecting data referred to each clinical case; the second area, is accessible to students who may consult clinical cards and cases, study and deepen any clinical case of interest, and undertake research activities. The third area is reserved for more specific research objectives, but at present, is still inactive.

Furthermore, each patient has a hand-written clinical record, where additional case information, not previously recorded in the SIOVUD, is promptly accessible.

5.1.10 DESCRIPTION OF THE PROCEDURES DEVELOPED TO ENSURE THE WELFARE OF ANIMALS USED FOR EDUCATIONAL AND RESEARCH ACTIVITIES

All preclinical and clinical activities are performed on privately owned animals through the application of the owner's signed informed consent (UE 2016/679). The latter allows the academic staff of the DVM to use any data reported in SIOVUD for research purposes as well.

For clinical activities, all staff working at the OVUD must respect the European Code for the Right Veterinary Practices, which includes rules on animal welfare (FNOVI, January 29, 2005)(Appendix 6.10.2). In case of experimental research on animals, the academic staff must observe the most recent Italian law (DL 2014, n. 26) related to the European Directive 2010/63/UE regarding the Protection of Animals used for Scientific Purposes.

5.1.11 DESCRIPTION OF HOW AND BY WHO THE NUMBER AND VARIETY OF ANIMALS AND MATERIAL OF ANIMAL ORIGIN FOR PRECLINICAL AND CLINICAL TRAINING, AND THE CLINICAL SERVICES PROVIDED BY THE ESTABLISHMENT ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

Teachers involved in preclinical and clinical subjects define, in the Syllabus, the primary skills that need to be attained as well as the methods to do so. In planning the preclinical and clinical practical activities, the number and variety of animals and material of animal origin needed to achieve the established learning outcomes are also identified by them. This information is published on the DVM website and UniStudium platform (www.unistudium.unipg.it). In fact, in the past AYs, the PDC and ESEVT standard Committee (ESC) have contributed significantly in defining, more specifically, the number and variety of animals and material of animal origin, for preclinical and clinical training. In case of insufficient clinical cases and material of animal origin, specific requests and proposals are discussed in the ESC, PDC and then, in the DCC and DVMC to find solutions and/or financial support so as to meet teaching objectives. In a few cases, deficiencies are expressed by students through the evaluation reports (see Standard 11 and Appendix 6.1d). Based on requests, actions for service implementations are called upon the OVUD MC. The DVMC remains the official organ which finally approves and communicates to the staff, students, and stakeholders the actions planned to implement, assess or revise the number of clinical cases and material of animal origin. Furthermore, stakeholders are informed during the planned meetings with the LTRC.

5.2 Comments

Based on the official curricula of the Degree Course approved by the Didactic Guidelines, the main objective of the DVM is to provide an adequate and active hands-on preclinical and clinical training for undergraduate students, assuring the attainment of efficient and effective Day One Competencies. The fixed number of students per group is 6 and 10 for clinical and practical activities, respectively. This group organisation has increased the need for animals and material of animal origin. Subsequently, the DVM global strategy involves regular clinical practice and a 24/7 emergency service at the OVUD on main domestic and non-domestic species as well as activation of several agreements with external public and private facilities and farms. In fact, to replace and reduce the use of animals, some academic staff members assemble homemade dummies for practical training needs.

As of the last AY, the Establishment has extended clinical training in food-producing animals by increasing the number of animals attended to both intra-murally and extra-murally, and with the additional introduction of EPT. The DVM has also added several agreements with practitioners working on bovines, small ruminants and pigs.

As for animals submitted to pathology and dissection, the influx is not constant, and the required number is not always guaranteed. Regarding small animals, the extended absence of specific rules and procedures in processing dead animals in the OVUD has contributed to the loss of valuable cases. The EU 2016/679 on informed consent became of law on 25 May 2018. Concerning food-producing animals, they are brought directly to IZS rather than DVM. IZS is a National Health Service, and provides a broad panel of free diagnostic approaches for disease detection. However, close collaboration with the IZS Establishment contributes to guarantee a sufficient number of food-producing animal necropsies for students. Additionally, a considerable amount of materials of animal origin (viscera) come from the local slaughterhouse.

5.3 Suggestions for improvement

To provide adequate animal resources and teaching material of animal origin for each student, regular and active clinical service in OVUD, including 24/7 ES, is essential. Concurrently, it is crucial to monitor the caseload and quality service by SIOVUD regularly and the customer satisfaction model, respectively, for improvements in future actions.

As for food-producing animals, the specific clinical service at VTH should be implemented, but we do not expect exceptional data in the future since individual medicine for these species is comparatively neglected. Diversely, to notably increase the food-producing animal caseload, the DVM is investing on the AZD premises and facilities for intra-mural activities, and in practitioner relationships for extra-mural and EPT. To support the high potentiality of AZD, the Establishment should invest far more in terms of technical staff and FFO.

In the matter of dissection material of small animals, we expect that the adoption of the updated informed consent will empower owners on the learning utility of dead animals thus providing a regular flow of dead animals for teaching purposes.

Relating to the dissection of food-producing animals, in the past years, the DVM has relied on collaborations with the IZS and will continue to benefit from them. In addition, the newly introduced high-level Master in Health and Production Management of Ovine and Caprine Breeding is an excellent opportunity to sensitise, and attract more clinical cases and dead animals to DVM dissection activities both from regional flocks and farms.

Timetable of the OVUD Services

UNIT	SERVICE	SPECIALITY	DAYS/ WEEK	OPENING HOURS	WEEKS/ YEAR
Small Animals	Internal Medicine	Blood Bank and Haemotransfusion Centre	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Haematology and Oncohaematology	Mon.- Fri.	9.00-12.00/ 15.30-17.00	52
	Reproduction	Small animal reproduction	Mon.- Fri.	8.30-17.00	52
	Surgery	Pain therapy (STAPA)	Weds.	11.30-16.00	52
		Anaesthesia and analgesia (SAAPA)	Weds.	8.30-15.00	52
		Orthopaedics and Traumatology	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Thoracic surgery (SECHTO) and upper airways	Tues.	8.30-14.00	52

		Ondotostomatolgy	Tues.- Fri.	9.00-12.30/ 15.30-17.00	52
		Neurosurgery	Tues.- Fri.	9.00-12.30/ 15.30-17.00	52
		Ophtalmology	Tues.- Fri.	9.00-12.30/ 15.30-17.00	52
		Audiometry	Tues.- Fri.	9.00-12.30/ 15.30-17.00	52
Exotic Animal		Exotic Animal Therapy	Mon.- Fri.	9.00-17.00	52
Equine	Surgery	Emergency, intensive care and equine neonatology	Mon.- Sun.	24/7	52
		Equine Ophtalmology	Mon.- Fri.	8.30-17.00	52
		Equine orthopaedics and image diagnostic	Mon.- Fri.	8.30-17.00	52
		Equine gastroenterology and laparoscopy	Mon.- Fri.	8.30-17.00	52
		Equine Diagnostic and surgery of airways	Mon.- Fri.	8.30-17.00	52
		Equine and food producing animals orthopaedic surgery	Mon.- Fri.	8.30-17.00	52
		Equine, food producing animals and non conventional animals anaesthesia	Mon.- Fri.	8.30-17.00	52
Food-producing animals	Reproduction	Food-producing animals obstetrics and andrological clinics	Mon.- Fri.	8.30-13.00/ 15.00-17.00	52
	Clinical services	Food-producing animal therapy	Mon.- Fri.	8.30-13.00/ 15.00-17.00	52
Centralized Services		Emergency Service	Mon.- Sun	24/7	52
		Clinical Pathology: Haematology, Clinical Biochemistry and cytology	Mon.- Fri.	8.30-13.00/ 15.00-17.00	52
		Veterinary Pathology	Mon.- Fri.	11.00-13.00 / 14.30-16.30	52
		Veterinary Parasitology	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Nutrition and animal feeding	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Veterinary Infectious Diseases	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Ethology and Animal Welfare	Mon.- Fri.	9.00-13.30	52
		Veterinary Phisiology (Endocrinology)	Mon.- Fri.	9.00-13.30/ 15.00-18.00	52
		Veterinary clinical Biochemistry	Mon.- Fri.	9.00-13.30	52
		Small and Large animal Flexible Endoscopy, Pneumology and Gastroenterology	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52
		Cardiology and Ultrasonography	Mon.- Fri.	9.00-12.30/ 15.30-17.00	52

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

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Horses				
Complete skeleton	1	1	1	1
Specimens	1 tongue and larynx 1 lung 1 heart 1 stomach 1 liver 1 spleen 1 kidney 1 genital	1 tongue and larynx 1 lung 1 heart 1 stomach 1 liver 1 spleen 1 kidney 1 genital	1 tongue and larynx 1 lung 1 heart 1 stomach 1 liver 1 spleen 1 kidney 1 genital	1 tongue and larynx 1 lung 1 heart 1 stomach 1 liver 1 spleen 1 kidney 1 genital
Pigs				
Cadavers	4	4	4	4
Specimens	4 tongues and larynges 10 lungs 10 hearts 4 stomachs 10 livers 4 spleens 10 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 4 stomachs 10 livers 4 spleens 10 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 4 stomachs 10 livers 4 spleens 10 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 4 stomachs 10 livers 4 spleens 10 kidneys 10 genitals
Anatomical model	1	1	1	1
Small ruminants				
Complete skeleton	1	1	1	1
Specimens	4 tongues and larynges 10 lungs 10 hearts 8 stomachs 10 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 stomachs 10 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 stomachs 10 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 stomachs 10 livers 4 spleens 8 kidneys 10 genitals
Anatomical model	1	1	1	1
Cattle				
Complete skeleton	1	1	1	1
Specimens	4 tongues and larynges 10 lungs 10 hearts 8 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 livers 4 spleens 8 kidneys 10 genitals	4 tongues and larynges 10 lungs 10 hearts 8 livers 4 spleens 8 kidneys 10 genitals
Anatomical model	1	1	1	1
Carnivores				
Complete skeleton	1	1	1	1
Cadavers	4	4	4	4
Anatomical model	1	1	1	1
Poultry				
Cadavers	40	40	40	40
Anatomical model	1	1	1	1

Tabella 5.1.2 Healthy live animals used for pre-clinical training (animal handling, physiology, animal production, propaedeutic, ..)

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	250	250	250	250
Small ruminants	55	80	80	71
Pigs	25	25	25	25
Companion animals	545	484	327	452
Equine	5	5	5	5
Poultry & rabbits	180	242	240	220
Exotic pets	0	0	0	0

Table 5.1.3 Number of patients** seen intra-murally (in the VTH)

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	4	34	16	18
Small ruminants	35	21	10	22
Pigs	3	6	19	9
Companion animals	6310	3622	3165	4365
Equine	661	461	496	539
Poultry & rabbits	258	21	36	105
Exotic pets	295	181	50	175

Table 5.1.4 Number of patients** seen extra-murally (in the ambulatory clinics)

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	456	275	250	327
Small ruminants	699	445	400	514
Pigs	225	150	150	175
Companion animals	0	0	0	0
Equine	0	0	0	0
Poultry & rabbits	0	0	0	0
Exotic pets	0	0	0	0
Others (specify)	0	0	0	0

** The replacement of PONGO database with SIOVUD occurred in 2017 and did not allow to completely download the number of patients seen extra-murally in the previous AYs. In many cases, since the records were referred to groups of animals per farm, the exact number of examined animals was obtained by reading each specific report.

Table 5.1.5 Percentage (%) of first opinion patients used for clinical training (both in VTH and ambulatory clinics, i.e. tables 5.1.3 & 5.1.4)

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	65	65	65	65
Small ruminants	85	85	85	85
Pigs	80	80	80	80
Companion animals	60	60	60	60

Equine	90	90	90	90
Poultry & rabbits	95	95	95	95
Exotic pets	100	100	100	100
Others (specify)	0	0	0	0

Table 5.1.6 Cadavers used in necropsy

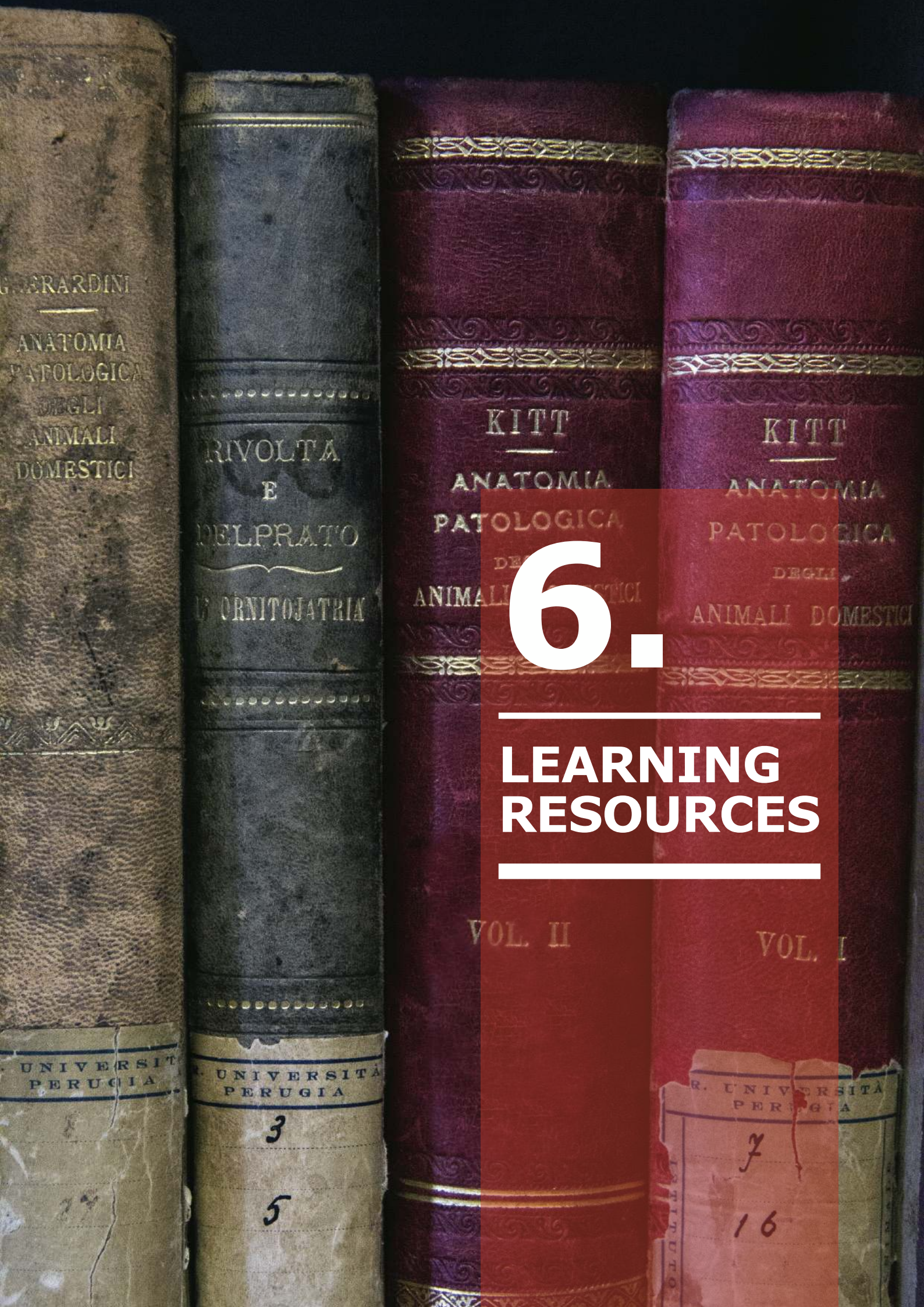
SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	8	10	14	10
Small ruminants	20	17	12	16
Pigs	19	6	18	14
Companion animals	128	94	139	120
Equine	42	66	42	50
Poultry & rabbits	42	28	35	35
Exotic pets	7	14	2	7
Others (specify)	0	0	0	0

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

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Cattle	370	358	298	342
Small ruminants	156	120	120	132
Pigs	192	156	120	156
Poultry	28	32	32	30
Rabbits	2	2	2	2
Others (specify)	0	0	0	0

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

SPECIES	2017-2018	2016-2017	2015-2016	MEAN
Ruminant's and pig’s slaughterhouses	168	168	168	168
Poultry slaughterhouses	1	1	1	1
Related premises	3/5	3/5	3/5	3/5
Others (pilot plant)	2/8	2/8	2/8	2/8



6.

LEARNING RESOURCES


SIGILLVM GENERALE CIVITATIS TRAIECTI
SCS
HER
LAN
CV
VS
A.D.MCCCVIII

6.1 Factual information

6.1.1 DESCRIPTION OF THE MAIN LIBRARY OF THE ESTABLISHMENT

The Library of the DVM is part of the "Agricultural, Veterinary and Engineering Librarian Structure" (AVELS) along with the Library of Agrarian Sciences and Engineering. The latter together with the libraries of the other departments is part of the University Library Center (CSB) http://www.csb.unipg.it/files/webmaster/Regolamenti/Regolamento-CSB_DR_477_9_aprile_2015.pdf.

Since the early 80's, the Library is located in Building C. A brief presentation of the library with a tutorial on how to access and how to use the services may be viewed in the following website: http://www.csb.unipg.it/organizzazione/strutture-bibliotecarie/struttura-agraria-veterinaria-e-ingegneria/biblioteca-di-medicina-veterinaria.

The Library is specialized in different subjects concerning veterinary medicine and medical sciences.

-) staff (FTE) and qualifications

Four full-time employees manage the library (one director, two librarians, and one general service unit). Since 1994, approximately 25 students per year on specific scholarships, support library activities, assist peers in library loans and in accessing electronic resources.

-) opening hours and days

Library services are open from Monday to Thursday, from 8:30 to 18:00 and on Friday from 8:30 to 14:00. Access to the study rooms is open from 8:30 to 19:00, from Monday to Friday. In addition, students may access the DVM library as well as any other University library by downloading the "Unipass" app and using a QR code. The Library is closed during the Christmas and Easter holidays and bank holidays. Opening and closing hours are published on the website of the Library. However, students have access to Library services from any computer 24/7 using VPN access.

-) annual budget

The annual budget of the DMV Library is assessed by the Administration of the CSB.

In the last three years, the budget for purchasing paper books for the DVM Library was **Paper books**: 3,235 euros in 2016, 5,023 euros in 2017, and 5214.69 euros in 2018; for **print journals or print and online journals**: 16,210 euros in 2016, 16,932 in 2017, 15,806 euros in 2018.

In addition, 1.647.959,44 euros in 2016, 1.762.523,71 euros in 2017 and 2.017.298,56 euros (prevision budget) in 2018 were used to purchase CSB databases and electronic resources. It is not possible to differentiate the economic value of the contents of each subject area since the cost is calculated at the systems level.

-) facilities: location in the campus, global space, number of rooms, number of seats

The library of DVM occupies an area of 500 sqm (including 260 sqm accessible by the public) on two floors of Building C. The first floor provides a loan-reference office and a (by reservation only) classroom called CARREL for individual study or small groups. The ground floor is used as a consulting room and is equipped with 20 reading places, a 4-seater study room, and a library deposit.

-) equipment: number of computers, number of electrical connections for portable PCs, available software for bibliographical research

The Library provides 5 computers, 2 photocopy machines/scanners for students and 30 electrical plugs to allow them to use their laptops. Wireless connection is available throughout the building.
The neighboring Teaching Pole provides an additional computer room with 14 computers, with a 24-inch screen. In the reading room (Teaching Pole – First Floor), there are 10 workstations with tables, electrical plugs, table lamps and internet access which students may use for study purposes during opening hours.

-) number of veterinary books and periodicals

Books: 4212
Total periodicals: 623
Current periodicals: 54

Some older books and periodicals are also available in the small libraries of the DVM Services and Units.

-) number of veterinary e-books and e-periodicals

All available veterinary e-books and e-periodicals can be found through **SFX** (http://sfxeu09.hosted.exlibrisgroup.com/39upg/journalsearch) or through **PRIMO** (https://unipg-primo.hosted.exlibrisgroup.com/primo-explore/search?institution=39UPG&vid=39UPG_VU1&tab=default_tab&search_scope=Everything&mode=Basic&displayMode=full&highlight=true&dum=true&query=any,contains,&displayField=all&sortby=rank&lang=it_IT)

With regard to electronic periodicals, more than 13,000 e-periodicals with relevance to veterinary sciences are available through the CSB. The total of available veterinary e-books is difficult to calculate due to the system's inability to search under subject titles.

In 2018, the DVM and the University of Perugia had access to a trial version of the Springer e-book multidisciplinary collection, with over 20,000 titles published in the 20 thematic collections of the publisher with the copyright year 2015, 2016 and 2017. At the end of the trial period, 85 e-book titles were purchased.

-) number of other (e)books and (e)periodicals

51175 e-books and 61287 e-periodicals

Bibliographic searches and source search services may be achieved through different systems:



1. Online university catalogue locating the resources available among the University Libraries
2. Linking resolver (SFX) and discovery tool (PRIMO)
   - SFX is a search tool which allows searching for an electronic journal, an e-book or an article if the citation of the article is known. Moreover, it gives access to the full text of the electronic periodicals and e-books purchased from the University or open access through a single access pagehttp://sfxeu09.hosted.exlibrisgroup.com/39upg/az
   - PRIMO allows searching for an article by topic https://unipg-primo.hosted.exlibrisgroup.com/primo-explore/search?sortby=rank&vid=39UPG_VU1&lang=it_IT
3. Interlibrary loan and brokerage services (e.g., Acnp, Nilde, and Sbn).

6.1.2 DESCRIPTION OF THE SUBSIDIARY LIBRARIES (IF ANY)

Subsidiary libraries of the DVM are the older ones of each Service/Unit, and have significant historical value. Students and staff also have free access to the neighboring library of IZS.

6.1.3 DESCRIPTION OF THE IT FACILITIES AND THE E-LEARNING PLATFORM (DEDICATED STAFF, HARDWARE, SOFTWARE, AVAILABLE SUPPORT FOR THE DEVELOPMENT BY STAFF AND THE USE BY STUDENTS OF INSTRUCTIONAL MATERIALS)

The DVM provides one full-time computer and IT technician to support students and academic staff. "UniStudium", a MOODLE-based platform, is the official e-learning platform of the University of Perugia (https://www.unistudium.unipg.it/unistudium/login/index.php). In UniStudium, educational material provided by the teachers, lecture notes, forums, communications, online quizzes, and interactive training material may be found. Students and staff can access UniStudium by using their University credentials (e.g., az950001).
The teaching staff of the DVM follows an e-learning "Course for UniPG professors on the use of UniStudium" (https://www.unistudium.unipg.it/unistudium/course/view.php?id=12834). The Moodle platform is managed and controlled by the DVM.

6.1.4 DESCRIPTION OF THE AVAILABLE ELECTRONIC INFORMATION AND E-LEARNING COURSES, AND THEIR ROLE IN SUPPORTING STUDENT LEARNING AND TEACHING IN THE CORE CURRICULUM

The Library staff provides a close collaboration with professors in teaching the fundamentals in using available electronic and bibliographic resources, bibliographic search and source search tools, and the use of citation tools. It also organises seminars for both undergraduate and postgraduate students. In particular, undergraduate students attend a core seminar in the class of Epidemiology and an elective activity on the "Management of electronic databases". PhD students participate in a seminar during their 3-year curriculum. As of April 2018, the library staff, in collaboration with the IZS library, organises 3 additional meetings per year on methods of bibliographic research and the use of citation tools. These meetings are mainly addressed to students who are preparing their thesis.
UniStudium once again plays an essential role in supporting student learning and teaching in the core curriculum (see 6.1.3).

6.1.5 DESCRIPTION OF ACCESSIBILITY FOR STAFF AND STUDENTS TO ELECTRONIC LEARNING RESOURCES BOTH ON AND OFF CAMPUS (WI-FI COVERAGE IN THE ESTABLISHMENT AND ACCESS TO VIRTUAL PRIVATE NETWORK (VPN))

Students and staff members as institutional users (@unipg.it) have access to available bibliographic resources through:

- internal access: http://www.csb.unipg.it/
- external access: through VPN: https://vpn.unipg.it/dana-na/auth/url_default/welcome.cgi. Wi-Fi coverage is available in the historical building as well as in the Teaching Pole.

6.1.6 DESCRIPTION OF HOW THE PROCEDURES FOR ACCESS TO AND USE OF LEARNING RESOURCES ARE TAUGHT TO STUDENTS.

During enrolment and DC, students are taught how to access and use learning resources by the classroom tutor and by individual teachers at the beginning of each course. A seminar on Bibliographic Research and Scientific Information is given in core curriculum (Veterinary Epidemiology). One elective activity is also dedicated to the "Management of electronic databases for literature". Students, who are writing their thesis, can attend a specific course on bibliographic resources and citation tools.

6.1.7 DESCRIPTION OF HOW (PROCEDURES) AND BY WHO (DESCRIPTION OF THE COMMITTEE STRUCTURE) THE LEARNING RESOURCES (BOOKS, PERIODICALS, DATABASES, E-LEARNING, NEW TECHNOLOGIES, ..) PROVIDED BY THE ESTABLISHMENT ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

The library is managed by the Technical-Scientific Committee of the AVELS which is composed of representatives for librarians, students, and teaching staff. It is responsible for the technical-scientific direction and control of the library structure. It collects suggestions from the DVM library staff and teachers on the implementation of teaching resources and reports them to the CSB Library Council for financial support. Final decisions and actions planned by the Technical Scientific Committee are communicated by the representatives (librarians, teaching staff, students) to the respective class. Two paper copies are available (one for consultation and one for loan) for the most requested books.
The Library also organises periodical customer satisfaction surveys to collect feedback and suggestions for improvement (see Appendix 6.1e)

6.2 Comments

The Establishment has a Library in the Teaching Pole which provides useful support for students and academic staff in teaching, studying and research purposes in librarian resources and updates of the most recent electronic devices.

The use of e-learning modules has been introduced relatively recently. Therefore, despite the mandatory course in which all teachers must participate, it is still necessary to improve competencies and accessibility and take full advantage of the immense potential of UniStudium.

The seminars organised for undergraduate students play an important role in publicising and learning the available resources. The Library also organises periodical customer satisfaction surveys to collect feedback and suggestions for improvement.

Recently, Wi-Fi connection has been extended to all teaching rooms in the historical building and Teaching Pole.

The University e-book search system needs improvements. To this purpose, CSB is evaluating the opportunity to insert new research fields into the existing system.

6.3 Suggestions for improvement

Due to Italian legislation, it is not and will not be possible to guarantee the Library opening hours on a 24/7 basis. To this effect, efforts are being made to enhance accessibility to bibliographic sources and educational material through remote access or via the VPN network thus enabling students to use resources on a continuous basis.

Additional rooms and seats should be provided to support students in studying.



7.

STUDENT ADMISSION, PROGRESSION AND WELFARE


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7.1 Factual information

7.1.1 DESCRIPTION OF HOW THE EDUCATIONAL PROGRAMME PROPOSED BY THE ESTABLISHMENT IS ADVERTISED TO PROSPECTIVE STUDENTS

To publicise the Degree Course the Establishment, supported by the Delegate for student tutoring, plans numerous actions (Incoming Perspective Events – see Appendix 6.9) (http://www.medvet.unipg.it/didattica/orientamento-e-tutorato) including:

Three Open Days per year and an orientation day "Orientamento a Perugia (UniPGorienta)" for prospective students; a "self-managed week" and "combined study/work experience" for 4Y and 5Y high school students (see Appendix 6.9).

In addition, the Establishment provides a Brochure (both online https://www.unipg.it/files/orientamento/2018/MU03.pdf, and as a leaflet) where the main objectives of the DC (i.e. clinical skills, animal production management, Public Health care) are described, and a detailed course description divided per year with the ECTS equivalent is listed. The Brochure also includes potential job opportunities for veterinarians as well as post-graduation studies (i.e. masters, specialisation schools, advanced traineeships), and illustrates international activities dedicated to undergraduate and graduate students (i.e. ERASMUS programme). Information regarding the last EAEVE certification (2008) and the history of the Establishment are also reported. Prospective students may also consult other useful details on the DVM website under the "Futuri studenti" section (http://www.medvet.unipg.it/studenti/futuri-studenti).

7.1.2 DESCRIPTION OF THE ADMISSION PROCEDURES FOR STANDARD STUDENTS:

-) selection criteria

The national admission process is accessible to students having a high school diploma. It is regulated and arranged by the MIUR which annually produces an admission test supported by CINECA. This exam is given on the same date throughout Italy (generally in September). The 100-minute exam includes 60 multiple choice questions on specific subjects:

- Basic Culture, Logical thinking, Biology, Chemistry, Physics and Mathematics are the subjects tested and marked as to follow: Exam mark (out of 90)
- 1.5 points for every correct answer
- Minus 0.4 points for every incorrect answer
- 0 points for omitted answers.

Students are ranked on a national list depending on their scores, where a minimum score of 20 is required for placement. The participants are then assigned and enrolled in specific universities according to ranking. In addition, students' location requests are taken into consideration when possible.

The student cohort, including the number of first-year EU and non-EU students, is annually defined by the MIUR based on Establishment availability of academic and support staff and facilities (see Table 7.1.1)

-) policy for disabled and ill students

Differently-abled students are enrolled in the regular course without number limitations. Entry test guidelines provide additional time for certified SLD and specific support for more severe issues. The University provides a Delegate supported by a contact person for each department as well as annually services for differently-abled and ill students. The academic and support staffs are called to respect specific guidelines in teaching and support activities (http://www.medvet.unipg.it/home/linee-guida-d-ateneo-per-dsa).

-) composition and training of the selection committee:

The University and DVM are not directly involved in the selection process. Members of the academic and support staff supervise the exam to ensure that the process is fair and rules are respected.

-) appeal process

Singular candidates (prospective student) may carry out the appeal process by private legal means. The appealing action is moved against the TAR.

-) publication of criteria and transparency of the procedures

The competition call for Veterinary Medicine admission including rules and minimum admission requirements is emitted by the MIUR each year. The Establishment publishes the announcement and all information concerning procedures on the DVM website "Futuri Studenti" section, sub-section "Bando di concorso Medicina Veterinaria" (http://www.medvet.unipg.it/studenti/futuri-studenti).

7.1.3 DESCRIPTION OF ADMISSION PROCEDURES FOR FULL FEE STUDENTS *(IF DIFFERENT FROM STANDARD STUDENTS)*

The Italian public University does not consider full fee students.

7.1.4 DESCRIPTION OF HOW THE ESTABLISHMENT ADAPTS THE NUMBER OF ADMITTED STUDENTS TO AVAILABLE EDUCATIONAL RESOURCES (FACILITIES AND EQUIPMENT, STAFF, HEALTHY AND DISEASED ANIMALS, *MATERIAL OF ANIMAL-ORIGIN)* AND BIOSECURITY AND WELFARE REQUIREMENTS.

To adapt the number of admitted students to the available educational resources, biosecurity and welfare requirements, every year the DVM Head completes MIUR forms referred to as "Potenziale formativo dei corsi di laurea" in which he reports the available premises, facilities, equipment, and



animal material available along with academic and support staff units. Subsequently, the MIUR verifies the statements and defines the eligible number of students who are allowed to be enrolled.

The final number of admitted students is also defined based on the general Italian employment policies and category association opinions (i.e. FNOVI). Every year, excluding the first, vacant positions in the DC are available for students from other universities and correspond to the numbers of students leaving.

7.1.5 DESCRIPTION OF:

-) The progression criteria and procedures for all students;

After the admission test and before the beginning of lectures, students who have an admission score lower than half of the maximum score in both the Biology and Chemistry must gain OFA (Additional Learning Obligations) attending an online course on the subject deficiencies. At the end of the courses, students are required to take an exam. Should a student fail, he/she is allowed to attend lectures but not to sit for any DC exam before passing the OFA.

Class attendance is compulsory. A minimum of 70% of lecture and activity hours for every course is called for (http://www.medvet.unipg.it/didattica/corsi-di-laurea/medicina-veterinaria-ciclo-unico-lm-42-d-m-270-2004/firme-frequenza).

Students may attempt an exam without any limitations. However, they must follow the sequence of preparatory exams. All information concerning propaedeutic exams is available on the DVM website, under "Regolamento didattico del corso di studi". (http://www.medvet.unipg.it/files/lm-42/regolamento_didattico/2017-2018/regolamento_did._mv_2017-2018_al_2017_07_07.pdf)

-) remediation and support for students who do not perform adequately;

Students who do not pass all their exams within the prescribed period or who do not achieve any ECTS for 1 full year are identified and annually invited to take advantage of tutorial assistance given by the academic staff (see Standard 8.1.4).

-) attrition rate and main causes;

Attrition rate is difficult to assess and perhaps is underestimated. For 2015-2016AY and 2016-2017AY the rate was 4.6% and 2.6%, respectively. For 2017-2018AY we can expect the rate to be approximately 3.2%.

Generally, the primary causes of attrition consist in personal and family issues. In a few cases, students transferred to a different degree course or a different University.

-) exclusion and appeal procedures;

Conforming to Italian law, since 2010-2011AY, students are obliged to leave the degree course if they do not pay tuition fees or if they do not sit for an exam for at least 3 consecutive AYs (https://www.unipg.it/files/pagine/115/reg-ctb-studentesca.pdf). On the other hand, this does not apply to students needing to discuss their degree thesis. In that case, a student may be enrolled again in the current AY with conforming fees. The number of ECTS collected in the previous de-

gree course may be recognised for the carrier progression by the PDC, and finally approved by the DCC and DVMC.

-) publication and transparency of criteria/ procedures

All procedures and criteria regarding student progression and career are published on the Unipg website (https://www.unipg.it/didattica/procedure-amministrative/iscrizioni-e-carriera) and the DVM website (DG). The Student Secretariat provides students with complete and detailed information on this matter.

7.1.6 DESCRIPTION OF STUDENT SERVICES (I.E. REGISTRATION, TEACHING ADMINISTRATION, MENTORING AND TUTORING, CAREER ADVICE, LISTENING AND COUNSELLING, ASSISTANCE IN CASE OF ILLNESS, IMPAIRMENT AND DISABILITY, CLUBS AND ORGANISATIONS).

The University provides a Student Secretariat for registration and other DC administrative affairs. Moreover, a Didactic Secretary has been made available by the DVM for assistance in all procedures concerning the DC.

The DVM also provides learning support through tutorials by the academic staff (see "Tutorato di Medicina Veterinaria Ciclo unico LM-42 270/2004" (http://www.medvet.unipg.it/didattica/orientamento-e-tutorato).

The University offers a free counselling service for students. Students elect delegates to represent their category to the PDC, DCC and DVMC. They report needs, complaints, and suggestions through quality assessments. In the Teaching Pole building, the DVM provides a box where student comments, complaints or needs are collected. In addition, students may also state their needs and suggestions through the evaluation report.

Finally, the University provides a number of additional services and economic benefits regarding sport and culture activities, clubs, credit cards, shopping, rent, transportation, medical assistance and disabilities (www.unipg.it/servizi).

7.1.7 PROSPECTED NUMBER OF NEW STUDENTS ADMITTED BY THE ESTABLISHMENT FOR THE NEXT 3 ACADEMIC YEARS

As reported in Standard 7.1.4 the number of students may change from an AY to another. Based on the trend of the last AYs, the prospected number of new students admitted by the Establishment for the next three AYs is between 45 to 55.

7.1.8 DESCRIPTION OF HOW *(PROCEDURES)* AND BY WHO *(DESCRIPTION OF THE COMMITTEE STRUCTURE)* THE ADMISSION PROCEDURES, THE ADMISSION CRITERIA, THE NUMBER OF ADMITTED STUDENTS AND THE SERVICES TO STUDENTS ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

The MIUR annually decides the admission criteria and procedures, and the number of admitted students and published in the annual announcement. Common university services and specific DVM services to students are decided, implemented and assessed by the Academic Senate and the DVMC, respectively. They are published on the University and DVM websites, respectively.

Table 7.1.1 Number of new veterinary students admitted by the Establishment

TYPE OF STUDENTS	2017/2018	2016/2017	2015/2016	MEAN
Admitted standard students	55	54	54	54.3

Table 7.1.2 Number of veterinary undergraduate students enrolled at the Establishment

YEAR OF PROGRAMME	2017-2018	2016-2017	2015-2016	MEAN
First year	55	54	54	54,33
Second year	46	50	84	60
Third year	41	80	67	62,66
Fourth year	70	66	140	92
Fifth year	52	125	58	78,33
FC*	105	70	111	95.3
Total	369	445	514	442.6

Table 7.1.3 Number of veterinary students graduating annually

TYPE OF STUDENTS	2017-2018	2016-2017	2015-2016
Standard students	71	80	107

Table 7.1.4 Average duration of veterinary studies

DURATION	% OF STUDENTS GRADUATED IN 2018	% OF STUDENTS GRADUATED IN 2017	% OF STUDENTS GRADUATED IN 2016	MEAN
+0 **	38.0	17.1	18.8	24.6
1	26.7	26.8	30.0	27.8
2	18.3	22.0	21.3	20.5
+3 or more	16.9	34.2	30.1	27.0

+ 0** The total duration of studies is 5 years.

Table 7.1.5 Number of postgraduate students registered at the Establishment Programmes

YEAR OF PROGRAMME	2017-2018	2016-2017	2015-2016	MEAN
Interns	16	6	9	10.3
Residents	7	5	8	6.6
PhD students	22	22	28	24
Master students	38	42	28	36
Lifelong Learning Courses	74	63	94	77

7.2 Comments

In the past AYs, submission of the DC to Quality Assessment (see Standard 11), monitoring process and actions adopted to improve student career progression and remove all possible obstacles, have resulted in the adoption, by the DVM of these lifelong, invaluable instruments.

University and DVM actions and services aimed at improving student welfare have also been increased in the past years.

Final enrollment, defined by the MIUR, belated due to slow results in student ranking. Delays in student attendance and practical activities are therefore encountered.

A block on the acquisition of a mandatory number of ECTS from 2Y to 3Y has been removed in order to reduce attrition rate and improve student progression. The lack of this action could have resulted in an increasing career duration.

The outside prescribed time students expected by the MIUR, result in unpredictable numbers of students enrolled at the Establishment.

7.3 Suggestions for improvement

The national admission test should be submitted to a periodical critical analysis to evaluate its discriminatory power in selecting the best adequate and motivated students.

By reason of the long periods of time spent by students at the Establishment during their degree course, further actions to ameliorate student welfare should be implemented (i.e. shared and social premises).



8.

STUDENT ASSESSMENT


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8.1 Factual information

8.1.1 DESCRIPTION OF STUDENT ASSESSMENT STRATEGY OF THE ESTABLISHMENT

DVM assessment procedures conform with University General Guidelines (UGG) (Regolamento Generale d'Ateneo: https://www.unipg.it/files/pagine/115/reg_gen_ateneo_2017.pdf) and the Student Charter (https://www.unipg.it/files/pagine/115/CartaDeiDiritti-approvata-SA-240215.pdf). Assessment procedures are published through didactic forms (Syllabuses). Annually, Syllabuses are checked by PDC and the Teaching Quality Responsible. On the DVM website, Unipg didactic forms (http://www.medvet..it/files/lm-42/msyllabus_59308_2017_09_28_estr._n._2.pdf) (see Appendix 6.2) Exam Schedules (http://www.medvet.unipg.it/didattica/corsi-di-laurea/medicina-veterinaria-ciclo-unico-lm-42-d-m-270-2004/calendario-degli-esami) and prerequisites table (http://www.medvet.unipg.it/files/lm-42/regolamento_didattico/2017-2018/regolamento_-did._mv_2017-2018_al_2017_07_07.pdf) are available.

Exam schedules are arranged by the SCT, then discussed and analysed by PDC, approved by DCC and published before the beginning of the AY lectures (from July to September). Any change in exam dates by the teacher must be motivated and promptly communicated to students via official forms or networks.

According to the Student Charter (Appendix 6.1f) the Establishment enforces 4 Ordinary exam periods (8 exam sessions), excluding in-class ones, ensuring achievement of theoretical and practical topics in addition to 3 Extraordinary periods (1 exam session each) during lesson period (March, May and December) for 5Y students or for the outside prescribed time students. In each exam period, each session must be 15 days away from the previous. Finally, the Establishment provides four convocation sessions in July, October, March, and May. Students may dispose of several ongoing tests during exam periods, from 1Y to 4Y. There are no limitations in the number of times students may sit for an exam.

8.1.2 DESCRIPTION OF SPECIFIC METHODOLOGIES FOR ASSESSING:

Italian law allows each teacher to adopt own exam procedures, consistent with the Student Charter and UGG.

Theoretical knowledge

The primary method of student assessment is through an oral exam consisting of an extensive discussion where theoretical knowledge, students' critical and associative abilities are tested. The examing board accurately verifies that students have acquired course objectives as follows:

- Content knowledge;
- Communication skills and adequate scientific lexis;
- Approach, handling and methods applicable to a practical test.

The oral exam generally consists of a discussion, lasting approximately 20 to 60 minutes, depending on the subject and the number of modules for each exam. Teachers may also adopt multiple choices questions and open answer questions as additional testing material.

Pre-clinical practical skills

Pre-clinical practical skills are assessed by practical activities performed during the course, written reports, supervised work, and are signed in the Log-book by the supervising teacher, or assessed during the final oral or practical exam. The Log-book registers the premises (LD; AZD; OVUD) and areas (PA; SV; SR; AC; TR) where activities are carried out under the supervision of the academic staff.

Clinical practical skills

Clinical practical skills are daily assessed by teaching staff during red weeks, "rotazioni cliniche", Ambulatory Clinics and Professional Practical training and registered in the Log-book (see Appendix 6.1a), or assessed during the final oral or practical exam. (see Standard 3.1.9)

To assess clinical practical skills students are required to write reports for activities carried out under the supervision of the academic staff or EPT providers (Appendix 6.1b).

8.1.3 DESCRIPTION OF THE ASSESSMENT METHODOLOGY TO ENSURE THAT EVERY GRADUATE HAS ACHIEVED THE MINIMUM LEVEL OF COMPETENCE, AS PRESCRIBED IN THE ESEVT DAY ONE COMPETENCES (*SEE ANNEX 2)*

Both the theoretical and practical competencies required in the DC are in agreement with ESEVT Day One Competencies and periodically revised by PDC. As previously reported, the ESEVT Day One Competencies are assessed during lessons and during exams (Appendix 2*)*, by oral discussions, multiple-choice/open answer quizzes, and practical activities. ESEVT Day One Competencies are also evaluated during the State Exam certifying qualification for the veterinary profession. An annual meeting with the OSEB contributes to the critical evaluation concerning the minimum level of competencies necessary to be acquired by students.

Practical ESEVT Day One Competencies assessment is carried out daily during practical activities and practical tests. A personal Log-book (Appendix 6.1a) is provided for at the beginning of 1Y (see above).

8.1.4 DESCRIPTION OF THE PROCESSES FOR:

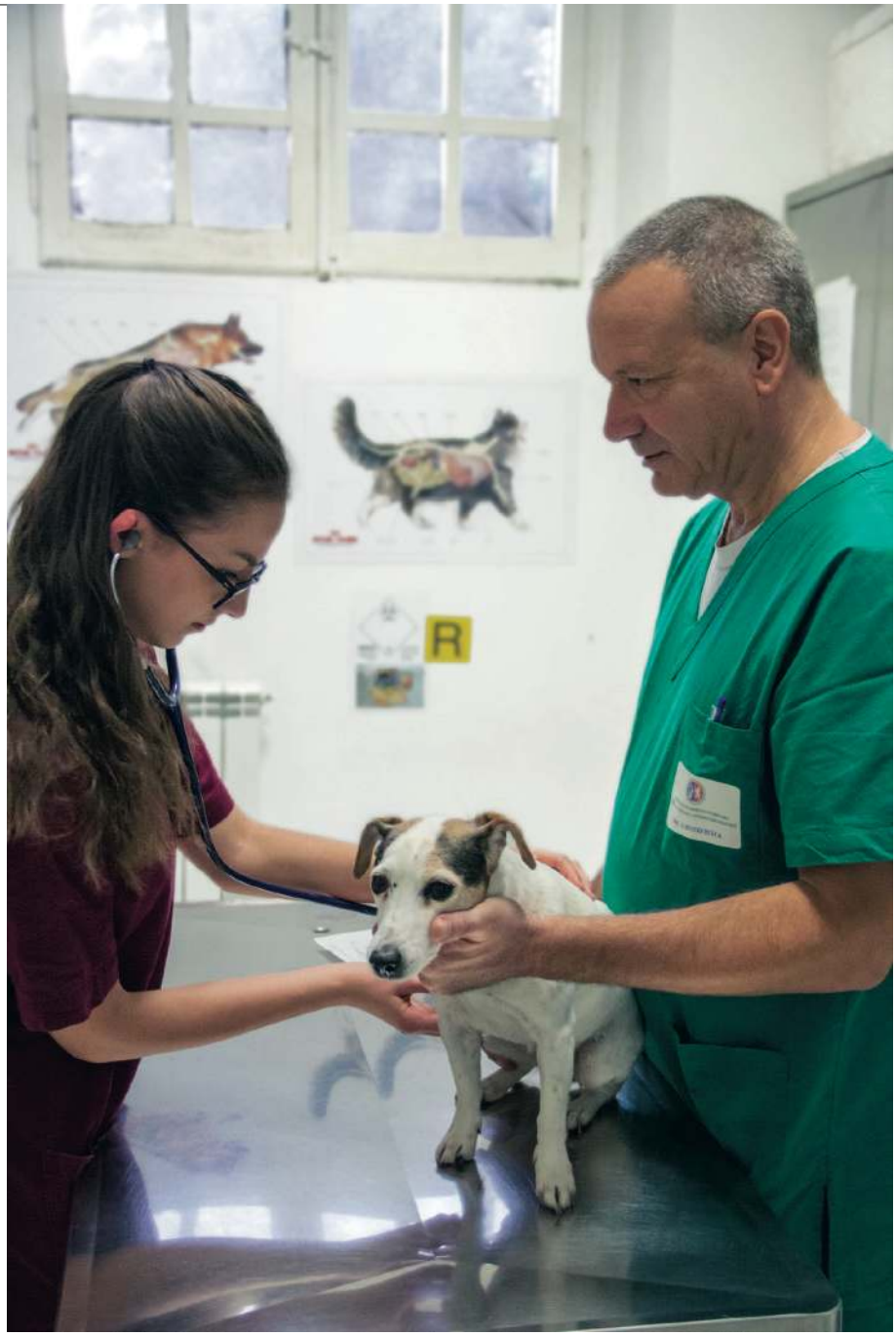
-) ensuring advertising and transparency of assessment criteria/ procedures;

Assessment criteria/procedures are reported in the Syllabuses. They are checked by the DVM Responsible for Teaching and QA and published on the DVM website for each AY. Assessment procedures are explained at the beginning of each course by all teachers.

Students are also called to download Syllabuses for any course on the UniStudium page. Assessment criteria/ procedures are published in the summer, before the beginning of the AY.

In order to ensure maximum transparency during the assessment process, oral and practical tests are open and verified by a board composed of at least two expert members in the specific subject area. Additional internal or external experts, such as PhDs, stakeholders, etc., may also be called.

Students are requested to evaluate if the assessment criteria/procedures are clearly explained at the beginning of any given course through an anonymous evaluation form on the SOL, with the following question: "Was the exam criteria/procedures provided clearly and appropriately?" (see Appendix 6.1d).



-) awarding grades, including explicit requirements for barrier assessments;

Grades are expressed in 30/30 for each exam. Students must achieve a minimum grade of 18 out of 30 to pass the exam. In the case of ongoing tests, the final grade corresponds to a pondered media value. In case of failure, the examing board invites the student to review his/her knowledge and to ask for learning support.

Students have the right to refuse a grade in order to improve it in a subsequent exam. Moreover, students may sit for an exam a second time to improve an already accepted grade. In this case, the higher grade will be officially registered. The various Syllabuses report the prerequisites and regulations governing exams. The Learning plan including prerequisites is reported in the veterinary medicine DG (LM42) (art. 8)

(link: http://www.medvet.unipg.it/files/lm-42/regolamento_didattico/2017-2018/regolamento_-did._mv_2017-2018_al_2017_07_07.pdf)

-) providing to students a feedback post-assessment and a guidance for improvement;

Post-Assessment feedback is available immediately for both oral and practical exams. Within this context, the teacher explains learning deficiencies and suggests necessary improvements. Review and performance feedback concerning written exams are provided for as well. Furthermore, teachers are also available during office hours for any clarifications and suggestions for improvements. Office-hours are published online and readily available. In addition, students may require guidance directly with individual tutors who are professors or researchers of the DVM. They are

assigned a small group of 1Y students and follow them throughout their studies providing support and guidance. Students may contact individual tutors in case of doubts regarding study methods, advice on specific skills and thesis dissertations. Furthermore, the individual tutor provides information and suggestions regarding university career arrangements and progression, or information on studying and work abroad programmes. For additional support, students may take advantage of class tutors (see Student's Charter in the Appendix 6.1f)

-) appealing

The possibility to take an exam numerous times as well as teacher availability (office hours and post-assessment feedback) annul appeal procedures as a means to solve judgement disagreements. In any case, a student who reports incongruence with exam criteria/procedures and board assessment may present the issue to the PDC or directly to the DC President who will then put forth the issue to the PDC. Subsequently, the PDC investigates the issue in a discussion opened to the involved board. If the disagreement is not resolved, the DC President will provide for a further examing board including additional expert members.

8.1.5 DESCRIPTION OF HOW *(PROCEDURES)* AND BY WHO *(DESCRIPTION OF THE COMMITTEE STRUCTURE)* STUDENT'S ASSESSMENT STRATEGY IS DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED.

Assessment strategy, including the number of exam sessions and the time gap between two calls, is provided by DCC, based on UGG and according to the Student's Charter (see Appendix 6.1f), and published on the DVM website through the exam schedule. Assessment criteria/procedures are provided by teachers according to his/her specific subjects and published through the Syllabus on UniStudium and the DVM website.

All implementing, assessing and revising actions are addressed by students or teachers to the PDC which reports to the DCC for final approval.

8.2 Comments

The assessment strategy adopted by the University and DVM is planned to encourage a regular career progression and attendance. The University of Perugia provides student evaluations at the end of lectures and not after exams. Therefore, an anonymous and constant evaluation of the assessment process does not occur.

With regard to the Student Charter, Italian Universities do not consider a univocal assessment procedure for students. However, potential issues can be reported to the PDC for discussion and improvement.

The recent introduction of Teaching Quality and DVM Quality Responsible positions play a vital role in monitoring student career progression. In addition, the availability of assessment criteria/procedures in all Syllabuses insures an unequivocally more transparent student assessment.

A further tool to improve student assessment consists in periodic refresher courses on exam techniques, which also represent a useful opportunity for sharing difficulties and experiences.

8.3 Suggestions for improvement

An electronic system monitoring a student's career should be available to the AS to verify specific barriers related to assessment procedures.

Compared to the previous AY, student career in the DC occupies the 9th/13 position compared to the 8th/13 of the AY before (CENSIS: http://www.censis.it/17?shadow_pubblicazione=120582). Therefore, more actions should be required to monitor student assessment as one of the potential causes of career delay.

A careful investigation should be carried out to check if student career interruption is actually due to assessment issues or to personal motivations.



9.

ACADEMIC AND SUPPORT STAFF


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9.1 Factual information

9.1.1 DESCRIPTION OF THE GLOBAL STRATEGY TO ENSURE ALL REQUESTED COMPETENCIES IN THE VETERINARY PROGRAMME ARE COVERED AND THAT STAFF ARE PROPERLY QUALIFIED AND PREPARED FOR THEIR ROLES

The requested expertise for the veterinary curriculum is periodically upgraded according to MIUR guidelines and EAEVE/FVE evaluation system. The list of skills which students should possess at the time of graduation is included in the logbook.

The Italian University system includes two upper levels of teachers: Full Professor (FP) and Associate Professor (AP). The entry-level calls for a Researcher who is principally dedicated to research work.

Based on the Italian law 240/2010, the role of a "Permanent Researcher" has been replaced by that of a "Temporary Researcher" as to follow:

- Junior Researcher (RTD-A): three-year project-based contract, renewable for an additional two years;
- Senior Researcher (RTD-B): a three-year contract followed by a National Scientific Qualification and subsequent enrolment as AP.

According to Italian legislation, the UGG states that teaching activities must be primarily attributed to FP and AP, with at least 350 hours (full-time) or 250 hours (part-time) of teaching work/AY. The involvement of full time (FT) Researchers in teaching activities is encouraged up to a maximum of 350 hours/AY for a Permanent Researcher; for RTD-A and RTD-B is 350 or 200 hours/AY if full-time or part-time, respectively.

Most FTE AS members involved in veterinary training are veterinarians. The AS includes teachers having expertise in their respective disciplines. They are enrolled from specific Discipline Scientific Sector (DSS) for distinct disciplines by a national competition assessing their qualifications and preparedness. As of 2010 (Italian law 240/2010), a PhD has been considered an essential title in the academic career. In DVM 55% of permanent AS has a PhD (Appendix 1). Furthermore, various AS members have acquired international or national specialisations (see Appendix 6.4).

Numerous post-graduate students having specific competencies are enrolled in the AS as temporary staff (non-budget positions) with a specific work contract to regularly perform structured practical and clinical training.

Concerning the pedagogic quality of teaching and assessment, teaching staff must participate in an e-learning platform (APE-learning - http://www.apelearning.unipg.it, Laboratory on Communication techniques, Examination techniques, UniStudium use for teacher courses) which is an essential contribution to multimedia teaching highlighting the fundamental elements of teaching such as vigour, partnership and constant discussion and exchange on knowledge. The platform is a tool and resource in the use of teaching materials as well as organisation and updating of training and contents.

Moreover, teachers may access UniStudium, the university's e-learning platform, which facilitates the relationship between students and teachers, the delivery of bibliographic support and learning resources, quiz assessments and tests, and any other e-learning pedagogic tools provided by the AS. In addition, student evaluation forms provide valuable and useful feedback on the competencies and qualifications of the AS.

Since 2003, the DC is part of the university QA system and from 2006, that of the ANVUR guidelines and evaluation system (see Standard 11).

As for biosecurity, the teaching staff is informed on guidelines provided by official university reports and also attend specific courses. Detailed biosecurity procedures for laboratory and teaching activities for each subject are available for students and stakeholders in the DVM website and UniStudium pages.

9.1.2 DESCRIPTION OF THE FORMAL PROGRAMME FOR THE SELECTION, RECRUITMENT AND TRAINING TO TEACH AND ASSESS STUDENTS (INCLUDING CONTINUING EDUCATION) OF THE ACADEMIC STAFF

Several national laws and administrative decrees regulate the selection and recruitment of the AS. Each University, in autonomy, dedicates part of the annual MIUR budget to recruitment. On the other hand, each department promotes requirements based on its Strategic Plan and needs.

According to art.16 of the Italian Law 240/2010 (NSQ), the procedure for selection of a University Professor position strictly relies on scientific qualification criteria. National boards are composed of selected FP having strict scientific qualification criteria. The national boards evaluate and assess the candidate's scientific qualifications including titles, publications, research ability for any DSS (http://abilitazione.miur.it/public/normativa.php?lang=eng). Criteria are differentiated in AP and FP positions.

APE-learning platform provides useful support in teaching and assessment training (http://www.a-pelearning.unipg.it). New enrolled researchers are trained to assess students by participating in the examination boards during their previous PhD status or as an early academic activity.

In order to ensure life-long learning along with maintaining a high level of knowledge and qualifications, teachers are encouraged to participate in different events among diverse fields of veterinary sciences organised by the DVM, the University or any other national or international scientific societies.

With regards to the TS included in the AS, they are selected by an examination board including DVM teachers named by the VTH MC according to the requested position. The candidates are evaluated based on their curriculum, specific expertise and aptitudes, in addition to an oral and practical test. The TS who contribute to teaching activities is trained by following the course "Formazione e aggiornamento su aspetti pedagogici e dell'insegnamento universitario, nuove tecnologie a sostegno dell'apprendimento e la docimoloiga" available on UniStudium platform.

9.1.3 DESCRIPTION OF THE FORMAL PROGRAMME FOR THE SELECTION, RECRUITMENT AND TRAINING TO PERFORM SPECIFIC SUPPORT STAFF DUTIES

Support staff dedicated to administrative, technical tasks and any other teaching-related tasks (TAB) are recruited according to the DVM priorities and financial availability of the University.

The selection of the TAB staff is based on a public call for permanent/temporary employment (http://www.gazzettaufficiale.it). The evaluation criteria are based on curriculum vitae, personal aptitudes and previous experiences in the required specific field. Furthermore, calls of intra or inter-departmental mobility are available based on specific requests or job welfare needs. The exam includes a written and an oral test evaluated by an academic board.

The TAB staff includes 4 categories (B, C, D and EP) according to an increasing level of autonomy and responsibility and proven competencies. Once recruited, the personnel is gradually integrated into a team that supports, acquaints and aids in the acquisition of role, task and duty awareness. Support staff is continuously called upon to attend periodic updates on biosecurity, first aid, alarm release, and fire-fighting courses. On request, the University provides further training courses (heavy vehicle use, basic laboratory skills, saw manipulation, administrative system updates, animal handling and keeping).

For these tasks, the University may additionally announce the selection of private companies.

A number of non-budget positions paid by service income, research grants or contract grants (temporary staff) are included in support staff for teaching or research tasks related to students. They are selected by a public call and tested on the required position and competencies by a DVM board.

9.1.4 DESCRIPTION OF THE FORMAL PROGRAM FOR APPRAISAL, DEVELOPMENT, PROMOTION CRITERIA AND PROCEDURES, SUPPORTING AND MENTORING OF BOTH ACADEMIC AND SUPPORT STAFF

According to the university QA system, students must evaluate AS. Publication of evaluation results encourages improvement and development in teaching. On the other hand, to date, the University does not provide a structured promotional program. Occasional salary promotions (*una tantum* incentives*)* are provided by the University in accordance to the Italian law 240/2010 (the last on 2015) based on the quality of teacher activity: educational, research, and participation to at least 50% of academic meetings. Since 2010, based on the quality of teaching, research and management activity, a three-year promotion system has been endorsed by the MIUR for budgeted academic positions.

Based on the DVM scientific production, the University annually assigns to it a promotion budget for basic research. The National Quality Research Evaluating System (VQR) represents additional support in promotion and development for the DVM. As for permanent researchers, the University supports and promotes teaching activity with additional economic recognition.

As for career progression, criteria (teaching quality, scientific activity, management expertise) are periodically discussed and established by the DB and a requested plan including separate orders or priorities is drafted according to DVM needs.

Members involved in VTH commercial activities may also benefit from special economic recognition coming from VTH incomes (benefit third parties) calculated by position coefficients (see Standard 2).

As for TAB support staff, they may benefit from an "economic horizontal progression" (i.e. from B1 to B7) and "vertical progression" (i.e. from D to EP), if deserving. They consist of a university progression system by call and evaluate the improvement in professional expertise, and the training courses followed. A specific exam is required with regards to the "vertical progression".

TAB support staff involved in VTH activities may also benefit from special economic recognition from VTH incomes (benefit third parties), calculated by position coefficients. Periodically, the DVM Head is called upon to send the University specific forms reporting the job quality of TABs for an additional university economic recognition.

9.1.5 DESCRIPTION OF THE FORMAL RULES GOVERNING WORK OUTSIDE THE UNIVERSITY, INCLUDING CONSULTATION AND PRIVATE PRACTICE, BY STAFF WORKING WITHIN THE ESTABLISHMENT

According to Italian legislation, every year teachers may choose a full-time job regimen, which corresponds to a 100% of teaching working hours (FTE = at least 350/h) or a part-time job regimen (at least 250/h). Full and part–time teachers may work outside the University (i.e. consulting), provided it does not interfere with the DVM teaching commitment (https://www.unipg.it/files/pagine/115/reg-inc-doc.pdf). Paid participation as a lecturer/speaker to conferences or courses requires previous consensus by both the Rector and the

DVMC. The SS may also work outside the University as long as it does not interfere with DVM job hours and efficiency.



9.1.6 DESCRIPTION OF THE FORMAL PROGRAMME OF THE ESTABLISHMENT FOR THE ASSESSMENT OF TEACHERS BY STUDENTS AND ITS OUTCOME

As already mentioned (see 9.1.1) the MIUR, through CINECA (Nord-East Inter-university Consortium for the Automatized Assessment), promotes the use of the most advanced information processing systems to favour public and private scientific and technological research and provides an advanced teaching evaluation system.

As of the 2014-2015AY, the DVM provides students with a compulsory online evaluation form for assessing teaching quality and consistency in all the study programme. It verifies teacher attendance, punctuality, public speaking and explanation ability, motivating ability, teacher availability towards students, adequacy of previous student knowledge, adequacy of lecture load, adequacy of available teaching material, transparency on the student assessment process, and adequacy of facilities (see Online Evaluation Form in Appendix 6.1d). The results of the evaluations are then analysed by PDC and discussed to investigate and solve potential inadequate conditions.

9.1.7 PROSPECTED NUMBER OF FTE ACADEMIC AND SUPPORT STAFF OF THE VETERINARY PROGRAMME FOR THE NEXT 3 ACADEMIC YEARS

DVM student-to-academic staff and student-to-support staff ratios can be considered sufficient, and the progressive stabilisation of enrolled students at about 50 units leads us to expect an improvement of these ratios in the next 3 AYs. The DVM student-to-veterinarian AS ratio can be considered sufficient as well. Nevertheless, the retirement of several AS and SS members will be taken into consideration in the next Strategic Plan in order to rapidly draw-up a replacement plan.

Meanwhile, constant DVM and OVUD politics regarding recruitment of academic staff as TS has continued and has further been implemented.

9.1.8 DESCRIPTION OF HOW AND BY WHOM THE STRATEGY FOR ALLOCATING, RECRUITING, PROMOTING, SUPPORTING AND ASSESSING ACADEMIC AND SUPPORT STAFF IS DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

Specific requests on allocating, recruiting, promoting AS and SS are made by the coordinator in charge of each DSS or VTH Service according to teaching, research and laboratory activity needs. Requests are collected by the DVM Head and discussed, revised and improved in DVM DB, and eventually included in the three-year Strategic

Plan. Conjointly, the University (Academic Senate) publishes an annual plan of actions for recruitment and promotion regarding career progression or economic treatment for the AS and SS. At the DVMC, all requests are discussed, revised, assessed and communicated to staff, students and stakeholders.

As for the temporary staff enrolled as SS or AS in teaching and research activities, DSS and VTH autonomously define their strategies, based on their own service/research incomes.

9.2 Comments

In the last years, the DVM reported a high number of retirements among AS members. The recent economic instability along with the entry into force of law 240/2010 and the new NSQ process have undoubtedly contributed to the delay in applying procedures for hiring and promotions. Moreover, recruitment of part-time Researchers has dramatically changed the new employment and progression system Italian Universities and reduced the stabilisation of the AS (junior researcher). The increasing number of enrolled post-graduate students as temporary staff into the AS has contributed to support VTH clinical activities, to regularly perform structured practical and clinical training, and to support research and laboratory activities.

The improvement and development of techniques and administrative systems require more specialised technicians and office employees as consistent support to research and VTH services.

9.3 Suggestions for improvement

A long-term Strategic Plan for a significant stabilisation of AS and SS needs to be performed and followed by DVM heads coming in succession. Whilst, a recruitment and promotion policy with international qualifications in the AS should be confirmed and improved.

To maintain teaching quality in the degree courses, University and Italian laws should define more strict actions against non-compliant AS members.

As for the support staff dedicated to administrative and technical tasks, the University should provide a selection process aimed to recruit more and more qualified personnel.

Table 9.1.1 Academic Staff in the Veterinary Programme

TYPE OF CONTRACT	2017-18	2016-17	2015-16	MEAN
Permanent (FTE)	58.5	56.5	57.5	57.5
Temporary*:	17	10.5	9	12.1
Interns (FTE)	0	0	0	0
Residents (FTE)	0	0	0	0
PhD students (FTE)**	4	4	4.5	4.1
Others	0	0	0	0
Total (FTE)	79.5	71	71	73.8

*Temporary staff employed as Academic staff consists in practitioners working at VTH (see Practitioners FTE); ** 0.25 FTE; *** 0.50 FTE.

Table 9.1.2 Percentage of veterinarians as academic staff

TYPE OF CONTRACT	2017-18	2016-17	2015-16	MEAN
Permanent (FTE)	87%	87%	87%	87%
Temporary (FTE)	100%	100%	100%	100%

Table 9.1.3 Support staff in the Veterinary Programme

TYPE OF CONTRACT	2017-18	2016-17	2015-16	MEAN
Permanent (FTE)	52	52	51	51.6
Temporary (FTE)	1	0	0	0.3
Total (FTE)	52.5	52	51	51.8

Table 9.1.4 Research staff of the Establishment

TYPE OF CONTRACT	2017-18	2016-17	2015-16	MEAN
Permanent (FTE)	59	64	67	63
Temporary (FTE) Research grants,* PhD**	4 RTD 22 16.5	4 RTD 18 16.5	4 RTD 17 21	4 19 18
Total (FTE)	101.5	102.5	109	104

* 1 FTE; **0.75 FT



10.

RESEARCH PROGRAMMES CONTINUING AND POSTGRADUATE EDUCATION


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10.1 Factual information

Involvement of undergraduate students in research is limited during the first four years of the course. However, they may attend any laboratory of the DVM, under the supervision of a staff member and participate in the research activities. During the final part of the degree course (4/5 Ys), those students who choose to prepare a research-based dissertation (10 ECTS) are actively involved in research co-operating with personnel in charge of research activities under the supervision of the AS. Generally, students showing an interest in research are highly encouraged by supervisors to partake in work done in the labs. As previously mentioned, the opportunity for undergraduate students to participate in research projects is limited for a series of reasons. The main one being the yearly courseload in conjunction with exams to prepare and pass. Usually, students are much more interested in practical activities connected to the professional areas of interest. Involvement of students in research is hampered due to the minimum allocation of public funds (in the past ten years there has been a decrease of about 50%).

10.1.1 DESCRIPTION OF HOW THE RESEARCH ACTIVITIES OF THE ESTABLISHMENT AND THE IMPLICATION OF MOST ACADEMIC STAFF IN IT CONTRIBUTE TO RESEARCH-BASED UNDERGRADUATE VETERINARY EDUCATION

The DVM provides 15 Research Teams (see Appendix 6.10) and two Departmental Research Centers (Research Center on Sport Horse – CRCS; Research Center on Animal Pain - CeSDA) (DVM website), in which research and teaching staff are involved.

All budgeted AS, and their scientific products are subject to periodic evaluation of research quality (VQR) issued by ANVUR. This assessment tests the involvement of the DVM in research and how much undergraduate veterinary education is research-based. Researchers and teaching staff transfer principles/methods and their expertise in scientific research into teaching (practical activities, clinical cases, laboratory activities).

In the last year and for the preparation of the final thesis students are exposed to the principles and methods of scientific research. Involvement in research occurs primarily in "research-based thesis" and indirectly in "desk-based thesis". In preparing the research-based thesis, the candidate is personally responsible for following a project. In a desk-based thesis, students must carry out a critical review of the scientific literature regarding a specific topic, screening the most relevant information.

A research-based undergraduate veterinary education is also provided by Journal Club activity (read, discuss and communicate scientific literature) independently performed throughout the degree course.

Once a year, the DVM organizes the "Game of Research", a self-managed meeting by PhD students, research grant or research contract holders aimed to report the study themes of the youngest protagonists of DVM research and provide an opportunity to learn to communicate science in a participatory, creative and lively way, as well as in a family context. Students are strongly encouraged to participate in this meeting.

10.1.2 DESCRIPTION OF HOW THE POSTGRADUATE CLINICAL TRAINING OF THE ESTABLISHMENT CONTRIBUTE TO UNDERGRADUATE VETERINARY EDUCATION AND HOW POTENTIAL CONFLICTS IN RELATION TO CASE MANAGEMENT BETWEEN POST- AND UNDERGRADUATE STUDENTS ARE AVOIDED

At the VTH a high number of practitioners support practical and clinical activities as TS. Permanent staff of AS supervises and assists their activity, providing in this sense a postgraduate clinical training. Shifts are planned among students, interns, trainees and TS thus preventing overcrowding but ensuring an adequate case study for all students. An environment where expertise and knowledge are shared both among post and undergraduate students is one of the primary aims of the DVM.

The VTH and AZD provide a sufficient caseload for companion, equine, ruminant and pigs useful for sharing activities between undergraduate and post-graduate students. Shared research activities in laboratories, VTH, and meetings contribute to creating a framework advantageous for learning interchange and education.

10.1.3 DESCRIPTION OF HOW UNDERGRADUATE STUDENTS:

-) are made aware of the importance of evidence-based medicine, scientific research and lifelong learning;

The core curriculum provides the course of Veterinary Epidemiology (2Y/2ndS) where students learn the fundamentals of evidence-based medicine and are trained to critically read scientific papers. Furthermore, in practical activities, "rotazioni cliniche" and PPT, students organise work groups, prepare clinical cases and revise scientific literature as support to the cases. Moreover, students are invited to participate in research activities in the DVM (seminars, game of research, meetings with invited foreign researchers) which is advertised on the DVM website and via a mailing list.

-) are initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers (e.g. through a graduation thesis);

The DVM provides courses and teaching activities aimed to teach students bibliographic research methodologies (Standard 6). Research techniques



are illustrated and taught within practical classes in specific subjects (i.e. histology, molecular biology, laboratory techniques). When preparing the research-based thesis, students, follow and perform experiments, analyse data and write a final manuscript structured as a scientific paper (introduction, material and methods, results, discussion/conclusion, references). Similarly, the elaboration of a desk-based thesis, supervised by AS, offers an ulterior, educational path which initiates students towards bibliographic search, scientific methods and research techniques;

-) are offered to participate to research programmes on a non-compulsory basis

The graduation thesis represents an occasion to participate in a research project or one of its phases. However, students may also voluntarily join on-going research activities as interns.

10.1.4 DESCRIPTION OF HOW THE CONTINUING EDUCATION PROGRAMMES PROVIDED BY THE ESTABLISHMENT ARE MATCHED TO THE NEEDS OF THE PROFESSION AND THE COMMUNITY

Based on the requests of professional associations, scientific societies, practitioners, and independent actions of teachers, in the last years, the DVM has concentrated its efforts to offer a post-graduate training programme and enhance the specific figures or services of the VTH.

At present, there are:

- 1 doctorate school in Health and Veterinary Experimental Sciences; the number of places offered for the PhD course has considerably decreased in recent years, due to a decrease in the MIUR budget. Despite that, positions in collaboration with private companies (industrial doctorate) and positions reserved for international students have increased proportionately. Moreover, the department has activated 3 International PhD positions.
- 4 Masters (DPM, FFHH, GESPAOC, VPHFH);
- 3 activated Residency Programs (ECVP, ECVPH, ECAR);
- 1 "Theoretical-practical course of Veterinary Cytopathology";
- 1 "Course of Abdominal Ecography and Echocardiography in the Dog";
- 1 "Training in Haematology and Cytology of dogs and cats".

  Furthermore, the DVM has enroled qualified personnel (i.e. ECVD) in some of the recently introduced specialist VTH services, to meet the needs of the profession and community.

10.1.5 PROSPECTED NUMBER OF STUDENTS REGISTERED IN POST-GRADUATE PROGRAMMES FOR THE NEXT 3 ACADEMIC YEARS

Based on the excellent evaluation of the PhD programme in the DVM (first position within the University of Perugia), we expect that the number of students, with grants, enrolled in the next 3 AYs will become stable. We are planning to invest far more in the international PhD programme in accordance with University policy.

As for residents, we expect 1 unit for each DVM certified field. Based on positive feedback and assessment by post-graduate students, as in master programmes, we could confirm the minimum number of registered students to renew their application.

10.1.6 DESCRIPTION OF HOW (PROCEDURES) AND BY WHO (DESCRIPTION OF THE COMMITTEE STRUCTURE) RESEARCH, CONTINUING AND POSTGRADUATE EDUCATION PROGRAMMES ORGANISED BY THE ESTABLISHMENT ARE DECIDED, COMMUNICATED TO STAFF, STUDENTS AND STAKEHOLDERS, IMPLEMENTED, ASSESSED AND REVISED

Research: In our department, a research work team has been active since 2014 with the task of facilitating communication and collaboration among DVM research groups, evaluating the quality of intra-departmental research, and organising seminars and training activities related to the research topic. The annual reports of the research work team are communicated and assessed in the DVMC.

PhD: The doctorate in Health and Veterinary Experimental Sciences was activated in 2013 with the XXIX cycle from the merging of three different PhD programmes. The new PhD programme is in line with the MIUR accreditation criteria (Decree 45/2013). The Doctoral Program is divided into 3 three-year curricula differentiated in thematic areas: Curriculum 1 - "Biotechnologies applied to Veterinary Sciences"; Curriculum 2 - "Veterinary Public Health and Food Hygiene"; Curriculum 3- "Clinical Sciences and Veterinary Diagnostics". The official organs of the PhD course are the Coordinator and the PhD Board. The PhD Board formulates proposals to define annual PhD or renewal courses consistent with the activated positions; regulates the PhD Teaching Guidelines; organises teaching activities and directs research activities, defines methods for annual monitoring and scientific-cultural training of PhD students. In addition, in agreement with each PhD student, it defines topics for the doctoral thesis, names the tutor and evaluates activities carried out by the candidates, and deliberates admission to the following years and the final exam (http://www.-medvet.unipg.it/didattica/dottorati-di-ricerca/sanita-e-scienze-sperimentali-veterinarie/regolamento-didattico).

Residencies: In Italian universities, there are no job positions offered by the Establishments for the specific resident position included in EBVS disciplines. For this reason, the residency programmes offered by the DVM, although officially recognised by their respective colleges, offer the best alternative training and, to a lesser extent, standard residency programmes. Most of the students involved in residency programmes are PhD students or post-doctoral students. Based on availability, each programme decides how many places and which areas to open for a residency course.

Other continuing and postgraduate programmes: Based on availability and offer, every Unit or Service of the Establishment may activate courses and post-graduate training activities regularly approved by the DVMC. These activities are published on the DVM website and through the veterinary professional associations.

Table 10.1.1 Number of students registered at postgraduate clinical training

	2017-2018	2016-2017	2015-2016	MEAN
INTERNS:				
Companion animals	11	3	4	6
Equine	3	2	3	2.6
Animal Production	1	0	0	0.3
Others: Pathology	1	0	0	0.3
Total	**16**	**5**	**7**	**9.3**
RESIDENTS EBVS SPECIALTIES:				
ECVP	3	3	2	2.3
ECAR	1	1	2	1.3
ECVPH	1	1	3	1.6
Neuropathology training for ECVN	2	0	1	1
Total	**7**	**5**	**8**	**6.6**

Table 10.1.2 Number of students registered at postgraduate research training

	2017-2018	2016-2017	2015-2016	MEAN
PhD	22	22	28	24
Funded researchers and Scholarship recipients	23	18	17	19.3
Total	**45**	**40**	**45**	**43.3**

Table 10.1.3 Number of students registered in other postgraduate programmes (including any external/distance learning courses)

	2017-2018	2016-2017	2015-2016	MEAN
MASTERS:				
DPM	8	8	0	5.3
FFHH	0	6	0	2
GESPAOC	10	10	0	6.6
VPHFH	15	20	28	21
EXTERNAL RESIDENCIES IN OTHER EBVS SPECIALTIES:				
American College of Veterinary Sport Medicine and Rehabilitation	1	0	0	0.3
European College of Equine Internal Medicine	1	1	1	1
Total	**35**	**45**	**29**	**36.3**

Table 10.1.4 Number of attendees in continuing education courses provided by the Establishment

	2017-2018	2016-2017	2015-2016	MEAN
Theoretical-Practical Course of Veterinary Cytopathology	9	9	9	9
Course of Abdominal Ecography and Echocardiography of the Dog	40	27	60	42.3
Training in Haematology and Cytology of Dogs and Cats	25	27	25	25.6
Total	**74**	**63**	**94**	**77**

Table 10.1.5 List of major funded research programmes in the Establishment which were on-going during the last full academic year prior to the Visitation (AY*)

SCIENTIFIC TOPICS	GRANT/ YEAR	DURATION (YEARS)
Canine Cancer Registry (CCR)	50.000	1
"Randagiamo"	40.000	1
24/7 ES	100.000	1
Zooiatric assistance for wild animals recovered from the territory of the Umbria Region	10.000	1
Basic Research	69.578	1-2
European, national and regional funds	627.000	1-2

10.2 Comments

The DVM provides a functional involvement of students in research activities. The percentage of students performing a research-based thesis is increasing (from 60% 2015-2016 AY to 74% 2016-2017 AY). Sufficient training in research is assured by courses included in the core curriculum, in supervised desk-based thesis elaboration, and additional actions (Journal Club, seminars and meetings).

However, research activities in the DVM suffer from the lack of structured departmental platforms and lack of a departmental dedicated research office giving more significant support in financing, planning and reporting. Moreover, the DVM also lacks technicians trained explicitly in advanced research.

Finally, poor economic support by the MIUR towards research in Italian universities render research calls more selective and almost inaccessible to the Veterinary Sciences.

10.3 Suggestions for improvement

Due to the insufficient economic support for research from the MIUR and the University, the DVM needs to rationalise better its resources regarding facilities and personnel dedicated to research.

The DVM should also provide a dedicated research office supporting administrative tasks and call proposing. Moreover, structured platforms matching international research networks should also be provided by the DVM.



11.

OUTCOME ASSESSMENT AND QUALITY ASSURANCE


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11.1 Factual information

11.1.1 DESCRIPTION OF THE GLOBAL STRATEGY OF THE ESTABLISHMENT FOR OUTCOME ASSESSMENT AND QUALITY ASSURANCE (QA), IN ORDER TO DEMONSTRATE THAT THE ESTABLISHMENT:

- has a culture of QA and continued enhancement of quality;
- **operates** *ad hoc*, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;
- collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities (*teaching, research, services*);
- informs regularly staff, students and stakeholders and involves them in the QA processes;
- closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;
- is compliant with ESG Standards.

One of the main objectives to be met in the mission of the University of Perugia consists of strict QA of all activities performed in its premises making learning proposals appealing for students and stakeholders. Since 2013, a QA system in teaching and research has been introduced and implemented to achieve this goal. The University QA system involves a number of central and departmental figures at three different levels.

First level. The University Rector, the Academic Senate, the Department Board, the Quality Presidium, and the Evaluation Unit provide and assure a University QA system and its consistent implementation and improvement. The Quality Presidium provides actions for the QA, the Evaluation Unit (EVU) assesses QA management and results for all departments and the entire university, while the Academic Senate and Rector's role is to approve and certify the above (see Organogram in Appendix 4.1b).

Second level. All departments provide a QA system involving PDC and DVMC. It is continuously checked by a DVM Quality Responsible (QR) for teaching, DVM Delegate for Security, and a QR for overall DVM.

Based on the purposes and reports produced by the Delegate for research and the Delegate for security in charge, respectively, and published at DVMC, the DVMC defines actions to promote and improve research and security quality. Diversely, based on PDC, QR for teaching in charge, and EVU purposes and reports published at DCC, the DCC defines actions to promote and improve DVM teaching quality.

Third level. Involvement in the QA system is shared by everyone (undergraduate and postgraduate students, practitioners, AS, SS) living and working within the Establishment. Specifically, students take part in teaching QA through evaluation forms. As for security QA, personnel working in all Units are involved and collaborate with the University Security Office and are in accordance with risk analysis (see Standard 4 and Appendix 6.10). All users must verify that procedures are available and respected.

Within this framework, security and activity procedures performed in all premises (OVUD, AZD, laboratories, necropsy rooms, classrooms, offices) have been provided, published, checked and implemented for throughout the years and under the supervision of
OVUD = Health Director
AZD = Health and Zootechnical Directors
Laboratories = Unit Coordinators
Necropsy rooms = DVMC
Classrooms = DVMC
Offices = Didactic and Administrative Secretary, respectively.

1. **Quality Responsible or QA members:** Quality Responsible in charge consists of 2 members of the AS. Precisely, the Establishment provides a QR for QA in the degree course and a QR of the entire DVM. Their task is to guarantee that all procedures and rules in quality issues are respected; they are in close contact with the University Quality Presidium which provides information concerning strategies, procedures, and deadlines for due reports. Additionally, the Establishment provides a Delegate for security, which mediates between services/premises staff and the University Security Office. All QRs are named by the Head.
2. **Peer Didactic Committee (PDC)** is composed of 7 Student Representatives and 7 members of the AS. The DC President, QR for teaching and QR for DVM are also invited. Due to the variability of its members, the PDC provides discussions on teaching issues according to differing and multiple points of view as well as proposals in teaching quality improvement which is then presented to the DCC for final approval.
3. **Degree Course Council (DCC)** is the final point of the teaching QA system. The DCC includes AS members involved in the degree course and some Student Representatives. In the DCC, actions proposed by the PDC are discussed and voted for final approval or are rejected. In case of approval, the proposal officially becomes part of the DC General Guidelines and published on the DVM website. Contrarily, if rejected, the PDC provides a new proposal based on the motions of the DCC.
4. The **cyclical checking** of the QA system is defined by the Annual Report (SUA) produced by the PDC, updated by the DC President and approved by DCC. SUA is a document written by a specific PDC sub-committee including the DC President, the QR for teaching and a student representative. In this document, all the indicators provided by the AVA-ANVUR National QA system, active from 2013, are assessed as satisfactory or non-satisfactory. This checklist



is useful in comparing previous AYs and assesses both potential improvements and retrogressions in teaching quality of the DC. (See organogram in Appendix 4.1a).

The Annual Report outlines the strengths and weaknesses of the DC and is communicated to the DCC by the DC President. After DCC approval, the document is sent to AVA-ANVUR which annually investigates achievements and continuity of quality standards in university teaching. This control is part of the QA system adopted by the MIUR and incorporates financial, teaching and research issues.

The annual verification must satisfy AVA standards providing a significant relationship between internal and external sources. ANVUR collects data, analyses and sends it to the DVM. Subsequently, the DVM supply feedback on the best and worst results and compare them to the expected ones pertaining to different issues. By juxtaposing internal data and comments to the given external standards and expected results, every year the DVM has the opportunity to modify/verify/close the PDCA cycle. The Annual Report is the main instrument for the Establishment to verify that the DVM PDCA cycle closes with the expected results and within the established times.

As well as SUA, **DCC meetings** organised during the AY contribute to close the PDCA cycle in progress and highlight potential renewals of it. DCC meetings are essential to collegially discuss (AS members and student representatives) strategies produced by the PDC. Moreover, the presence of the Student Representatives in both PDC and DCC is an opportunity to consider issues on behalf of students. DCC meetings are an excellent opportunity to collect relevant information and input from **internal sources** hence to ameliorate the QA system.

Teaching evaluation forms completed by students showcase, for each semester/year, a thorough and updated prospect of the teaching course and aids in detecting, finding and solving issues as soon as possible.

As for **external sources,** additionally to the previously mentioned AVA and ANVUR standards (see Appendix 4.1h), DVM and DCC take into account the evaluation reports by EPT providers, "Alma Laurea" evaluation system, CENSIS raking, and from LTRC and OSEB meetings.

University and DVM QA systems also include research activity and services. Regarding **research activity**, QA is assured by the MIURs periodic evaluation (VQR) issued by ANVUR (http://www.anvur.it/attivita/vqr/). To this purpose, the DVM Delegate for Research (QR) monitors the Establishment's research activities, research groupings between different research teams and the production of interdisciplinary national and international projects.

The **VTH services** are conducted in accordance with procedures planned by OVUD MC, which govern the use of premises and facilities, and standard clinical performance, benefiting both patient and owner. Even though the principal focus of the procedures are teaching issues, the DVM Quality Responsible periodically ascertains that all procedures are observed by all staff working in the Establishment or attending it. The issues he checks for VTH or the Establishment are reported to OVUD MC or DVMC, respectively, for improving actions. Furthermore, the customer satisfaction form is an essential instrument to collect data from external sources regarding VTH services. Customer feedback is collected and discussed in the OVUD MC, which in turn promotes actions to solve emerging issues. Consequently, AS and SS working at the VTH are kept informed on new

provisions by the OVUD Health Director or by the person in charge of Units/Services.

11.1.2 DESCRIPTION OF THE FORM BY WHICH THE STRATEGY, POLICY AND PROCEDURES ARE MADE FORMAL AND ARE PUBLICLY AVAILABLE

All the strategies of teaching QA are formalized and published by the DC President at the DCC and then on the website, along with DG and UGG. The proposals are finally approved by DVMC and then communicated to the AS and students through an e-mail system that connects students and staff of the Establishment. The results of the external source analysis are published on the official website of the AVA/ANVUR system (http://www.anvur.it/attivita/ava/).

11.1.3 DESCRIPTION OF THE REGULAR PUBLICATION OF UP TO DATE, IMPARTIAL AND OBJECTIVE INFORMATION, BOTH QUANTITATIVE AND QUALITATIVE, ABOUT THE EDUCATIONAL PROGRAMMES AND AWARDS THE ESTABLISHMENT OFFERS.

The DVM insures cyclical publishing on the website of information for students, prospective students and staff working at the Establishment (http://www.medvet.unipg.it/). From the end of the AY to the start of the new one, the DG and UGG, Lecture and Practical Activity Timetable, and the exam timetable are published on the website. As to the teaching programme, every subject has its own didactic form (Syllabus), reporting a detailed description of objectives, student assessment procedures, prerequisites, suggested resources, and textbooks. The Syllabus also outlines programme requisites, indicating the number of hours for each topic. Every year, the didactic form is updated, based on independent actions by teachers or requests made by the PDC and QR for teaching. In the personal page of UniStudium, each teacher may include, together with the Syllabus, procedures to carry out practical activities and procedures for security in labs and other DVM premises (VTH, AZD). Students may access this page and be informed about the issues mentioned above.

The University provides an e-mail account to all enrolled students and staff members to access SOL (online Student Secretariat). Through the SOL, in the form of a newsletter, both students and teaching staff receive updates and share information about the Degree course such as meetings, seminars, and tutorial assistance.

11.1.4 DESCRIPTION OF THE QA PROCESSES NOT YET DESCRIBED IN THE OTHER 10 STANDARDS, WHEN AND BY WHOM THEY ARE COMPLETED)

All the processes have been described. 11.1.5 Description of how and by who the QA strategy of the Establishment is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Based on the guidelines and standards AVA/ANVUR, the QA strategy of the Establishment is defined by the University Quality Presidium. The entire University QA strategy is available at the university website (https://www.unipg.it/ateneo/organizzazione/organi-di-gestione-di-controllo-consultivi-e-di-garanzia/presidio-di-qualità-di-ateneo).

At DVM, QA strategy involves the Head, the QR for DVM, the QR for teaching, the Delegate for research, the Delegate for DVM security, the PDC and the DCC.

The QA strategy bounds the DVM to cyclically providing events and documents: the specific PDC sub-committee including the DC President produces an annual self-evaluation report (SUA) in which the results of the PDCA cycle are analysed. Since 2018, SUA also includes a form to compare DVM data with that produced by other Regional and National departments of Italy. As a result of this document and the reported comparison, the DVM is able to clearly verify whether actions performed during the past year are useful and is encouraged to improve ulteriorly. Moreover, the Evaluation Unit periodically achieves an *Audit* as an external evaluation of the DVM.

Lastly, all findings concerning internal strategies and results are sent to the University EVU.

11.2 Comments

The introduction of a QA system and strategy is of a relatively recent acquisition for Italian university culture. Due to the National AVA-ANVUR Agencies and the VQR QA-system, university teaching and research has been submitted to the PDCA cycle for QA. Thus resulting in an increased awareness of the Establishment and academic staff on the necessity to improve actions and results in teaching and research for student and stakeholders in addition to augmenting effective competition with other Italian Establishments and Universities.

11.3 Suggestions for improvement

The QA system has not contributed in simplifying academic bureaucracy thus a stabilization of QA criteria is necessary to best direct actions and activities. The electronic systems adopted to call data should also be standardised at national level to avoid wasting unnecessary time inserting and collecting the same required data for QA.



12.

INDICATORS


SIGILLVM GENERALE CIVITATIS TRAIECTI
SCS
HER
LAN
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VS
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12.1 Factual information

Name of the Establishment: Department of Veterinary Medicine of the University of Perugia (Italy)
Date of the form filling: October 31st, 2018

CALCULATED INDICATORS FROM RAW DATA		ESTABLISHMENT VALUES	MEDIAN VALUES[1]	MINIMAL VALUES[2]	BALANCE[3]
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0,167	0,16	0,13	0,041
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0,760	0,87	0,59	0,170
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0,603	0,94	0,57	0,036
I4	n° of hours of practical (non-clinical) training	1071,500	905,67	595,00	476,500
I5	n° of hours of clinical training	817,167	932,92	670,00	147,167
I6	n° of hours of FSQ & VPH training	264,167	287,00	174,40	89,767
I7	n° of hours of extra-mural practical training in FSQ & VPH	82,000	68,00	28,80	53,200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	50,764	70,48	42,01	8,754
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	0,574	2,69	0,46	0,110
I10	n° of equine patients seen intra-murally / n° of students graduating annually	6,271	5,05	1,30	4,973
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	3,260	3,35	1,55	1,715
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0,000	6,80	0,22	-0,223
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	11,822	15,95	6,29	5,527
I14	n° of equine patients seen extra-murally / n° of students graduating annually	0,000	2,11	0,60	-0,595
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	6,938	1,33	0,55	6,391
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0,380	0,12	0,04	0,335
I17	n° of companion animal necropsies / n° of students graduating annually	1,399	2,07	1,40	-0,001
I18	n° of ruminant and pig necropsies / n° of students graduating annually	0,481	2,32	0,97	-0,490
I19	n° of equine necropsies / n° of students graduating annually	0,581	0,30	0,09	0,489
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	0,496	2,05	0,69	-0,197

I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0,159	0,20	0,06	0,096
I22*	n° of PhD graduating annually / n° of students graduating annually	0,109	0,15	0,09	0,021

12.2 Comments

Overall, the calculated Indicators from raw data result over the minimal value except for a few of them.

I1, I2, I3. As for the AS and SS provided for students graduating annually, the ratio is closely related to on-going retirement for some personnel staff working at the DVM. In any case, a minimal/median value would be guaranteed by the expected decrease trends for the student number in the next consecutive years.

I4, I5, I6, I7, I8, I9, I10, I11, I12, I13, I14. As for the curricular practical-non clinical, clinical, and FSQ/VPH training, along with the intramural caseload, Establishment policies and the many efforts on behalf of all the AS to attain ESEVT standard for each enrolled student seem to have produced outstanding results despite many factors influencing the number of students attending the DC for each AY. Contrarily, due to the high VTH caseload and the necessity to promote student participation in the VTH activities, in the last AYs, the Establishment has not encouraged extra-mural clinical activities for equine and companion animals (**I12, I14**).

I15, I16. In addition, the curriculum provides a very high number of visits to food-producing animals herds per student because of the

efficacy of relationships and collaborations between the Establishment and extra-mural premises and plants.

I17, I18, I19, I20. The number of necropsies remains a critical Indicator, except for horses. The delayed introduction of stricter procedures at VTH for AS and SS, as well as the informed consent for owners, may have contributed to this data, especially in companion animals. As for necropsies of food-producing animals, farmers are accustomed to submitting them for necropsy to the IZS instead of the DVM. Moreover, the varied geographical setting of the region and the lack of sizeable intensive farming make it challenging to perform necropsical work in the field. Weak technical support for dead animal transport service may have contributed to this data.

I21, I22. Finally, as for FTE specialised veterinarians involved in veterinary training, and number of PhDs graduating annually per number of students graduating annually, ratios are from minimal to median despite the decreased PhD positions provided by the University and the insufficiently driving Establishment policies for certificated and specialised veterinarians involved in the DC.

12.3 Suggestions for improvements

To maintain good ratios AS and SS/students graduating annually, new enrolments in AS and SS should be requested by the Establishment and promoted by the University, at least until the number of students attending the Veterinary Medicine DC will become stable as per MIUR standards. The many efforts made by the Establishment in improving student progression should continue to stabilise this data further.

As for necropsical data, we expect that the new actions and procedures introduced in the VTH will provide a higher number in the next months and years. Many more efforts and investments should be made to improve DVM facilities for dead food-producing animal transport to the Establishment. Moreover, the close collaboration with IZS in necropsy activities should be confirmed in the next years to support this deficiency.



Alteticonavolta
Student Football Team

LIST OF ABBREVIATIONS

AC = Ambulatory Clinics (Clinica Mobile)

ADE = Elective Teaching Activities

ANVUR = National Agency for the Evaluation of the University System and Research

AVA = Self Evaluation, Periodic Evaluation, and Validation

AP = Associate Professor

AS = Academic staff

AY = Academic Year

AVELS = Agricultural, Veterinary and Engineering Librarian Structure

AZD = Teaching farm

CCR = Canine Cancer Registry

CENSIS = Social Invest Study Center (Centro Studi Investimenti Sociali)

CeSDA = Research Center on Animal Pain

CINECA = Nord-East Inter-university Consortium for the Automatized Assessment

CIP = Corso Integrato Professionalizzante (Old form of Elective Teaching Activities)

CRCS = Study Center of Sport Horse

CSB = University Library Center – Centro Servizi Bibliotecari

CUN = National University Council

DB = Departmental Board (Giunta)

DC = Degree Course

DCC = Degree Course Council

DG = Didactic Guidelines (Regolamento Didattico)

DOS = Day One Skills

DPM = Dairy Production Medicine

DVM = Department of Veterinary Medicine

DVMC = DVM Council

DS = Didactic System (Ordinamento Didattico)

DSA = Specific Learning Disturb

DSS = Discipline Scientific Sector

ECAR = European College of Animal Reproduction

ECAVBM = European College of Animal Welfare and Behavioural Medicine

ECM = Lifelong Learning in Medicine

ECTS = European Credit Transit and Accumulation System

ECVD = European College of Veterinary Dermatology

ECVN = European College of Veterinary Neurology

ECVP = European College of Veterinary Pathology

ECVPH = European College of Veterinary Public Health

EPT = External Practical Training

ES = Emergency Service

ESEVT = European System of Evaluation of Veterinary Training

ESC = ESEVT Standard Committee

ESG = Standard and Guidelines for QA in the European Higher Education Area

EU = European Union

EVU = Evaluation Unit (Nucleo di Valutazione)

FC = outside prescribed time students (Fuori corso)

FFHH = Feed and Food Safety for Human Health

FFO = Ordinary Functioning Budget

FNOVI = National Federation of the Italian Veterinary Professional Orders

FT = Full time

FP = Full Professor

FVE = Federation of Veterinarians of Europe

GESPAOC = Health and Production Management of Sheep and Goat Breeding

GG = General Guidelines

HACCP = Hazard Analysis and Critical Control Point

IT = Information Technology

IZS = Istituto Zooprofilattico Sperimentale di Umbria e Marche

LA = Large Animals

LEBA = Laboratory of Ethology and Animal Behaviour

LD = Teaching Lab

LTRC = Local Territorial Relationship Committee

MC = Management Committee (Comitato Gestione)

MIUR = Italian Ministry of Education, University and Research

NSQ = National Scientific Qualification

OFA = Additional Learning Obligations

OSEB = Official State Examination Board

OVUD = University Veterinary Teaching Hospital

PA = Practical Activity

PC = Personal Computer

PDC = Peer Didactic Committee

PDCA = Plan-Do-Check-Act

PG = Perugia

PPT = Professional Practical Training

QA = Quality Assurance

QAS = Quality Assessment System

QP = Quality Presidium (Presidio di Qualità d'Ateneo)

QR = Quality Responsible

QR code = Quick Response code

S = Semester

SA = Small Animals

SCM = Supply Chain Meeting

SCT = Semester Coordinator Team

SDL = Self Directed Learning

SLD = Student with Learning Disabilities

SIOVUD = Informatic System of VTH

SOL = Online Secretary

SOP = Standard Operating Procedures

SP = Strategic Plan

SPERIVET = Health and Veterinary Experimental Sciences

SSD = Discipline Scientific Subject

SR = Reed Weeks

SS = Support Staff

SV = Green Weeks

TAB = Technical, Administrative, Librarian staff

TAR = Regional Administrative Court

TP = Teaching Pole

TQ = Teaching Quality

TR = Professional Practical Training

TS = Temporary Staff

TSP = Teaching Strategic Plan

TUCEP = Tiber Umbria Comett Education Programme

UGG = University General Guidelines (Regolamento Generale d'Ateneo)

UNIPG = University of Perugia

USL = Local Health Unit

DVM = Veterinary Medicine Department

VPHFH = Veterinary Public Health and Food Hygiene

VPN = Virtual Private Network

VQR = Quality Research Evaluating System

VTH = Veterinary Teaching Hospital

Y = Year



Department of Veterinary Medicine (DVM) University of Perugia (Italy)

Self Evaluation Report 2019