



Dipartimento di Scienze Veterinarie Università di Pisa



Self-Evaluation Report

Department of Veterinary Sciences

University of Pisa

EAEVE Visitation, 4th – 8th April 2022

Acknowledgment

This Self-Evaluation Report results from the collaboration and efforts of all the Department members, including students, support staff and academic staff. It has been prepared in compliance with the ESEVT SOP Zagreb 2019 as amended in September 2021. It was sent for comments and corrections to the members of the Veterinary Education Establishment and finally approved by the Department Council on January 25th, 2022.

We warmly thank all the contributors for their willingness to provide factual data, and specific information. We are also grateful to the staff members who worked to organise the expert visit.

Hopefully, it will provide an accurate and useful basis for the evaluation work that will be carried out in April by the visiting expert team in Pisa.

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List of acronyms & abbreviations

A

- **AMR:** Rapporto di Riesame Annuale / Annual Monitoring Report
- **ANVUR:** Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca / National Agency for the Evaluation of Universities and Research Institutes
- **AVA:** Autovalutazione, Valutazione periodica, Accreditamento / Self-assessment, Periodic Evaluation, Accreditation
- **AY:** Anno Accademico / Academic Year

C

- **CIRAA:** Centro di Ricerche Agro-Ambientali “Enrico Avanzi” / Agro-Environmental Research Center “Enrico Avanzi”
- **CRR:** Rapporto di Riesame Ciclico / Cyclic Review Report
- **CUG:** Comitato Unico di Garanzia / Guarantee Body

D

- **DAFE:** Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali / Department of Agriculture, Food and Environment
- **DEM:** Dipartimento di Economia e Management / Department of Economy and Management
- **D-JFSC:** Commissione Paritetica di Dipartimento / Department Joint Faculty Students Committee
- **DVM Council:** Consiglio di Corso di Studio in Medicina Veterinaria / Degree in Veterinary Medicine Council
- **DVM Course:** Corso di Studio in Medicina Veterinaria / Degree Programme in Veterinary Medicine
- **DVM-JFSC:** Commissione Paritetica del Corso di Studio in Medicina Veterinaria / Degree in Veterinary Medicine Joint Faculty Students Committee
- **DVS:** Dipartimento di Scienze Veterinarie / Department of Veterinary Sciences
- **DVS Council:** Consiglio di Dipartimento / Department Council
- **DVS Head:** Direttore di Dipartimento / Head of the Department

E

- **EAEVE:** European Association of Establishments for Veterinary Education
- **EBVS:** European Board of Veterinary Specialisation
- **ECOVE:** European Committee of Veterinary Education
- **ECTS:** European Credits Transfer System
- **EPT:** External Practical Training
- **ESEVT:** European System of Evaluation of Veterinary Training
- **ETD:** Electronic Theses and Dissertations

F

- **FSQ:** Food Safety and Quality
- **FTE:** Full-Time Equivalent

I

- **IZS:** Istituto Zooprofilattico Sperimentale / Experimental Zoophylactic Institute

L

- **LA:** Grossi animali / Large Animals
- **LAF:** Laboratory Animal Facility

M

- **MUR:** Ministero dell’Università e della Ricerca / Ministry of University and Research

N

- **NSQ:** National Scientific Qualification

O

- **OFA:** Obblighi Formativi Aggiuntivi / Additional Learning Requirements
- **OPBA:** Organismo preposto per il Benessere Animale / Body Responsible for Animal Welfare

P

- **PiB:** Pisa Buildings
- **PPT:** Tirocinio / Professional Practical Training
- **PPT Committee:** Commissione Tirocinio / Professional Practical Training Committee

- **PQA:** Presidio Qualità di Ateneo / UniPi Presidium for Quality Assurance

Q

- **QA:** Assicurazione Qualità / Quality Assurance
- **QuB:** "Le Querciole" Buildings

S

- **SA:** Piccoli animali / Small Animals
- **SBA:** Sistema Bibliotecario di Ateneo / UniPi Library System
- **SER:** Self-Evaluation Report
- **SID:** Sistema Informatico Dipartimentale / Departmental IT System
- **SLD:** Specific Learning Disabilities
- **SOP:** Standard Operating Procedures
- **SPB:** San Piero a Grado Buildings
- **SPC:** Commissione di Programmazione / Staff Planning Committee
- **SPP:** Servizio Prevenzione e Protezione / Prevention and Protection Service
- **SUA-CdS:** Scheda Unica Annuale del Corso di Studi / Degree Course Single Annual Report

U

- **UniPi:** Università di Pisa / University of Pisa
- **USID:** Ufficio Servizi per l'Integrazione di studenti con Disabilità / Services Office for the Integration of Students with Disabilities

V

- **VEE:** Veterinary Education Establishment
- **VPH:** Veterinary Public Health
- **VPN:** Virtual Private Network
- **VQR:** Valutazione della Qualità della Ricerca / Research Quality Assessment
- **VTH:** Ospedale Didattico Veterinario / Veterinary Teaching Hospital
- **VTH Council:** Consiglio dell'Ospedale Didattico Veterinario / Veterinary Teaching Hospital Council

The DVS in brief...

Surface area

DVS facilities are dislocated in 14 ha / 16,500 m² of buildings.

Workforce

974 students in 2020-2021 (360 of which are DVM students).

121 staff (including 64 academics).

Budget

Average 2018-2020: €10,734,323.29 (of which €8.05M in salaries) excluding services and library budget.

Technical facilities and centres of expertise within the VEE as of 2022

Veterinary Teaching Hospital (VTH).

Veterinary Anatomy Museum.

Research labs:

HistoLab; Etovet; Histopathology and dermatopathology; Neuropathology; FishLab; Food Quality; Infectious Disease; Parasitology, Reproduction Technology; Meat Quality; Milk Quality; Feed Quality; Biochemistry and Apidology; Food Microbiology and Physico-chemical Analyses.

Teaching labs:

1 chemistry/microbiology lab; 2 microscopy labs; 1 necropsy room; 1 dissection room; 1 clinical skill lab.

UNI EN ISO 9001:2015 certified labs/services:

Diagnostic Histopathology; Clinical Pathology; Pharmacology and Toxicology; Equine Semen Production; Genetic Biotechnologies; Applied Biology and Ecotoxicology; VTH Pharmacy; Transfusion Medicine; VTH stock warehouse.

Other degree programmes

First cycle

Sciences and technologies of animal production.
Animal breeding technology and dog training.

Second cycle

Sciences and technologies of animal production.
Food quality and biosecurity (interdepartmental).

Post-graduate programmes

PhD programme:

Veterinary Sciences.

Master programmes (last 5 years):

Diagnostic imaging; Veterinary oncology; Companion animal ethology; Companion animal gastroenterology; Anaesthesia, analgesia, intensive care of companion animals; Veterinary clinical ethology; Food science: quality, safety and nutrition; Companion animal nephrology and urology; Dog training.

Specialisation schools

Inspection of food of animal origin; Pathology and clinics of companion animals; Animal health, breeding and zootechnical productions; Equine medicine and surgery.

Accreditations

Selected labs/services UNI EN ISO 9001:2015 certified.

DVS approved by EAEVE (2012).

Veterinary curriculum accredited by ANVUR (2019).

Partnerships and Internationalisation

Erasmus+ more than 30 agreements.

The DVS receives an average of 10 international professors each year for research and teaching exchange activity.

15 memorandum of understanding with international institutions.

1 double degree - Sciences and technologies of animal production - second cycle  .

Member of EAEVE.

Introduction

Brief history of the Veterinary Education Establishment (VEE) and of its previous European System of Evaluation of Veterinary Training (ESEVT) Visitations (if any)

The University of Pisa (UniPi) is a public institution with twenty Departments, and high-level research centres in the agriculture, astrophysics, computer science, engineering, medicine and veterinary medicine sectors. Furthermore, the University has close relations with the Pisan Institutes of the National Board of Research, with many cultural institutions of national and international importance, and with industries, especially those based in information technology, which went through a phase of rapid expansion in Pisa during the nineteen sixties and seventies.

UniPi was officially established in 1343, although a number of scholars claim its origin dates back to the 11th century. The earliest evidence of a Pisan “Studium” dates back to 1338, when the renowned jurist Ranieri Arsendi transferred to Pisa from Bologna. He along with Bartolo Da Sassoferrato, a lecturer in Civil Law, were paid by the Municipality to teach public lessons.

The papal bull “*In supremæ dignitatis*”, granted by Pope Clement VI on September 3rd 1343, recognized the 'Studium' of Pisa as a 'Studium Generale'; an institution of further education founded or confirmed by a universal authority, the Papacy or Empire. Pisa was one of the first European universities that received this papal attestation, which guaranteed the universal, legal value of its educational qualifications.



The subjects taught first were: Theology, Civil Law, Canon Law and Medicine. In 1355 Francesco Da Buti, the well-known commentator of Dante's Divine Comedy, began teaching at the "Studium".

Pisa and its "Studium" underwent a period of crisis around the turn of the 15th century: the Florentines' conquering of the town ruined its economic and social life: there is a lack of documented evidence on the

University's regular functioning for decades.

In 1473, thanks to Lorenzo dei Medici, the Pisan Studium resumed its systematic development and the construction of a building for holding lessons was built in 1486. The building - later known as Palazzo della Sapienza (The Building of Knowledge) - was located in the fourteenth-century Piazza del Grano. The image of a cherub was placed above the Gate “Dell'Abbondanza” (the Gate of Abundance), leading to the Piazza, which is still today the symbol of the University. The papal bull sentence “*In supremæ dignitatis*” stands on UniPi logo as a promise of quality.

Following the rebellion against Florence in 1494 and the war following, the Pisan Studium suffered a period of decline, and was transferred to Pistoia, Prato and Florence. The ceremonial re-opening of the University, on 1st November 1543, occurred under the rule of Duke Cosimo I dei Medici, who was considered as a second inauguration. The statute of 1545 improved the quality of the University and the Pisan Athenaeum became one of the most notorious in Europe for teaching and research. Luca Ghini held the chair of “Semplici” (Botany), and was the founder of the world's first Botanical Gardens, succeeded by Andrea Cesalpino, who pioneered the first scientific methodology for the classification of plants and is considered a forerunner in the discovery of blood circulation. Gabriele Falloppio and Marcello Malpighi lectured in Anatomy and Medicine.

Galileo Galilei, who was born and studied in Pisa, became a professor of Mathematics at the Pisan Studium in 1589.

The annexation of Tuscany to the Napoleonic Empire resulted in the transformation of the Studium into an Imperial Academy: the Athenaeum became a branch of the University of Paris and the courses and study programmes were structured following the French public education model. Five new faculties were established (Theology, Law, Medicine, Science and Literature), along with examinations, different qualification titles and graduation theses. In 1813 'La Scuola Normale Superiore' was established, as a branch of the 'Ecole Normale de Paris'.

Today Pisa hosts three Universities: UniPi, Scuola Normale Superiore and Sant'Anna School of Advanced Studies; the collaboration among the three athenaei, and the number of students and staff living in the city, make Pisa a real University Campus, creating an environment conducive to learning. The first news relating to teaching of Veterinary Medicine in Pisa dates back to 1818, the year in which Vincenzo Mazza, veterinarian of the Napoleon's "grand armée", opened a small school. However, it had to wait until 1839 for the first true Chair of Veterinary to be established, then annexed to the Faculty of Medicine of Pisa and directed by Felice Melchiorre Tonelli. In 1874, Prof. Luigi Lombardini decided to designate a room in the Anatomy Cabinet to the collection and exhibition of the anatomical preparations used up to then for educational purposes, thus creating the first nucleus of the Veterinary Anatomy Museum. In 1923 the Higher School of Veterinary Medicine was transformed into the Royal Higher Institute of Veterinary Medicine, with an autonomous and independent organisation from the University. In 1934 the Institute became the Faculty of Veterinary Medicine and returned to be part of the University definitively, keeping the one in Via Savi as its headquarters, thus associating its history with that of the Hospital. In 1957, with the Bill Act C.3338 of November 29, 1957, the construction of new facilities in Viale delle Piagge was approved. The works, based on projects by Italo Gamberini and Loris Macchi, began in 1962 and were completed in 1964. In 1965 the faculty moved to its current location in Via delle Piagge (Pisa site of the VEE).

In year 2000, the first new premises for the clinical sectors were officially inaugurated (Stage 1), and all premises including the Veterinary Teaching Hospital (VTH) were completed in winter 2009 (Stage 2). These premises are located near the small village of San Piero a Grado, approximately 10 km south-west of the facilities located in Pisa.

The construction of the Stage 3 Project at San Piero a Grado, and thus the full completion of the Department was first approved by the Faculty Council (Resolution number 139 Academic Year 2010-2011) on the 27th of July 2011, and later modified. Later, in the decision n. 194/2017 of the University which allocated resources for the period 2017-2019, the Stage 3 was again approved and a new executive project was drawn. The definitive Department of Veterinary Sciences (DVS) in San Piero a Grado is expected to be ready in 2025.

The first European Association of Establishments for Veterinary Education (EAEVE) visit dates back to Academic Year (AY) 1997-1998. In that occasion the Faculty of Veterinary Medicine in Pisa was not approved. A second visit in 2009 showed two major deficiencies (facilities for ruminants and teaching in bovine medicine; lack of mobile clinic for farm animals) and several minor deficiencies whereby decision was again not approval. The Faculty of Veterinary Medicine of the UniPi was finally fully approved after a revisitation in 2012.

Main developments since the last Visitation

Since the last EAEVE Visitation, the full governance of Italian University Institution was revolutionised by the Italian Law no. 240/2010.

Since September 2012, the Faculty of Veterinary Medicine and its three original Departments merged into a single VEE, the DVS of the UniPi. Since November 2020, Prof. Francesco Paolo Di Iacovo is the Head of the Department (DVS Head).

Furthermore, the Italian Law no. 240/2010 introduced two assistant professor figures: type A - junior (three-year term position) and type B - senior (three-year tenure track position). Type B assistant professors will become permanent associate professor after obtaining a National Scientific Qualification (NSQ) and a positive evaluation from the Department. Permanent assistant professor positions are no more present in the Italian system.

Changes in the Department, that may affect ESEVT compliance are:

Area 1 – Objectives, Organisation, and QA Policy

- a. Development of a Strategic Plan 2018/2022, which includes a Mission Statement and a SWOT analysis.
- b. New organisational structure: a Staff Planning Committee (SPC), facilitating decision-making processes concerning the human resources of the VEE.

- c. In March 2019, the National Agency for Evaluation of Universities and Research Institutes (ANVUR) evaluated our DVM programme. The outcome of the visit was fully satisfactory.
- d. Some laboratories and services of the VEE have been certified UNI EN ISO 9001:2015.

Area 3 – Curriculum

- a. Teaching syllabi, available in advance for students, where specific learning outcomes, assessment criteria and subject programmes are clearly stated. Detailed communication of activities by using the ESEVT Standard Operating Procedures (SOP) nomenclature.
- b. Introduction of the Annual Monitoring Report (AMR) and of the five years Cyclic Review Report (CRR). Both documents include self-evaluation of quantitative indicators on student careers, attractiveness, internationalisation, employability of graduates, quantity and qualification of the teaching staff, satisfaction of graduates. The process helps, amongst other goals, in adjusting curriculum objectives in relation to the current needs of the veterinary profession.

Area 4 – Facilities and equipment

- a. The VTH is open 24/7 all year round.
- b. Introduction of new equipment in the VTH: dialysis, 16 slices CT scan, land-treadmill for horses.
- c. Remarkable increase of contracts for veterinary clinicians, covering different subjects.
- d. Better link between the Teaching Farm and the VEE: the Deputy Director of the institution that includes the farm (Centro di Ricerche Agro-Ambientali “Enrico Avanzi”, CIRAA) is a professor of the VEE; the Teaching Farm management is linked to the training activity of the DVM programme.
- e. New minibuses to bring students during the off-campus visits to slaughterhouses and food transformation facilities, cattle, small ruminant and pig herds or to poultry and farmed rabbit units were purchased.

Area 6 – Learning resources

- a. A self-learning biosecurity course for students was developed.
- b. Innovative teaching methods in practical activities were introduced (including video tutorial and the use of mannequins). This was also urged by the COVID-19 pandemic.
- c. Introduction of the Moodle e-learning platform with specific staff training activities.

Area 7 – Student admission progression, and welfare

- a. The number of enrolled students has been reduced by the Italian Ministry of University and Research (MUR) in all the Italian VEEs. This allowed to reduce the number of students per groups performing clinical practical activities thus favouring hands-on activities.

Area 8 – Student assessment

- a. Internal policy adopted by the Degree in Veterinary Medicine Council (DVM Council) on the alignment among learning outcomes, ESEVT Day One Competences and assessment methods.

Area 9 – Academic and support staff

- a. Academic staff personal development course “insegnare a insegnare” provided by UniPi.

Area 10 – Research programmes, continuing, and postgraduate education

- a. Introduction of a Research Committee promoting paths and actions to improve research.
- b. Introduction of a Third Mission Committee for the Promotion of the social role of DVS activity.

Major problems encountered by the VEE

The main problem of DVS is the location of premises in two separated sites, which is an obvious limiting factor for the best integration between students and staff involved in the early vs. late stages of the educational programme, preventing the exploitation of all synergies.

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

ESEVT SOP 2019 approved at the Zagreb General Assembly as amended in Turin in September 2021.

Area 1. Objectives, organisation, and QA policy

1.1. Mission Statement and objectives

The DVS has developed a Strategic Plan 2018/2022 (Annex 1 - [📄](#)), in line with the corresponding general plan adopted by the UniPi. The DVS Mission Statement identifies the following major aims: *“to study, do research, educate, collaborate and innovate in a quality setting with people and society in order to promote animal welfare, environmental sustainability and collective health”*.

The Degree Course in Veterinary Medicine (DVM Course) is explicitly intended to provide, in agreement with the EU Directives and ESG recommendations, adequate, ethical, research-based, evidence-based veterinary training that enables new graduates to perform as a veterinarian capable of entering all commonly recognised branches of the veterinary profession and to be aware of the importance of lifelong learning as also detailed in the DVS quality policy (Annex D - [📄](#)).

The VEE promotes internal quality improvement actions through the ESEVT-EAEVE, AVA (Autovalutazione, Valutazione periodica, Accreditamento - Self-assessment, Periodic Evaluation, Accreditation)-ANVUR, and UNI EN ISO 9001:2015 (for selected laboratories/services) quality management systems.

According to national legislation, the Italian university system operates in three broad compartments, namely Education (teaching), Research and the so called Third Mission (spreading culture, knowledge and transferring research results outside the academic community, thus contributing to social and cultural growth). VEE objectives as communicated in the Strategic Plan can be summarised as follows:

Teaching objectives

- to offer high quality education by innovative teaching, continue revision of syllabi and definition of a coherent curriculum;
- to streamline student careers providing appropriate tutoring and support;
- to provide a wide range of opportunities to students and graduates: internationalisation, postgraduate doctoral and specialist training, and job placement;
- to improve the liveability of the study environment and the technological support for training;
- to comply with the requirements of the EAEVE and the ANVUR;

Research objectives

- to support the prosperity of the society by performing research activities in different fields of the veterinary medicine, including One Health and the sustainability of animal productions;
- to generate and communicate valuable research outcomes;
- to improve internal and external communication of research activities in order to increase the ability in networking and fundraising, thus ameliorating DVS ranking and endeavours;
- to consolidate and strengthen the scientific quality of staff;
- to maintain/update facilities and equipment;

Third Mission objectives

- to enhance the quality of the services according to codified procedures;
- to increase DVS visibility by efficient communication and inter-institutional agreements;
- to increase society awareness on the role of veterinary professionals and veterinary science.

The Strategic Plan is annually monitored/updated by the DVS Council; the DVS Head with the support of his/her delegates, and the contribution of departmental committees carries out the preliminary drafting work and submits it to the DVS Council for discussion and approval.

The DVS is focused on continuously adapting its veterinary training programme to several bodies' requirements: primarily, the programme is designed to comply with EU Directive 2005/36/EC, the World Organisation for Animal Health recommendations on the Day One Competences [📄](#) and the 10 areas and standards set by the ESEVT in the most recent versions of the Manual of SOP. The programme aims to enable all new graduates to perform well in the different fields of the veterinary

profession, whether clinical or not. Student training is progressive and combines theoretical knowledge with practical skills and development of attitudes. The first two curricular years are almost exclusively dedicated to basic sciences and animal production subjects, whereas the following three years are mainly devoted to the clinical sciences, Food Safety and Quality (FSQ) and Veterinary Public Health (VPH). The DVS annually monitors and cyclically reviews the provided core curriculum in the framework of the ESEVT requirements and indicators, and the Italian AVA Quality Assurance (QA) system.

Until September 2021 a dedicated DVS committee (i.e., EAEVE Committee) was in charge to plan and propose actions aimed at increasing compliance of the DVM curriculum to the most recent version of ESEVT SOP. Most changes occurred since the last Visitation, as listed in the introduction and throughout the Self-Evaluation Report (SER), were suggested, planned and monitored by the EAEVE Committee and supported by the DVM/DVS governing bodies. More recently, EAEVE Committee functions were assigned to other existing DVS committees; a DVS Head referent for EAEVE accreditation (ESEVT expert) operates within the QA group and is responsible for facilitating/monitoring this integration process. Therefore, issues related to organisation, QA, finances, facilities and staff are now under the responsibility of the DVS Council; curriculum, animal and learning resources, student admission, progression and welfare and assessment policies are under the responsibility of the DVM Council (supported by its committees as detailed in paragraph 7.5 and Figure 7.5.1). The parithetic committees, Degree in Veterinary Medicine-Joint Faculty Students Committee (DVM-JFSC) and Department-Joint Faculty Students Committee (D-JFSC), act as monitoring bodies: the DVM-JFSC analyses teaching assessment questionnaires and, together with the DVM Course coordinator, analyses the adequacy of corrective actions identified by lecturers responsible of those subjects where weaknesses were highlighted; the DVM-JFSC also identifies and corrects curricular overlaps and inconsistencies, and deals with curriculum adaptations and students' progression/welfare related changes. The D-JFSC is in charge for the annual analysis of all the degree courses offered by DVS. This is accomplished by a) monitoring of the educational offer and the quality of teaching as emerged from students' questionnaires; b) identifying of the indicators to evaluate the results of the aforementioned activities; c) formulating opinions on the activation/suppression of study courses, and the consistency between assigned European Credits Transfer System (ECTS) and the degree course objectives; d) preparing an annual report on teaching activities. Review activities are performed by the Review Group by performing its duties on producing the AMR (annually) and the CRR (every 5 years).

1.2. Organisation of the DVS

UniPi, to which the VEE belongs, is a public institution which depends on the MUR. UniPi has a clear governance structure and defines its own Statute and regulations on educational, scientific, organisational, administrative, financial and accounting activities. The Rector serves as UniPi Head and official representative, and chairs the two main UniPi governing bodies, namely the Academic Senate and the Board of Directors. A General Director is responsible for the organization and management of UniPi services, resources and technical-administrative staff. UniPi includes 20 Departments.

Overall, 130 officially recognised degree programmes, one-hundred post-graduate courses (Specialisation schools and Masters) and 36 PhD programmes are offered. Detailed information can be found in UniPi website.

Veterinary students receive their training in the DVS, located in two sites: Pisa, viale delle Piagge 2 (downtown) and San Piero a Grado, via Livornese 120 (VTH), approximately 10 km away from Pisa.

The DVS is responsible for the DVM curriculum and offers other four curricula:

1. Sciences and Technologies of Animal Production - Bachelor level;
2. Sciences and Technologies of Animal Production - Master level, an international degree;

3. Animal Breeding Technology and Dog Training - Bachelor level ;
4. Food Quality and Biosecurity - Master level . International interdepartmental degree .

The DVS educational offer is further enriched by professionalising Masters, Specialisation schools and a PhD programme (as detailed in Area 10).

VEE details

Name of the VEE	Dipartimento di Scienze Veterinarie	
Institution	Università di Pisa	
Address of the VEE	Pisa Viale delle Piagge, 2 56124 Pisa	San Piero a Grado Via Livornese, lato monte 56122 San Piero a Grado
Telephone	+39 050 2210160	+39 50 2210100
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Title and name of the DVS Head	Francesco Paolo Di Iacovo (full professor)	
DVM Course coordinator	Prof. Alessandra Rota, DVM, PhD	
VTH Director	Prof. Micaela Sgorbini, DVM, PhD	

The DVS is hierarchically organised. The DVS Head is elected every 4 years by the DVS Council. He/she nominates a Deputy Head and the VTH Director and can allocate specific functions/activities to delegates. Degree course coordinators are elected every three years by the members of each Degree course council. The DVS Council and the DVM Council (in the case of the veterinary curriculum) are the decision-making bodies. The Department activity is managed by different committees chaired by the DVS Head himself or by relevant delegates/referent persons. All of them report to the DVM Council for major decisions. Similarly, the DVM is managed by a coordinator and different committees: the detailed workflow of the DVM degree management is provided in paragraph 7.5. Services are coordinated by the Administrative Manager that directly reports to the DVS Head; the VTH is coordinated by a Director directly appointed by the DVS Head, and VTH services are organised in 6 Operative Units. The VTH Director has currently the position of Deputy Director of CIRAA, the interdepartmental centre that manages the Teaching Farm. Several DVS members mostly from the clinical and animal production science areas are also member of the CIRAA Council.

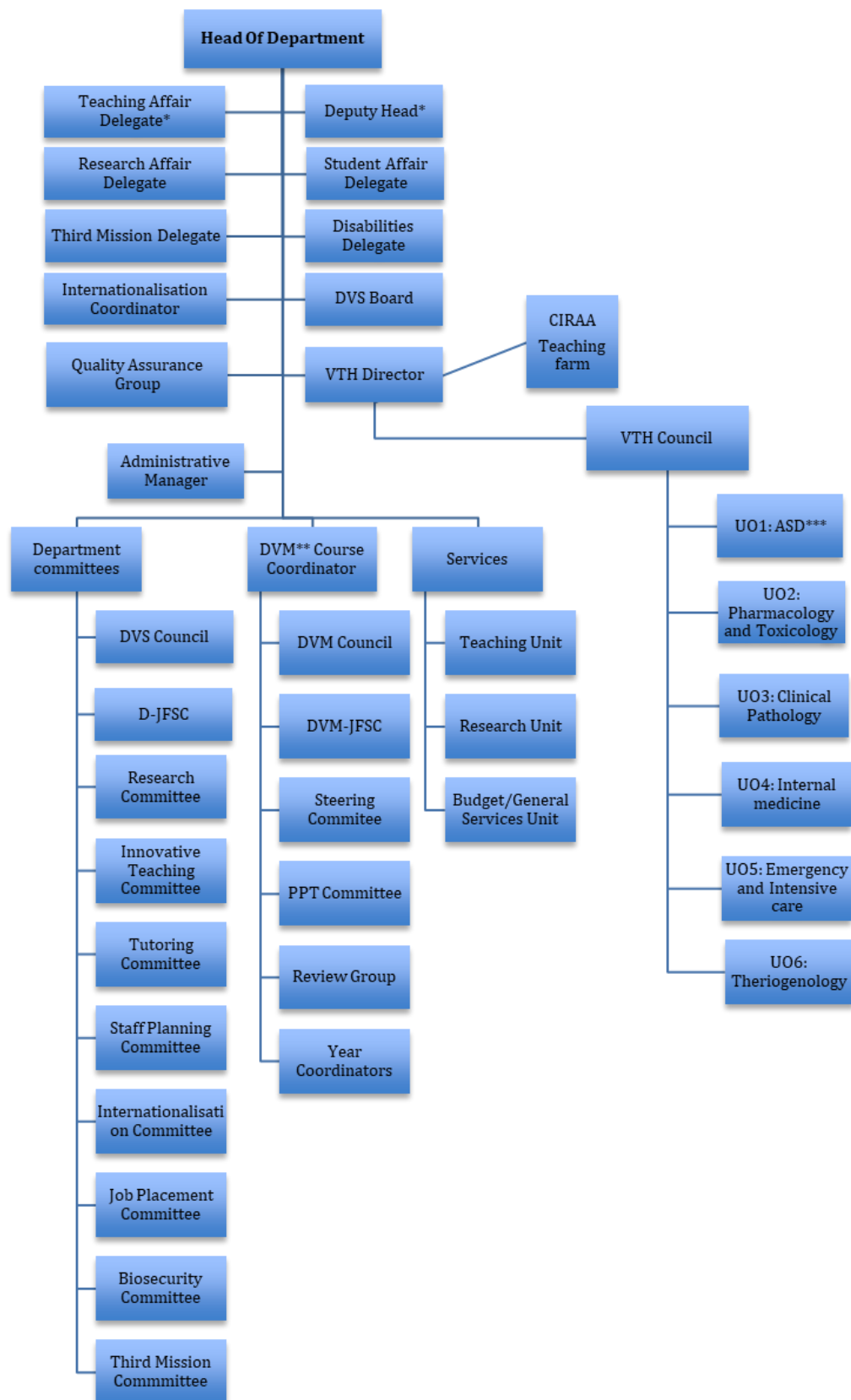
DVS Units - The DVS is managed and administered by the DVS Head through the DVS Council in accordance with the general strategies endorsed by the UniPi governing bodies. The DVS Head appoints five delegates with specific responsibilities on teaching, research, students, Third Mission, and disabilities as well as a QA group of three members, each one in charge for ESEVT, AVA, UNI EN ISO 9001:2015 QA systems respectively. The Deputy Head is also the teaching affair delegate in this 2020/24 mandate.

The DVS Council is chaired by the DVS Head. The DVM Council is chaired by the DVM Course coordinator, who holds a DVM degree and is a qualified veterinarian.

The clinical activity of the VTH is managed by the VTH Director (a qualified veterinarian) through the VTH Council. Further information on functions/responsibilities of the different VTH units is available on the VTH website .

There is also an Administrative Manager in the Department who coordinates all the administrative and accounting activities supporting the DVS teaching, research and Third Mission institutional activities. This Manager coordinates 3 units: Budget and general services unit, Teaching unit, and Research unit. He/she also participates in the meetings of the DVS Council with the functions of secretary.

The Teaching Farm belongs to the UniPi CIRAA  co-managed with the Department of Agriculture, Food and Environment (DAFE) .

Organisational chart

* The Deputy Head and the delegate to teaching affairs are the same person in this moment.

** The DVM Course was explained as a relevant example of a degree course organisation.

*** Anaesthesiology, Surgery and Diagnostic imaging.

DVS bodies - In the DVS there are several committees (see Table 1.2.1), among them, the DVS Council and the DVM Council are the main decision-making bodies for the DVM curriculum management. Discussion on specific issues during the DVS Council and the DVM Council meetings are possible only on a specific agenda communicated in advance by either the DVS Head or the DVM Course coordinator respectively.

Table 1.2.1. List of the VEE councils/boards/committees with description of their composition/function/responsibilities

Council/Committee	Composition	Main Functions/Responsibilities
DVS bodies		
<i>Department Council (DVS Council)</i>	All permanent academic staff, 5 support staff representatives, 2 post-graduate students, 7 students	Decision-making body of the DVS ; approves the Strategic Plan; approves proposals about staff planning and related budget needs; decides about the activation of new study programmes; organises and manage the teaching and research activities.
<i>Department Board</i>	DVS Head, Deputy Head, 6 academic staff, 1 support staff, 1 student and 1 post-graduate student	Proactive and executive body in support of the DVS Head.
<i>Department-Joint Faculty Students Committee (D-JFSC)</i>	5 academic staff members (including the DSV Head or teaching delegate) and 5 students	Monitoring of the DVS educational offer; monitoring of service activities provided to students; identification of the indicators for evaluating the results of the aforementioned activities; formulation of opinions on the activation and suppression of study courses, on the consistency between credits assigned to specific training activities and learning objectives; preparation of the annual report on the progress of teaching activities, based on the reports presented by individual degree programmes; uses the information contained in various documents (student's teaching assessment questionnaires, Review Group reports, SUA-CdS), data obtained from the University Statistical Office, as well as specific indicators (e.g., ESEVT indicators in the case of the DVM Course) to produce an annual document that analyses all the DVS curricula and proposes corrective actions when needed.
<i>Veterinary Teaching Hospital Council (VTH Council)</i>	VTH Director, 20 academic staff, 2 support staff, 2 PhD/residents	Decision-making body of the VTH (limited to issues which do not require the discussion/approval by the DVS or DVM Council).
<i>EAEVE Committee (until September 2021)</i>	Composed of 12 academic staff members and 2 students	To check the alignment of the DVM curriculum to the ESEVT Day One Competences and standards.
<i>Research Committee</i>	7 academic staff members including the research delegate	Analysis/monitoring of internal research activities, their evaluation in comparison to national and international reference parameters; delivering of the SUA-research report.
<i>Innovative Teaching Committee</i>	4 academic staff members including the Teaching delegate	To promote innovation in veterinary education.
<i>Tutoring Committee</i>	5 academic staff, 1 student, 1 support staff	Students' orientation and tutoring activities.
<i>Quality Assurance Group</i>	3 academic staff	To develop synergies among the QA systems.
<i>Staff Planning Committee (SPC)</i>	Composed of 17 academic staff members	Staff recruitment planning.
<i>Internationalisation Committee</i>	6 academic staff members.	To support the incoming and outgoing students and staff members. To increase the capacity to build national and international research networks.
<i>Job Placement Committee</i>	6 academic staff members.	Post-graduate career service activities.

Council/Committee	Composition	Main Functions/Responsibilities
<i>Biosecurity Committee</i>	3 academic staff members and 2 technical staff members	Safety and biosecurity interventions in the DVS premises; Biosecurity manual update.
<i>Third Mission Committee</i>	5 academic staff members including the director delegate for the Third Mission	Promotion of the social role of DVS activity.
DVM Course bodies		
<i>Degree in Veterinary Medicine Council (DVM Council)</i>	DVM Course coordinator, all the academic staff involved in the programme and 5 students	Decision-making body of the DVM Course. Adopts resolution on all aspects related to the DVM curriculum, receives inputs from the DVM-JFSC, the D-JFSC, the PPT Committee, the Steering Committee and the Review Groups.
<i>Degree in Veterinary Medicine-Joint Faculty Students Committee (DVM-JFSC)</i>	5 academic staff (including the DVM Course Coordinator) and 5 students (was 6+6 in the years included in this SER).	Monitoring and proposal on curricular inconsistencies and teaching issues. Analysis of students' questionnaire; analyses corrective actions identified by lecturers responsible of subjects where critical issues have been pointed out; the DVM-JFSC also deals with the preliminary phase of adaptations of the degree programme related to curriculum changes, students' progression and welfare (whose inputs may be produced by the PPT Committee or the Steering Committee).
<i>Steering Committee</i>	DVM Course coordinator and deputy coordinator; EAEVE delegate; PPT Committee coordinator, 2 students and 4 professionals.	Collaborates in defining the needs of stakeholders; monitors the adaptation of the curriculum based on previously provided indications and evaluates the effectiveness of employment outcomes. Proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.
<i>PPT Committee</i>	PPT academic tutors	Deals with all the aspects related to PPT both intra and extra-mural; identifies potential deficiencies also related to ESEVT Day One Competences and proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.
<i>Review Group</i>	DVM Course coordinator, 2 academic staff, 1 student, 1 professional	Production of the AMR and the CRR of the DVM Curriculum.
<i>Year Coordinators</i>	5 academic staff	Organisation of teaching activities in each curricular year.

DVS formal collaborations – The DVS has formal agreements with private and public establishments in which students can carry out part of their practical training. The complete list is regularly updated and available on the DVS website [🔗](#).

The DVS may establish formal agreements with other VEEs either directly (e.g., following the proposal of an academic staff member) or through UniPi. Formal agreements have been established with other UniPi Departments [🔗](#), other Departments/Universities in Italy and other countries, especially those associated to Veterinary Sciences [🔗](#). New agreements are signed regularly to ensure a continuing international exchange of teachers and students.

1.3. DVS Strategic Plan

SWOT analysis and operating plan – As per UniPi regulations, the DVS is bound to adopt a Strategic Plan which embraces all structures and missions and identifies priority actions to achieve the identified objectives. The Strategic Plan in place was approved in 2018 and defines strategies and objectives for the period 2018-2022 [🔗](#). A detailed SWOT analysis is included, whose main points may be summarised

as follows; a summary of the DVS operating plan reporting objectives and related indicators for their accomplishment is provided as well.

Weaknesses	Strengths
- Suboptimal results in the Research Quality Assessment (Valutazione della Qualità della Ricerca, VQR) 2010/2014. - Suboptimal ability to attract competitive funds and timely seize opportunities. - Suboptimal collaboration among and within Scientific-Disciplinary Sectors. - Organisational difficulties with negative effects on the efficiency of research and publication processes. - Suboptimal communication and team working between academic and administrative staff. - Incomplete ability to meet the needs of stakeholders. - Suboptimal international staff networks. - Limited number of study rooms in Pisa premises. - Low attractiveness of the PhD programme to the productive world and the international students.	- Some individuals and research groups with international visibility. - Good national and international networks on specific themes. - Development of research, training and service initiatives in innovative fields. - Ability to exploit limited resources. - Multidisciplinary environment. - A well-equipped VTH. - A relatively young academic and technical staff. - EAEVE certification for the DVM Course. - Collaboration with other institutions. - Quality certification of some laboratories (ISO 9001:2015). - UniPi support for research and service development. - Placement of past PhD students.
Threats	Opportunities
- Suboptimal recognition of excellence in teaching if compared to research, for staff progression (a nationwide threat). - Growth of the bureaucratic workload of the academic staff. - A high number (13) of DVM degree courses in the national territory, causing competition for resources. - Limited access to EU funding due to competition within the life science area.	- Merging of the two sites and resource rationalisation. - Growing commitment to staff training activities. - Evolution of the demand for research and post-graduate training in society. - New resources from the national recovery and resilience plan. - Increasing attention by the large public to food quality and safety, and the human-animal-environment relationships. - Development of collaborations with other institutions. - Strengthening of internationalisation.

Objectives	Indicators
Teaching	
OB 1a: to increase and consolidate the DVS educational offer.	- Annual review of study programmes. - In the Strategic Plan timeframe: - review of the organisation of Specialisation schools; - consolidation of courses for PhD students.
OB 2a: to monitor student careers and ensure a correct relationship between time and quality of training.	Strengthening of DVS tutoring (with implementation of an annual questionnaire).
OB 2b: to ensure an environment conducive to learning.	Annual student questionnaire and subsequent actions.
OB 2c: to innovate teaching and expose undergraduates to scientific thinking.	Organisation of research seminars dedicated to undergraduates.
OB 2d: to comply with ESEVT and AVA QA systems.	- D-JFSC annual report including the monitoring of ESEVT indicators. - Review group annual monitoring activity.
OB 2e: to strengthen EU and non-EU students (including post-graduates) mobility.	- Full allocation of available mobility scholarships. - Signing of new bilateral agreements (one per year) in geographical areas not covered by the existing ones. - Increase the number of subjects taught in English. - Planning one double degree and one summer school.
OB 2f: to facilitate the placement of new graduates and strengthen the collaboration between DVS and professionals.	- Meetings with professional associations and practitioners/companies (one per year). - Stipulation of agreements with professional Chambers (Veterinarians and Agronomists) for joint actions.

Objectives	Indicators
Research	
OB 1b: to strengthen research on the 3 themes identified in the Strategic Plan.	7 annual impacted scientific publications on each of the indicated topics (21 annual publications).
OB 3a: to improve DVS ranking in VQR evaluations.	- Halving the number of inactive or sub-active researchers in the time frame of the plan. - Improve the ranking of those Scientific-Disciplinary Sectors which are below the ANVUR medians. - Recruitment of academic staff according to their scientific impact.
OB 3b: to improve research results communication.	- Definition of a DVS Editorial Committee and organisation of events focused on research. - Definition of a DVS newsletter.
OB 3c: to increase networking and fundraising abilities.	- Increase of the number of published papers with non-DVS coauthors. - Increase in the share of competitive funding. - Support to the mobility of junior researchers.
OB 3d: research laboratories optimization.	- Centralisation of shared activities. - QA certification of specific services.
OB 5a: qualification of technical support staff.	Definition of a dedicated training programme for support staff (2 events per year).
Third Mission	
OB 4a: training of DVS staff.	3 formative events.
OB 4b: communicate Third Mission actions carried out by DVS.	- Annual reports on activities of the certified laboratories. - Reports of activities organised with veterinary associations.
OB 4c: to strengthen and evaluate the quality of DVS services.	- Obtaining EAEVE accreditation. - Increase in ISO 9001:2015 certified services during the plan period.
OB 4d: collection of historical data (since 2015).	- Creation of a data base for Third Mission activities. - Promotion of UniPi dedicated form filling.
Organisation	
OB 5a: to increase safety and biosecurity level.	- Collaborate with the UniPi dedicated service. - Support UniPi formative actions.
OB 5b: to ensure that staff can communicate needs and solve grievances.	- Support UniPi actions. - Annual meetings with support staff.
OB 5c: promote meritocracy and proactivity of non-academic staff.	Identification of incentive instruments adapted to the different position.

1.4. DVS policy for QA

The VEE is committed to enhancement of the QA system (Annex D - ). A QA group operates within the DVS to find and implement synergies among the three quality certification systems in place:

1. the international EAEVE/FVE QA system ESEVT;
2. the international UNI EN ISO 9001:2015 quality management system;
3. the Italian higher education QA system AVA.

The DVM curriculum follows written procedures for the management of most activities . The DVS strategy for the continuous enhancement of quality (declined here on the DVM Course) is the result of actions played by several bodies and people and can briefly summarised as follows :

Annual actions

- The UniPi Presidium for Quality Assurance (PQA), at the end of each semester, obtains students' feedback through online questionnaires for the assessment of teaching, to understand how the

teaching and organisation of the Degree Course is perceived by students. The outcome of the assessment is transmitted to the DVM Course coordinator.

- Students complete the teaching evaluation questionnaires. Student representatives participate in the meetings of the DVM Council, the Review Group, the DVM-JFSC, the D-JFSC and the Steering Committee. This is to communicate students' needs and give feedback to fellow students regarding any actions implemented for the evaluation and revision of the DVM curriculum.
- The DVM Course coordinator and the DVM-JFSC analyse the teaching evaluation questionnaires; for courses in which critical issues are highlighted, they urge teachers to propose actions for improvement and monitoring of their effectiveness. The DVM Course coordinator draws up the SUA-CdS (Scheda Unica Annuale del Corso di Studi / Degree Course Single Annual Report) which is also discussed within the DVM-JFSC and the DVM Council.
- The Steering Committee examines the learning project of the DVM Course and provides advice and proposals for a continuous improvement of the educational programme offered to students, taking into consideration the needs of the labour market. Moreover, it defines and reviews the professional training activities, keeping them updated with regard to the job prospects of new graduates.
- The EAEVE delegate provides the D-JFSC with ESEVT indicators to be analysed during the production of the annual report.
- The Review Group draws up the AMR, which represents a comment on the national quality indicators of the student flow, internationalisation, and integration of graduates in the labour market provided by the ANVUR. The Monitoring Report is brought to the attention of the DVM Council for approval.
- The D-JFSC collects all the reports drawn up by the DVM Council and produces a report on the teaching activity carried out within the DVS and proposes any improvements. The D-JFSC analyses any critical issues concerning the general management of the Department (usability of the classrooms, library, etc.).
- The DVM Course coordinator, assisted by the Review Group, analyses the proposals of the D-JFSC and proposes initiatives for improvement to be discussed in the DVM Council.
- The DVM Council acknowledges the proposals resulting from the work of the various commissions, discusses them, approves them, and monitors their implementation and communication through the DVM Course coordinator.

Cyclical actions

- The Review Group prepares the CRR every 5 years. The DVM Course last issued this report in 2018. In 2019 it was subjected to an accreditation assessment by the ANVUR: both provided documents and the on-site visit led to national accreditation.

1.5. Stakeholders and Society interactions

Through the DVS website, students and any stakeholders have access to all information related to DVS Teaching, Research and Third Mission activities, including the activities of the VTH. Briefly, concerning teaching, on the website there is the description of the DVM Course and all the information needed to the public, stakeholders and students, including the orientation programme ("Open Days"), and a section devoted to the outgoing, professional orientation .

Study programme, objectives, curriculum, learning environment, learning outcomes, self-evaluation outcomes, profile of the current student population and the employment destinations of the curriculum and of the past students are described in the SUA-CdS, reachable from the DVS website and from a national platform intended for potential students, their families and stakeholders . The aim of this platform is to allow the public to compare curricula, evaluations and outcomes of different VEEs, in order to make informed choices. Moreover, the timetables , study programmes and methods of teaching and assessment , research activity and courses registry for each teacher  are available to the public without restrictions.

On the main page (Italian version)  all information on events for students, teachers, and/or stakeholders, including continuing education events, are readily available in the “in evidence” section. Research grants and contracts as well as job opportunities, including those for adjunct staff for the VTH, are advertised both in the “Avvisi e Bandi” section of the VEE website and in the UniPi website. Other ways the VEE interacts with the general public are the aforementioned “Open Days”, organised every year for high school students and their families, and the “Researcher’s Night”, where the activities of the VTH and the research done within the Department are presented. Periodical consultations with representatives of the veterinary profession and ex alumni were organised in the last years every six months during the license to practice exams: questionnaires were proposed to collect professionals/ex-alumni feedback, suggestions, and information needed to improve the curriculum. Colleagues are also invited to share their experiences and give an overview of the labour market to late students (4th and 5th year) during the “Giornata di Orientamento”, organised yearly by the DVM Course . Career weeks and recruiting days are organised at the University level .

In addition, the DVS actively participates in Third Mission activities, including Public Engagement events. A section which includes procedures and advertise events and publications is present on the website .

Every year, in May, the DVS is open to public during the event “Fiera di Sant’Ubaldo”, allowing visiting the Veterinary Anatomy Museum, the exposition of posters explaining the activities occurring in the DVS and giving the possibility to the public to meet teachers and students. A barbecue is traditionally organised by the students at the end of June.

VEE ESEVT status communication - The DVS website has a page dedicated to ESEVT status  and related information that is reachable from the home page .

1.6. Monitoring and review activities

The current DVS Strategic Plan 2018/2022 was presented in September 2018 to all DVS Council members by the DVS Head. The Strategic Plan was positively evaluated by the UniPi Rector and General Director. It is publicly available on the website of the Department .

DVS organisation is largely established by national legislation. The UniPi Statute determines the organisation, function and composition of Departments, Schools and teaching councils. All other bodies, boards, committees and services are outlined in departmental regulations that are assessed, revised and approved by the Department Board and DVS Council. At the end of this process, departmental regulations are approved by UniPi Rector.

This organisation and corresponding documents are available in the public area of the Department website.

The **Strategic Plan implementation assessment and revision** involves the following steps with transparent decision processes and dissemination:

- The DVS Head drafts the Strategic Plan following PQA guidelines, in accordance with University Strategic Plan; priorities, objectives and goals are identified by interviewing internal and external stakeholders;
- The DVS Council discusses and approves the Strategic Plan;
- The QA manager (AVA member of the QA Group), following PQA guidelines, monitors the functioning of different bodies and suggests major changes/improvements;
- The DVS Head monitors and periodically adjusts the plan that is formally approved by the DVS Council.

The **Organisation** of the DVS is defined by UniPi general rules; the DVS Head identifies delegates and coordinators of DVS committees usually at the beginning of the mandate. Changes to adapt the organisation to new strategies or to meet to particular needs remain the responsibility of the DVS Head/management.

The **QA policy**  is proposed/implemented/monitored/reviewed by the QA group and adopted by the DVS Council.

1.7. External evaluations and progress

The Faculty of Veterinary Medicine of Pisa was evaluated by EAEVE in 2009, between November 30th and December 4th. The European Committee of Veterinary Education (ECOVE) pointed out two unrelated Category I Deficiencies (facilities for ruminants and teaching in bovine medicine; lack of a mobile clinic for farm animals) and several minor deficiencies (e.g., insufficient teaching staff, non-adequate tracking of hands-on activities, excess of theoretical teaching, need for integration of herd health concept, insufficient equipment such as Magnetic Resonance Imaging/Computed Tomography, need for innovation in teaching methods) whereby the decision was non-approval. In 2012 (1st-2nd February), after a revisit, it was concluded that Category I Deficiencies were amended, and large improvements of other minor deficiencies were observed. Therefore, the decision was full approval.

In the final report no major suggestions were made by the EAEVE Team, however the VEE decided to establish an EAEVE Committee to monitor the DVM Course and to propose actions aimed to comply with the ESEVT standards. Since then, all students had the opportunity to take part to bovine clinical activities and the mobile clinic work in farm animals, both with academic and hired staff. Herd health activities have also been strengthened. Since 2012, the number of students was further reduced and the curriculum has been continuously monitored, with the aim of providing sufficient hands-on activities and adequate numbers and diversity of animal patients and herds.

The VTH has improved significantly its equipment, also with specific funds made available by UniPi; Learning related e-platforms were adopted (e.g., Moodle, Teams) and COVID-19 pandemic further increased their use. The culture of biosecurity and QA has remarkably grown up, as witnessed by the fully satisfactory report issued following the ANVUR Visitation in March 2019. Some projects still need to be finalised, the main of which is the relocation of all DVS premises in the new Campus of San Piero a Grado.

1.8. Comments on Area 1

Since the last EAEVE Visitation, the VEE's organisation has devoted a large amount of energy and time to comply with the requests of the new legislation, that introduced the higher education QA system AVA. This was not always accompanied by a homogenous growth of the QA culture at all levels. However, the QA culture was diffused among staff working within the EAEVE Committee because clear objectives specific to veterinary education were present. Despite the image and accountability of DVS in front of the UniPi governing bodies was strengthened by the DVM Course AVA accreditation in 2019 and by all the steps and changes that the DVS did to meet ESEVT standard, there is still risk that the staff may perceive quality assurance processes as additional administrative workload and not as an opportunity for the entire community.

1.9. Suggestions for improvement on Area 1

QA procedures should be further implemented and/or refined to mitigate the identified weaknesses and threats. A more coherent flow of information should be assured among different internal bodies.

The VEE should increase the number of experts in both the ESEVT and the AVA system to enhance the internal awareness about opportunities that can originate from a well-managed QA system.

1.10. Notes on COVID-19 pandemic

Following the DPCM March 4th, 2020, containing the measures concerning the contrast and containment throughout the national territory of the spread of the Coronavirus, on March 5th, 2020 a

first UniPi Rectoral Decree of suspension of the “in presence” didactic activities was issued⁴. Remote teaching and assessment activities started on March 9th, while Professional Practical Training (PPT), External Practical Training (EPT), laboratory activities, access to libraries and study rooms, were suspended. On March 6th committees/bodies started to meet remotely, technical and administrative staff started smart working, and all front-office activities turned into distance ones. The VTH, without the presence of students, remained open for urgencies and for activities related to horse and ruminants’ reproduction, as these were legally allowed. On May 4th, 2020 Phase 2 begun and teachers, researchers and technicians were allowed to access laboratories, although not contemporarily in order to reduce the number of persons in the buildings⁴. In Phase 2, lectures, exams, graduations were carried out remotely, libraries and study rooms remained closed; The presence of PhD students, undergraduates preparing their graduation thesis was allowed, thus students re-entered the DVS laboratories and the VTH (although in small numbers). Since June 2020⁴ most activities were functioning, although at a reduced pace. Several adaptations were needed in the last year to maintain a regular provision of quality education and services. DVS bodies still meet remotely or in mixed format when numbers do not allow distancing. All DVS members adopted a responsible behaviour to manage DVS activities; both staff and students adapted to the transitory situation; in the last graduating session of 2021 (December) thesis discussion was again in presence. Changes and adaptations depending on the pandemic situation are reported, when needed at the end of each SER Area chapter.

Area 2. Finances

2.1. Economic and financial process

Beside personnel cost, the DVS budget includes an annual transfer by UniPi, namely Multifondo, plus overheads charged on external revenues for research and services including VTH activities.

The Multifondo is allocated for the overall teaching activities and general expenses for the ordinary management of the DVS activities. Expenditures related to staff salaries (excluding contracted professionals for the VTH or specific collaborations of the DVS), utilities, maintenance and refurbishment of premises, logistics and the cleaning and security services are in charge of UniPi Central Administration.

Multifondo amount is decided by UniPi Academic Senate and Board of Directors depending on the annual Ordinary Financing Fund received from the MUR and possible strategic UniPi decisions. For items in charge of UniPi Central Administration, the DVS can submit requests through its management for extra funding. In the last three AYs, UniPi also transferred to the DVS a specific amount for the VTH following specific request by the VEE management.

In order to build the DVS budget, the DVS Head initially meet the Deputy Head, Degree course coordinators, the VTH Director, the DVS Administrative Manager as well as the responsible of different administrative units (teaching, research and budget/general services), to prepare a draft proposal. Then, the document is conveyed to the DVS Council for discussion and approval (in the autumn for the following solar year). In the Multifondo, resources provided by UniPi are thus allocated according to didactic needs of the Degree courses offered and associated requirements.

As anticipated, specific request for well identified projects (innovative didactical activities , specific investment in technical tools ) can be addressed to UniPi during the year: the VEE in the last years asked for specific funding aimed to implement the Clinical Skill Lab and purchase innovative teaching tools (detailed in Area 6, Table 6.3.1).

The VTH budget is managed by the DVS and most of it comes from provided services (to private clients and other veterinary structures in the area), or from specific contracts with other institutions.

The VEE pays a 5% and 7% margin as overhead to UniPi on revenues from services and research grants coming from institutional (VAT free) or commercial contributors, respectively. The VEE also charges and manages a 10% sum as overheads from grants and services. The final impact of overheads on external funding is thus either 15% (10+5) or 17% (10+7).

Expenditures

Table 2.1.1. Annual expenditures during the last 3 AYs (in Euros)

Area of expenditure	2020	2019	2018	Mean
<i>Personnel</i>	8,096,761.22	8,235,677.70	7,799,913.80	8,044,117.57
<i>Operating costs</i>	888,367.37	1,289,584.93	1,160,416.04	1,183,059.45
<i>Maintenance costs</i>	374,000.00	298,000.00	173,000.00	281,666.67
<i>Equipment</i>	579,312.39	426,377.02	476,100.25	456,993.22
<i>Other costs</i>	354,766.74	377,219.00	409,696.00	312,002.07
<i>Total expenditure</i>	10,293,207.72	10,626,858.65	10,019,126.09	10,734,323.29

Personnel costs: DVS personnel includes permanent and temporary teaching staff, permanent support staff dedicated to research and administrative services, scholarships and VTH contracted veterinarians. PhD, post-docs and any other kind of scholarship costs are included here, and accounts for 5.12% of the total personnel cost. The cost of VTH contracted veterinarians accounts for a further 4.23%. Expenditures for scholarships and DVS hired staff have remained broadly unchanged in the last years.

The costs of other UniPi personnel that serves for the needs of DVS and the veterinary training organisation, such IT and library staff shared with other Departments, are not included in the personnel costs. One support staff Full-Time Equivalent (FTE) is fully committed to QA management.

Operating costs: these include costs directly paid by the DVS mostly for the purchase of consumables, personal safety devices, purchase of material needed for training, disposal of carcasses, waste management, student visits to extramural facilities. Moreover, the operating costs also include utilities directly paid by UniPi (for water, electricity, gas): their amount was € 337,000.00 in 2018, € 387,000.00 in 2019 and € 339,000.00 in 2020.

Maintenance costs: maintenance costs include fees that are directly paid by UniPi related to air conditioners, elevators, fire extinguisher, gardening maintenance.

Equipment: the VEE investment for equipment has increased in 2020 mostly due to the acquisition of VTH instruments.

Other costs: in this voice we included costs related to overheads transferred to UniPi for institutional (5%) and commercial (7%) services/research. Contributions that the DVS gives to the library, the Veterinary Anatomy Museum, and the linguistic centre of UniPi are also included here.

Revenues

Table 2.1.2. Annual revenues during the last 3 AYs (in Euros)

Revenue source	2020	2019	2018	Mean
Public authorities	9,024,042.55	8,788,603.68	8,105,936.72	8,639,527.53
Tuition fees*	-	-	-	-
Clinical services	1,301,169.69	1,382,721.01	1,401,719.98	1,361,870.23
Diagnostic services	172,993.59	82,687.54	115,770.00	123,817.04
Other services	7,850.15	153,534.15	37,502.41	66,295.57
Research grants	563,375.52	455,212.98	378,088.28	465,558.93
Continuing education	289,710.96	91,914.45	277,583.39	219,736.27
Other sources	51,700.25	61,783.76	7,080.00	40,188.00
Total revenues	11,410,842.71	11,016,457.57	10,323,680.78	10,916,993.69

Public authorities: most of the public funding in Table 2.1.2 relates to the payment of salaries. In addition, as already mentioned, UniPi annually transfers a budget (Multifondo) that the VEE is allowed to manage first-hand. Multifondo amount depends on a formula that considers several parameters among which the number of students and staff, as well as staff performance in research and teaching and internationalisation quality, are included. UniPi regularly reviews the Multifondo algorithm. In the next future, performance in the Public Engagement area will be also included amongst criteria. Multifondo summed up to € 228,742.00 in 2018, € 218,368.00 in 2019 and € 205,176.00 in 2020. Additionally, an average of € 70,000.00 was annually transferred from UniPi for the update of VTH equipment and is included in this item.

***Tuition fees:** student fees are not directly transferred from UniPi to the VEE but are considered as a parameter in Multifondo. For the sake of completeness, in the current a.y. the maximum annual contribution for regular students, covering educational, scientific and administrative services, amounts to € 2,400.00. The annual contribution may vary in relation to the ISEE (economic-patrimonial situation indicator) of the student's family unit, the number of years of enrolment beyond the normal duration of the course plus one and the number of credits acquired. An equivalent index ("ISEE

parificato”) is calculated for foreign EU and non-EU students. Detailed information is retrievable in the dedicated UniPi web-page for international students [🔗](#).

Clinical and diagnostic services: revenues from services showed a stable trend in the years included in this SER; clinical services item includes the VTH activity income while within diagnostic services other DVS services are included (diagnostic pathology, parasitology, bacteriology, virology service). Contracts for specific collaborations (typically research contracts) or consulting services by individual staff are included in “other services”. Services have an unquestionable didactic value in an evidence-based/research-based educational framework.

Research grants: this item includes funding by UniPi and other public sources (national and EU grants). The DVS actively promotes research activity of its academic staff in order to build a quality research-based training. The research grants item also includes the so called “Fondi di Ateneo”; these are University funds annually transferred to single academic staff members on the basis of a personal rating that depends on past research activity. The entire procedure is managed by a joint DVS-DAFE Committee [🔗](#), which annually analyses academic staff productivity (in term of quantity and quality) and assigns a rating (from 1 to 4) that will determine the amount of “Fondi di Ateneo” that staff will receive.

Continuing education: continuing education revenues include fees paid by postgraduate students enrolled to Master and Specialisation schools provided by the VEE.

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

Academic Year	Total expenditures	Total revenues	Balance
2018	10,019,126.09	10,323,680.78	304,554.69
2019	10,626,858.65	11,016,457.57	389,598.92
2020	10,293,207.72	11,410,842.71	1,117,634.99

Utilities (e.g., water, electricity, gas, fuel) and other expenditures directly paid by UniPi: as mentioned (Table 2.1.1), among operating costs, includes utilities directly paid by UniPi (for water, electricity, gas) their amount was € 337,000.00 in 2018, € 387,000.00 in 2019 and € 339,000.00 in 2020. The same amounts are also included in Table 2.1.2 (Public authorities). UniPi Central Administration also covers the cost for the cleaning service, the surveillance service, and the hired staff in support of teaching at the Pisa premises (e.g., to open and lock lecture halls, operate overhead projectors and video equipment, etc.).

2.2. Resources from clinical and field services

Clinical and field services are a priority for the DVS management: their efficiency is perceived as a key factor to ensure that expected Day One Competences are gained by our DVM students, and that opportunities for qualified post-graduate veterinary education may increasingly be offered. The VTH has its own governing body (i.e., VTH Council) in charge for the organisational management of clinical and field services. The VTH Council has its own director that is designated by the DVS Head. DVS members that sit in the VTH Council are mostly clinicians. However, the VTH is not an independent spending centre, and this ensures that a high priority is reserved for the teaching mission, since the approval of the VTH financial budget is responsibility of the DVS decision bodies. Noteworthy, in the last two years the DVS first reduced and then abolished the overheads on services offered by the VTH, thus directly contributing to its budget.

Table 2.2.1. VTH annual balance

VTH revenues	2018	2019	2020
<i>Services</i>	1,140,208.36	1,080,287.99	1,009,654.62
<i>UniPi contribution</i>	0.00	110,810.00	100,000.00
Total income	1,140,208.36	1,191,097.99	1,109,654.62
VTH expenditures	2018	2019	2020
<i>Consumables</i>	388,519.77	470,274.82	377,972.81
<i>Contracts to practitioners</i>	391,850.00	320,426.35	349,586.54
<i>Equipment</i>	107,848.41	178,566.75	228,555.68
<i>Permanent staff overtime</i>	121,988.22	111,269.66	108,064.73
<i>Overheads DVS</i>	57,569.00	7,559.55	0.00
<i>Overheads UniPi</i>	79,805.38	75,620.16	70,695.55
Total expenditures	1,147,580.78	1,163,717.29	1,134,875.31
Balance	2018	2019	2020
	-7,372.42	27,380.70	-25,781.09

Degree of autonomy of the VEE on the financial process

Over recent years the DVS has undoubtedly enjoyed sufficient autonomy in using its resources (mainly represented by the Multifondo, an additional special contribution for the VTH equipment, as well as the 10% overheads charged on services and research grants) to meet the ESEVT standards and other objectives announced in the three-year Strategic Plan. Beyond this, evidence shows that, since the last EAEVE on site Visitation, UniPi is working forward to completion of the San Piero a Grado premises where the DVS will have its own final location: the conclusion is foreseen for 2025 and this is perceived as a major step to increase quality of teaching, of research activities and services in order to provide students with high level education in full compliance with ESEVT standards. Over the years, UniPi allocated 35,700,000.00 € for the completion of the DVS premises .

2.3. Resources allocation and investments

As anticipated, UniPi has earmarked important funds for the completion of the DVS premises in San Piero. This will allow the reunification of staff, teaching activities and services. During the writing of this SER, the new Campus plan is in its final drafting phase (Annex 5) and a public tender for works is expected to be opened in the first half of 2022. The new structures will include:

- 16 halls for didactical activities (2*27 seats, 1*50s, 1*72s, 4*87s, 3*40s, 1*56s, 2*69s, 1*67s, 1*138s);
- a Skill Lab/Computer Lab (40 places), 2 biological labs for about 75 square meters each, 2 microbiology labs for about 100 square meters each;
- a dissection room for 35 students + a necroscopy room for about 85 square meters and about 25 positions;
- 25 research labs and facilities for about 1000 square meters;
- 34 rooms for staff for about 510 square meters;
- a cafeteria and a staff/student canteen;
- study rooms for students about 100 places plus 1 student hall for about 140 square meters;
- a library with 40 seats;
- a dairy processing plant;
- poultry and rabbit infrastructures.

Expenditures and revenues are expected to dramatically increase in the next three years due to the completion of the new site as described. Moreover, the national plan of recovery and resilience post COVID-19 pandemic is supposed to allocate funding that UniPi first and subsequently the DVS should be able to intercept.

A process of negotiation has been initiated with UniPi aimed to achieve a better recognition of the DVS efforts (to maintain high quality undergraduate and post-graduate teaching), and of the specificity of the veterinary training whose cost is higher than other subject areas. This negotiation already resulted in the mentioned special contribution for VTH equipment and some budget for human resources. Beside the investment on facilities (DVS site completion), prospected expenditures and revenues may further increase in the next 3 Academic Years (AY) if the DVS is able to obtain full recognition of its peculiarities from UniPi. The EAEVE accreditation process is acknowledged as a step forward in this negotiation process.

A way to obtain more funding from UniPi relies on the effectiveness in the VEE resource management: UniPi, in compliance with the national legislation, expects that the planned/available budget is used as scheduled; to this regard, the DVS was able in 2021 to strongly reduce academic staff personal research residues.

Specific investments for the coming years were planned to innovate didactical activities and to increase the Clinical Skill Lab equipment in continuity with the efforts done in the latest few years.

The VEE decisional process regarding the budget allocation involves, in different steps, the DVS management, the Degree course councils, the DVS Council, the VTH Council, as well as single researchers depending on the type of funding. Academic staff is entitled to plan research activities autonomously in compliance with funded projects development. Students play a role for assessing and revisioning budget allocation through their questionnaires and representatives.

The management of the VTH depends on the specific revenues related to the clinical and diagnostic services offered to public and private clients. The allocation of such revenues is done according to the planned costs and a specific allocation plan, which is first discussed and approved by the VTH Council and then by the DVS Council. As stated before, a specific procedure regulates purchases from the VTH. At VEE level, the planning cycle involves the DVS Head and then the Council, where both staff and student representatives are involved. All the decisions for major expenses and investments are taken in the planning phase for the different needs; nonetheless, budget variations are possible if during the year specific needs impose a change in the allocation of resources. Any variation must be approved by the DVS Head supported by the Administrative Manager.

Allocated resources are used according to the annual development of teaching activities. The effectiveness of budget allocation and use is assessed by students (by teaching activity and facility related questionnaires) and by staff. Students can convey their suggestions and needs in several ways including the students' affair delegate or the relevant JFSC to ask for revision and adjustments. Teacher themselves might present suggestions and innovative solutions to be pursued. The DVS management take into consideration the diverse suggestions addressing them according with the available budget. For issues related to facilities a specific request is forwarded to the UniPi Building management unit when necessary (detailed in Area 4). In case of demands for further investments in technical equipment (e.g., simulators, mannequins, minivans...), the DVS itself plans new investments according to internal availabilities or by applying to specific teaching innovation projects  funded by UniPi. In the last years, specific requests for innovative teaching activities and technical investments were designed by the VEE members and presented to the DVS Council for discussion and approval: UniPi funded some requests as detailed in Area 6.

2.4. Comments on Area 2

As shown, the VEE finances are strongly dependent on UniPi strategy and planning. However, the DVS charges, for general expenses, 10% overheads on clinical/diagnostic services and research grants; overheads increase the level of autonomy of the VEE and can be used to potentiate VTH initiatives for

innovating teaching methods/equipment. The VEE operational capacity is thus directly linked to the capability of its members to attract funds through services and research sponsors. The national legislation requires an efficient use of public funds and UniPi is strongly committed to promote actions that favours the use of the budget in the scheduled time.

2.5. Suggestions for improvement on Area 2

Actions should be taken to increase the fundraising ability of academic staff in terms of services and research grants.

As for the recognition of the higher costs related to the training of DVM students, the VEE should negotiate about the overheads currently requested from UniPi. As described, the distribution of Multifondo does not consider specificities and differences among diverse degree courses. EAEVE accreditation is a step forward to a growing recognition, at UniPi level, of the specificities of the DVM degree and its costs.

2.6. Notes on COVID-19 pandemic

During COVID-19 pandemic UniPi financially supported equipment needs related to the implementation of remote teaching and assessment tool either directly or upon specific requests (e.g., the funded projects for teaching innovation described in Area 6, Table 6.3.1). Specific budget was allocated for individual protection devices avoiding any charge on students and staff.

Area 3. Curriculum

3.1. Curriculum design, resources, and management

Educational aims and the general strategy – In accordance with the EU Directive 2005/36/EC (as amended by directive 2013/55/EU), the educational objectives of the DVM Course include to provide students with the broad cultural background, the scientific basis and the technical-practical skills necessary for the exercise of the profession of veterinarian. These objectives are constantly updated to meet the needs of the profession and to ensure specific training appropriate to the evolution of scientific knowledge. The study programme has been designed to train professionals capable of ascertaining and protect the health and welfare of pets and livestock, preventing and treating infectious and parasitic diseases including zoonoses, inspecting and controlling the production and marketing of foodstuffs of animal origin, managing genetic selection schemes and aspects concerning breeding technology, nutrition and reproduction, resolving clinical, medical, surgical and obstetrical events in animals. In our opinion, the programme also allows students to acquire the methodological and cultural basis necessary for lifelong learning, as well as the methodological basis work in the biomedical research field, being ready to tackle post-graduate training courses (Doctorate, Master, Specialisation school).

The curriculum is organised in 5 years (300 ECTS; 1 ECTS = 25 hours) and is divided into three phases in which specific veterinary subjects are declined: a *first phase* characterised by the acquisition of basic science knowledge, a *second phase* in which animal production, clinical sciences, FSQ, and VPH subjects are taught, and a final *third phase* of PPT. This latter alone accounts for 10% of the entire curriculum (30 ECTS, equal to 750 hours), and is aimed at providing an adequate practical preparation in professional subjects under appropriate supervision.

The degree programme is designed to provide the ESEVT Day One Competences established by the European Coordinating Committee on Veterinary Training and adopted by the EA EVE. Theoretical knowledge, pre-clinical and clinical practical skills are specifically assessed (see Area 8). The achievement of learning outcomes is verified through *in itinere* tests during the courses and through exams at the end of each subject.

The current programme was activated in 2009, consistently with the Ministerial Decree no. 270 of 22 October 2004; it was designed considering the surveys carried out by institutional bodies and consulting several professional organisations and academic staff involved in the management of the curriculum. A schematic view of the DVM Course management (in terms of organisation, monitoring and review activities) is reported in Area 7, Figure 7.5.1: briefly, the DVM Council is the responsible of the design and management of the programme and receives inputs from different stakeholders through a Steering Committee and the DVM-JFSC; PPT is monitored by a dedicated committee while annual monitoring activities and cyclic revision is the responsibility of the Review Group.

Legal constraints and the degree of autonomy – The current curriculum of the DVM Course is regulated by the Ministerial Decree no. 270 of 22 October 2004, by the Italian Law no. 17/2010 (*Requirements for study courses*), by the EU Directive 78/1027/EEC, by the Italian Law no. 264/1999 (*Rules on access to university courses*), by the Ministerial Decrees of 4 October 2000 (*Scientific-Disciplinary Sectors*) and 28 November 2000 (*Determination of the classes of specialist degrees*) and according to EU Directive 2005/36/EC (*Recognition of professional qualifications*) amended by EU Directive 2013/55/EU.

The 300 ECTS are distributed over 5 years, with an average annual workload of 60 credits. Furthermore, the national legislation provides for the distribution of 300 credits over a maximum of 30 core subjects, and the curriculum should be completed within 5 years (10 semesters), including PPT activities.

The degree of autonomy of the DVM Course to modify the curriculum is wide despite the constraints imposed by national regulations; as shown in Table 3.1.1, the legislation defines a minimum of credits

to be attributed to the different classes of disciplines, however the DVM Council can make a series of decisions regarding:

- the weight (in terms of credits) to be attributed to specific subjects;
- the form in which the core subjects are delivered, either in a single discipline (“monographic”) course or as “integrated” courses including two or more “teaching modules”;
- the type of activity to be carried out in the course, by defining for each ECTS the ratio between lectures/practical activities and individual study;
- the distribution of the workload per ECTS (i.e., the amount of time per ECTS that must be dedicated to different learning activities, such as lectures, seminars, supervised self-learning, animal work activity etc.).

In addition, the DVM Council defines the elective activities, decides the amount of ECTS assigned to the final graduation thesis work, establishes procedures and criteria for verifying learning outcomes (assessment) and regulates the practical training activities and the final exam for the acquisition of the degree.

Table 3.1.1. Broad structure of the DVM Course

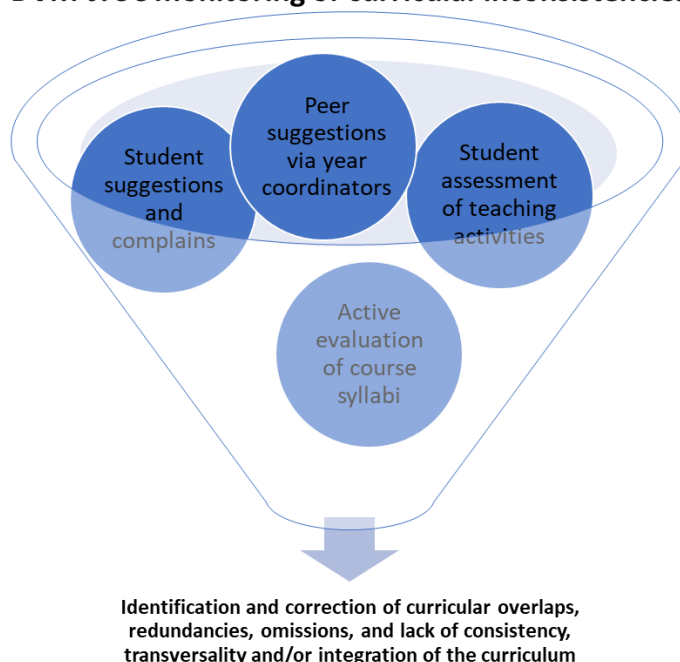
Broad Subject Areas	Assigned ECTS	Minimum Legal ECTS*
<i>Basic subjects</i>	58	58
<i>Characterising subjects</i>	169	130
<i>Integrative subjects</i>	16	-
<i>Electives</i>	9	-
<i>Graduation thesis</i>	15	-
<i>Professional practical training</i>	30	30
<i>Foreign (EU) Language</i>	3	-

* Ministerial Decree no. 270 of 22 October 2004

Identification and correction of curricular inconsistencies – The DVM curriculum, as well other degree courses delivered by the DVS, is constantly monitored and corrected in its deficiencies thanks to the integrated work of the relevant degree Council (DVM Council for the veterinary curriculum) and various committees that facilitate the acquisition of students and stakeholders needs (DVM-JFSC and Steering Committee). The DVM-JFSC is specifically in charge to identify and propose corrective actions on curricular overlaps, redundancies, omissions, and lack of consistency.

Each teaching subject has a published syllabus, issued by the teaching subject lecturer, available on a dedicated UniPi page  which contains the programme of the course and defines learning outcomes and student assessment methods and criteria. At the end of each semester, the Year Coordinators stimulate the students to evaluate the courses : the internal evaluation of student opinion is an important tool whereby the curriculum is monitored and modified. Teaching assessment questionnaires include a suggestion section where students can comment about: teaching load; quality of support material; provision of basic knowledge; overlaps and consistency with other teaching subjects; usefulness of *in itinere* assessment.

The DVM-JFSC, by considering student assessment questionnaires, performs a continuing critical examination of the programmes, to eliminate redundancies and fill identified gaps. Their observations are reported, through the DVM Course coordinator to the DVM Council. In addition, some organisational aspects are monitored by the Year Coordinators, in order to optimise teaching delivery, collecting any critical issues and presenting them to the DVM Course coordinator for subsequent discussion in DVM-JFSC and DVM Council. Specific critical issues are considered and corrected.

DVM-JFSC monitoring of curricular inconsistencies**Figure 3.1.1. DVM-JFSC process in monitoring curricular inconsistencies****Table 3.1.2. Curriculum hours in each AY taken by each student**

Academic Years	A	B	C	D	E	F	G
<i>Year 1</i>	508	7		94	36		645
<i>Year 2</i>	523	21	9	95	21		669
<i>Year 3</i>	552	12	4	49	51	70	738
<i>Year 4</i>	507	2		49	28	125	711
<i>Year 5</i>	281			17	14	100	412
<i>PPT</i>			3	64	232	451	750
<i>Electives</i>	172	14	16	82	37	23	344
Total	2543	56	32	450	419	769	4269

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

Table 3.1.3. Curriculum hours taken by each student

Subjects	A	B	C	D	E	F	G
Basic subjects							
<i>Medical physics</i>	25			10			35
<i>Chemistry (inorganic and organic sections)</i>	20						20
<i>Animal biology, zoology and cell biology</i>	30			10			40
<i>Feed plant biology and toxic plants</i>	64			14			78
<i>Biomedical statistics</i>	30	2		10			42
Basic sciences							
<i>Anatomy, histology and embryology</i>	191			48	34		273
<i>Physiology</i>	186	6		20	4		216

Subjects	A	B	C	D	E	F	G
<i>Biochemistry</i>	124						124
<i>General and molecular genetics</i>	33	3			2		38
<i>Pharmacology, pharmacy and pharmacotherapy</i>	64			12			76
<i>Pathology</i>	77	15	9	6			107
<i>Toxicology</i>	32			8			40
<i>Parasitology</i>	55			28	5	17	105
<i>Microbiology</i>	52			36	2	20	110
<i>Immunology</i>	20			19		25	64
<i>Epidemiology</i>	29	6		5	2		42
<i>Information literacy and data management</i>						13	13
<i>Professional ethics and communication</i>	6			5		46	57
<i>Animal health economics and practice management</i>	7						7
<i>Animal ethology</i>	23			4	3		30
<i>Animal welfare</i>	7				8		15
<i>Animal nutrition</i>	22		1				23
Clinical sciences							
<i>Obstetrics, reproduction and reproductive disorders</i>	157					118	275
<i>Diagnostic pathology</i>	144			20	4	99	267
<i>Medicine</i>	161					15	176
<i>Surgery</i>	72					90	162
<i>Anaesthesiology</i>	36					20	56
<i>Clinical practical training in common animal species</i>	0					145	145
<i>Preventive medicine</i>	17				2		19
<i>Diagnostic imaging</i>	36					45	81
<i>Therapy in common animal species</i>	42					43	85
<i>Propaedeutics of common animal species</i>	75			23	10	27	135
Animal production							
<i>Animal production, including breeding, husbandry and economics</i>	221	4	6	32	166		429
<i>Herd Health Management</i>	33			8	14		55
Food safety and quality, Veterinary Public Health and One Health Concept							
<i>Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification</i>	162	6		12	96	18	294
<i>Control of food, feed and animal by-products</i>	32			6	20		58
<i>Zoonoses</i>	16					5	21
<i>Food hygiene and food microbiology</i>	37			18	10		65
<i>Food technology</i>	33			14			47

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

Table 3.1.4. Practical rotations under academic staff supervision (excluding EPT)

Types	List of practical rotations	Duration (weeks)	Year of programme
<i>Intra-mural clinics (VTH)</i>	Internal medicine	7.7	4 th /5 th
	Surgery, anaesthesiology and diagnostic imaging	6.1	
	Reproduction	4.3	
<i>Ambulatory clinics</i>	Internal medicine	0.3	4 th
	Reproduction	0.3	
<i>Herd Health Management</i>	Internal medicine	0.4	4 th /5 th
	Animal production	6.7	1 st /2 nd /3 rd /4 th
<i>FSQ & VPH</i>	Microbiology and parasitology	1.3	2 nd
	Avian pathology, parasitic diseases and VPH	3.1	3 rd
	Infectious diseases and epidemiology	2.8	3 rd
	Food inspection	4.0	4 th
	Hygiene, tech. and control systems in the food ind.	0.9	5 th
<i>Electives</i>	Advanced assessment in large an. internal medicine	0.4	5 th
	Insights in internal medicine of companion animals	0.4	
	Emergency procedures	0.5	
	Loco-regional anaesthesia advanced techniques	0.4	
	Diagnostics for infectious diseases	0.4	
	Adv. knowledge in business and manag. of vet. clin.	0.4	
	Veterinary fungal diseases	0.4	
	Chemical residues in food of animal origin	0.4	
	Ultrastructural morphology	0.8	
	Clinical neuropathology	0.4	
	Small animal oncology	0.4	
	Advanced reproductive tech. in domestic animals	0.4	
	Animal morpho-functional evaluation	0.4	
<i>Other</i>	Diagnostic pathology	2.2	3 rd /4 th

Table 3.1.5. Curriculum hours offered as “electives” (9 ECTS from the listed subjects)

Electives	A	B	C	D	E	F	G
Basic sciences							
<i>Advanced course in management and economics of veterinary facilities</i>	12		6	6			24
<i>Diagnosis of infectious diseases</i>	12			12			24
<i>Residues of chemicals in food of animal origin</i>	12			12			24
<i>Ultrastructural morphology</i>	6			24			30
<i>Veterinary fungal diseases</i>	12			12			24
Clinical sciences							
<i>Insights in internal medicine of companion animals (IT)</i>	12	8	4				24
<i>Emergency procedures (IT)</i>	12				12		24
<i>Advanced assessment in large animal internal medicine</i>	15	4	2				21
<i>Clinical neuropathology</i>	12			8	4		24
<i>Small animal oncology</i>	12					12	24
<i>Advanced techniques of loco-regional anaesthesia</i>	12				3	9	24
<i>Advanced reproductive technologies in domestic animals</i>	12			8	2	2	24
Animal production							
<i>Morpho-functional evaluation (IT)</i>	12				12		24

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

Core clinical exercises/practicals/seminars prior to the start of the clinical rotations – Before starting clinical rotations, students carry out the following preparatory activities organised in groups and consisting of seminars and practicals including non-clinical animal work, laboratory and desk-based work and simulations on anatomical preparations, cadavers and animal models (dummies).

1st year

Veterinary anatomy 1 and *Veterinary anatomy 2*: dissection of animal carcasses, identification and dissection of non-pathological organs.

2nd year

Safety and biosecurity training course: students are required to attend a training course and relative assessment to obtain relevant information on safety and biosecurity issues before carrying out any activity in laboratories, clinics, livestock farms, abattoirs.

Physiology, ethology and animal welfare: laboratory analysis of blood, semen and urine; approach to the dog and evaluation of signs of stress (in shelters); approach to animals and evaluation of welfare indices (in cattle sheds).

Physiology and endocrinology: blood collection and analysis, preparation, colouring and examination of blood smears from different animal species; red and white blood cell counts; evaluation of microhematocrit and haemoglobin, plasma protein concentration, erythrocyte sedimentation rate; determination of blood glucose; laboratory analysis for hormonal assays.

General pathology and pathophysiology: collection and processing of samples for histopathological examination.

3rd year

Anatomic pathology and autopsy: examinations of organs and viscera; post-mortem examinations of pets and livestock animals.

Special animal husbandry: management, breeding and feeding of production animals (cattle, sheep, goats, pigs, horses, poultry, rabbits); identification of zoognostic regions and zoometric measurements; BCS assessment; management and interpretation of farm documents.

Infectious diseases and epidemiology; *Avian pathology, parasitic diseases and VPH*: report on viral, bacterial and parasitic infections/infestations and diseases, and application of correct control measures; sampling and parasitological examination of biological samples and viscera; parasite identification; post-mortem examination of avian species and disposal of pathological material; examination of embryonated eggs and embryos and determination of non-hatching causes.

4th year

Semeiotics, laboratory diagnostics and internal medicine: containment, anamnesis and general physical examination on common animal species; instructions on filling out the electronic medical record; correct management of biological samples for haematology and transfusion medicine; general principles in clinical biochemistry, coagulation and serum electrophoresis; microscopic haemocytopathological examination; anamnesis, physical examination on common animal species.

Andrology and reproduction technologies: clinical examination of the male and female reproductive system; artificial insemination and diagnosis of pregnancy in farm animals and horses; semen collection, evaluation and storage; principles of reproductive system surgery.

Surgical pathology, surgical semeiotics and diagnostic imaging: containment, anamnesis and physical examination on common animal species; use of surgical instruments and execution of the most common surgical suturing techniques.

Core clinical rotations and emergency services – Clinical rotations consist of the practical activities of clinical courses and ambulatory clinics as well as PPT activities.

Practical activities in clinical courses and ambulatory clinics: held from the 7th to the 9th semester, these activities are provided to students divided into groups (6-7 students) and organised as follows:

- *Internal medicine area:* clinical activity at the VTH and ambulatory clinics on companion animals, farm animals and horses.
- *Reproduction area:* clinical activity at the VTH on companion animals, production animals, horses as well as ambulatory clinics on horses and farm animals.
- *Surgery area:* clinical activity at the VTH on companion animals, non-conventional pets, production animals and horses.

At the VTH, students are trained to collect the patient's complete signalment and history and to perform the clinical examination. Under the supervision of academic staff, students summarise and evaluate recorded data and plan further diagnostic investigations, suggest a list of differential diagnoses with corresponding therapies and prognoses, and plan patient follow-up. In addition, under the supervision of the teacher, students draw up the clinical report, participate in the compilation of drug prescriptions and inform the owner about the management of the patient. During these activities, students are also trained to discuss and report clinical cases to colleagues.

Clinical activities also involve training on animal models, simulators, organs and cadavers, providing the opportunity to acquire practical skills, confidence with tools and diagnostic and surgical procedures. In further didactic activities students (in small groups) discuss simulated clinical cases and agree on the diagnostic and therapeutic process; also, they participate in ambulatory clinics under academic or contracted staff supervision.

PPT activities: during the last AY of the curriculum, in the 10th semester, students who have passed the preparatory exams  may carry out the PPT in the clinical, surgical and obstetric areas (14 ECTS).

PPT activities are carried out in small groups (1-3 students) supervised by academic staff and/or a reference veterinarian (who may be a hired practitioner):

- *Internal medicine:* (150 hours): companion animals (50 hours); intensive care following cases of medical competence (75 hours); livestock animals and horses (25 hours).
- *Surgery and reproduction:* (200 hours): activities in surgery, anaesthesia and diagnostic imaging of companion animals (75 hours); reproduction of companion animals (25 hours); reproduction of horses and farm animals (25 hours); emergency and intensive care following cases of surgical and reproductive competence (75 hours).

During the PPT, students are engaged in the management of hospitalised animals and in intensive care activities at the VTH for a total of 150 hours, divided into day and night shifts even on holidays. In addition, they participate in the management of medical, surgical and obstetric-gynaecological emergencies of all patients admitted at the VTH, including wildlife.

When applicable, students perform (or participate in) diagnostic imaging procedures and surgical activities during the PPT.

Teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin – As the DVS is not equipped with a slaughterhouse or other premises for the production, processing, distribution/sale or consumption of food of animal origin, the practical activities within relevant teaching units and the PPT are carried out in external private slaughterhouses and food processing plants.

Compulsory basic training on food inspection and hygiene is covered by two integrated courses respectively scheduled at the 7th and 9th semester of the curriculum: *Food inspection*, consisting of inspection and control of food of animal origin, practical activities in slaughterhouses and veterinary legislation modules; *Hygiene, food industry and technology*, consisting of quality check of food of animal origin and food inspection, control and certification.

Practical activities within the course of *Food Inspection* are carried on during visits in slaughterhouses (15h/student: 5h cattle, 5h swine, and 5h turkey); students are guided to observe facilities/equipment and to understand animal slaughtering phases, preparation techniques, the management of by-products and the control of hygiene, to acquire knowledge about the technologies used and understand sanitary control of the production line. Students also participate to the *ante-mortem* visits and *post-mortem*

inspection of carcasses and offal involving visual inspection, palpation, and incision of specific organs and lymph nodes. Half class (around 25 students) participate in the visit at a time, but during the visit the group is further divided into two groups (about 12 students). Visits are supervised by academic staff and VPH official veterinarians.

Students also visit (5h/student) a dispatch and purification centre where VPH veterinarians and the quality manager of the plant describe the general hygiene requirements for the production, harvesting and placing on the market of live bivalve molluscs.

Additional practical activities within *Hygiene, food industry and technology* course also include a basic training on:

- analysis of food and fish products labelling in accordance with EU legislation and supplementary national legislation through the description of commercial products packaging and labels presented in class to the students (4 hours/student);
- application of analytical methods for seafood traceability and the control of fishery chain commercial and health issues for consumer protection (16 hours/students).

Practical activities within the course of *Hygiene, food industry and technology* are carried out during visits in food processing plants for a total of 20h/student. The class visits one meat- and one milk-derived products plant, where students, divided in two groups, observe facilities, equipment and processes, making the most of the interaction with the VPH veterinarians and the internal quality manager. Under their guidance students examine the internal self-control system and, as official control tool, the inspection and audit processes.

A further practical activity is aimed at the elaboration of the HACCP plan and its integration into the food safety management plan, associated with the food processing plants visited. Students, divided in groups composed of 7-8 people, starting from the flow chart of the chosen production process, must develop a synoptic framework accordingly with the 7 principles of the HACCP methodology. The activity is performed under the guidance of the teacher and subsequently discussed.

The DVS has formal agreements with Local Health Authorities to ensure that students receive adequate and homogeneous training in food hygiene and VPH during the PPT (in form of EPT). During EPT (75 h) students are expected to visit slaughterhouses and food processing plants to perform *ante-* and *post-mortem* inspections, as well as hygiene controls on food products of animal origin. All activities undertaken by students on the premises and facilities with which an agreement has been drawn up, are supervised by VPH veterinarians. The average number of students per group is small (2-4).

Electives – The DVM Course requires students to acquire 9 elective ECTS, which can be obtained through activities organised by the study course in the 10th semester: in particular students can choose among 13 elective subjects as shown in Table 3.1.5. Electives include activities offered by other degree courses, which must be consistent with the training objectives of the study programme and approved by the DVM Council, or the increase of the PPT duration either intra or extra-mural .

Elective subjects proposed by the study course are provided either in Italian (3/13) and in English (10/13). A maximum number of 10 students is set in order to allow quality teaching, and they are activated if chosen by at least 5 students of the Degree programme or at least 3 international students (Erasmus+ project). For the choice of elective subjects, students can apply by mid-December of each year, indicating three preferences in order of choice; the Administrative Didactic Unit draws up a grid for assigning students to the various courses, matching the preferences of the students to the number of places available. Also, students can acquire 3 ECTS by following 4 professional seminars and one exit orientation seminar organised for 5th year and off-course students after successfully sitting the final verification test .

Completion of core practical/clinical activities – The fundamental practical activities necessary for the achievement of the study programme learning objectives are provided to students during the practical teaching associated with the individual teaching modules and during the PPT activities: the skills acquired are recorded in a personal LogBook  that is delivered to students in the 2nd year. This

was the result of a long work, aimed to harmonise the ESEVT Day One Competences with suggestions proposed by the academic staff, stakeholders and students dealing with the essential abilities that are to be developed and certified. The first LogBook version dates AY 2010-2011 and was intended for the ambulatory clinic. The first comprehensive LogBook was then introduced in 2013 and modified in 2016 and 2019 based on the proposals of the EAEVE Committee.

The LogBook is divided into three parts: one dedicated to verifying the acquisition of safety and biosecurity instructions, one that refers to the acquisition of soft skills, and a third one that refers to the acquisition of professional skills for the various disciplines. During the training, after having acquired specific skills, students get the teacher's signature in the space beside the completed activity. Personal LogBooks must be completed before graduation; the DVM Course coordinator is in charge to check completeness. The entire procedure is formalised and published into the website [\[link\]](#). Over the years, teachers have included most of the skills within the learning outcomes of core subjects and therefore students can acquire them during practicals, thus obtaining the signature on the LogBook; some skills are instead necessarily included in PPT activities. In this latter case, the student records activities in the PPT diary together with the signature of an internal or external (for EPT) tutor; then, the academic tutor, having checked the diary, finally certifies the skill on the LogBook.

Table 3.1.6. PPT organisation

Fields of Practice	Total ECTS	Intra-mural		EPT	
		Till 17/18 cohort	Since 18/19 cohort	Till 17/18 cohort	Since 18/19 cohort
<i>Diagnostic pathology</i>	3	3	3	0	0
<i>FSQ and VPH</i>	8	2	2	6	6
<i>Animal production</i>	5	2	2	3	3
<i>Companion animal clinics</i>	5	5	2	0	3
<i>Production animals and equine clinics</i>	4	4	3	0	1
<i>Emergency and critical care</i>	5	5	5	0	0
Total	30	21	17	9	13

3.2. Objectives of the programme: students as independent learners

Learning outcomes of the single teaching units are aligned with ESEVT Day One Competences (Annex B-[\[link\]](#)) and are reported in the syllabi; they are drawn up according to a format present on the online UniPi platform "Valutami"[\[link\]](#) and organised in a series of fields based on the Dublin Descriptors: Knowledge, Skills, Behaviour and methods of their acquisition and verification. For each teaching module, assessment modalities and criteria are explicit: the verification of the achievement of these objectives takes place through exams and through the management of the LogBook, in which the practical activities are certified (see paragraph 3.1).

An in-depth review of the syllabi was conducted in 2017 by the DVM-JFSC in agreement with the EAEVE Committee and subsequently discussed in the DVM Council; this allowed to adapt and update them, trying to fill gaps and reduce redundancies among different subjects. The training objectives are periodically updated through consultations with internal stakeholders (especially students and teachers of the study course) and with the external ones (Steering Committee and professionals).

An environment conducive to learning is guaranteed by a mix of factors that range from the quality of students and teachers, to the availability of several teaching resources in terms of patients, study material provided, simulators, e-learning resources. The students admitted to the DVM Course are selected and, despite a vocational selection is not in place, the majority of them are strongly motivated to study veterinary medicine; also, the VEE is guided by the EAEVE certification process to the

enhancement of staff awareness and quality, enhancement of resources (such as simulators, clinical skill development devices, e-learning platforms), enhancement of a QA system where students are always involved in a parithetic fashion due to the role that the D-JFSC and the DVM-JFSC play for any changes. The last steps forward, that the VEE made, to promote such an environment include:

- the implementation of training initiatives for the teaching staff, with a special focus on innovative veterinary education (see Area 9);
- the drafting and adoption of a policy for the alignment of learning outcomes to ESEVT Day One Competences and assessment methods (see Area 8);
- the remarkable expansion of e-learning resources and the greater use of e-learning tools and methods by the teaching staff (also due to the COVID-19 pandemic);
- the focus on the implementation of a Clinical Skill Lab for which materials have been obtained in the last AYs (see Area 6).

The VTH itself represents an environment highly conducive to learning and so does the Teaching Farm: in these facilities, students take part to practical teaching and PPT activities, but also come into contact with research and routine clinical activities, necessary for their training and also pivotal to understand the importance of the commitment to self-learning and lifelong learning for their professional development.

The VTH clinical case database, the e-learning portal and the library are excellent tools available to students for self-learning and lifelong learning. These are also favoured by some practical activities carried out as part of the teaching, during the PPT and in research and study activities for the preparation of the dissertation thesis.

The contact of students with professionals also represents an essential basis for acquiring the awareness of lifelong learning: to this regard, for many years the teachers of the study course have been organising seminars held by external professionals during the hours of theoretical teaching. From 2020, students have free access to seminars organised by some of the main veterinary associations (FNOVI , ASPA ) with which the DVS has made agreements: the DVM Course coordinator periodically informs students of these events, providing dates and programmes. By participating in these seminar activities and those organised and proposed by the DVM Course, students can get in touch with the professional reality and begin to understand the importance of continuing education.

3.3. Programme learning outcomes

The main objective of the study course is to train future veterinarians with solid knowledge and practical skills to face the veterinary profession from day one: the educational objectives are standardised by national legislation and defined by the MUR  (pp.166-167). Furthermore, the knowledge and skills necessary to be able to practice the veterinary profession have been established in accordance with EU Directives 2005/36/EC and 2013/55/EU. The main training objectives of the study course have been detailed in paragraph 3.1.

In this national framework, VEEs are annually requested to decline those aims and outcomes and monitor a range of related parameters in view of identifying possible areas for improvement. This work is the core content of the SUA-CdS , a dedicated document publicly available that includes the following four sections: a) General information; b) Learning objectives; c) Student's experience; d) Learning outcomes. The SUA-CdS of the DVM Course, AY 2020/21, is reported in Annex 2 and publicly available online .

Since ESEVT Day One Competences were published (annexed to Uppsala 2016, and then to Zagreb 2019 SOP), the DVS EAEVE Committee started to work on the analysis of learning outcomes that were included in the DVM Course teaching units. Despite the DVM Course already had adopted a comprehensive LogBook since 2013, this document was subsequently modified in 2016 and 2019. Changes were first driven by the DVM-JFSC and then adopted by the DVM Council. The study course is, in our opinion, now structured in the way to provide students with the complete set of Day One Competences (obtained by theoretical lessons, practical rotations, PPT), to which core subjects learning

outcomes are aligned. To further ensure the connection, the DVM Course adopted an internal policy in the form of guidelines for the alignment of learning outcomes with ESEVT Day One Competences and with assessment methods (Annex 3-). This latter change has strengthened the process by providing assessment formats consistent with a competence-based approach.

The learning outcomes are verified, assessed and reviewed through the periodic management of the SUA-CdS of the study course, a functional document for the design, implementation, management, self-assessment and redesign of the curriculum with useful information to disclose the exit profiles, the training objectives, the training path, the learning outcomes, roles and responsibilities related to the management of the QA system of the study course.

The DVM-JFSC participates in the management of the SUA-CdS, considering the indications of the Steering Committee and the observations reported in the annual report of the D-JFSC. After discussion and approval by the DVM Council, the SUA-CdS is sent for publication.

3.4. Committees for curriculum structure

As schematically drawn in Figure 7.5.1, different committees generate inputs that determine the core curriculum management by the DVM Council.

- DVM-JFSC: analyses teaching assessment questionnaires results and together with the DVM Course coordinator analyses corrective actions; deals with the preliminary phase of adaptations of the degree programme related to curriculum changes, students' progression and welfare.
- PPT Committee: deals with all the aspects related to PPT both intra- and extra-mural; identifies potential deficiencies also related to ESEVT Day One Competences and proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.
- Steering Committee: brings the training course closer to the needs of the labour market and collaborates in defining the needs of stakeholders; monitors the adaptation of the curriculum based on previously provided indications and graduate careers. Proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.
- Review Group: AMR and CRR (every five years).

3.5. EPT

Within the 30 ECTS of compulsory PPT, 9 were dedicated to EPT in the years included in this SER. A change (which increases the number of EPT ECTS from 9 to 13) was deliberated in AY 17/18 in order to ensure student exposure to extra-VTH clinical cases: this change will affect students from the 18/19 cohort.

The EPT allows students to encounter different professional realities from the academic world such as:

- Local Veterinary Units of the National Health System;
- Experimental Zooprophyllactic Institute (IZS), a VPH institution that provides multiple services to support official and private veterinarians, breeders and the general public;
- Regional Breeders Association and associated farms;
- Bee farms;
- Private clinics.

In these structures, during the EPT activities, students have the opportunity to meet with practitioners or with official veterinarians.

For EPT, as well as for all other PPT activities carried out within the VEE facilities, lists are available of “minimum activities”  that the student must perform and which integrate and strengthen academic education, improving students' professional knowledge.

The purpose of the EPT is to improve professional training and gain experience of daily professional life outside the academic world; the educational objectives of the EPT ensure that the contents are in any case relevant to the degree course and complementary to academic training.

The integration between external and internal training paths is guaranteed by periodic meetings between the non-academic tutors and the referent teachers of the relevant PPT areas; moreover, a further discussion with the stakeholders regarding PPT activities takes place during the meetings of the Steering Committee.

Table 3.5.1. Curriculum weeks of EPT for each student

Fields of practice	Minimum duration (weeks)		Year of programme
	Till 17/18 cohort	Since 18/19 cohort	
<i>Production animals (pre-clinical)</i>	3	3	4 th or 5 th
<i>Companion animals (pre-clinical)</i>	-	-	NA
<i>Production animals (clinical)</i>	-	1	5 th
<i>Companion animals (clinical)</i>	-	3	5 th
<i>FSQ & VPH</i>	6	6	4 th or 5 th

3.6. EPT providers' contracts/agreements

All activities related to the students PPT, including EPT, are regulated by a specific procedure  and managed by a PPT Committee with the following functions:

- coordinating PPT activities;
- identifying among the external structures affiliated with the DVS those suitable for the study programme PPT;
- preparing and annually reviewing the PPT regulations;
- preparing and monitoring and updating of a database on PPT carried out by students.

The administrative management of the PPT, including EPT, is guaranteed by the DVS Administrative Didactic Unit.

The study programme rules require students to complete 30 credits of PPT; among these, 13 are now compulsorily carried out as EPT (Table 3.5.1). Students can also carry out optional additional periods of EPT to acquire the elective credits under the study plan (see paragraph 3.1).

In order to provide EPT activities, the DVS, in the person of the DVS Head stipulates formal agreements with private and public structures belonging to the National Health System: the updated list of the affiliated structures with the indications of the sectors of interest is available . A copy of two agreements is provided in Annex 4 as relevant examples.

The student's attendance to EPT and the acquisition of the skills listed in the training project (See paragraph 3.7) are certified by the tutor of the host structure who supervises the practical activities carried out by the student, using the relevant document ; on this document the tutor of the host structure also expresses an assessment of the activities carried out by the student. This evaluation takes into consideration the student's ability to adapt to schedules and organisational procedures of the host structure, the student's level of learning during EPT, achieved results, and the knowledge and proficiency of tools made available during the training. Such document, compiled by the tutor of the host structure, is then verified by the academic tutor who certifies the acquired skills by signing beside the relevant activities into the LogBook.

3.7. Responsibilities of students during EPT

The student will be able to start EPT activities only if in possession of the following pre-requisites:

- have complied with the obligations for enrolment in the PPT ;
- have taken the *Safety and biosecurity training* course test ;
- be in possession of the relevant medical certification.

Students must agree with the PPT academic tutor and the tutor of the host structure the location and the period in which to carry out the EPT placement; a training project must be formalised by the coordinator in agreement with the tutor of the host structure, based on the characteristics of the structure itself and the minimum activities that the student must carry out, defined for each sector; the host structure, assisted by the student, will have to enter the training project in the University portal for the appropriate activation and additional insurance coverage.

During EPT placement students must record all the activities performed on a daily basis in a dedicated diary where both the student and the EPT tutor signatures must be present. Then, as mentioned in paragraph 3.1, the academic tutor, having checked the diary, finally certifies the skill on the LogBook. At the end of each EPT placement the student must fill in a satisfaction form. Also, students can express their observations and any complaints regarding the EPT, as well as for all other educational activities, by following the procedure for the management of reports (observations and complaints). Complaints are anonymous and acknowledged by the Department QA Manager who sends it to the DVM Course coordinator and to the DVS Head; the DVM Course coordinator, after having assessed the consistency of the complaints and their frequency, identifies and implements corrective actions.

3.8. Comments on Area 3

The DVM curriculum is aimed at providing students with the cultural preparation, the scientific basis and the technical and practical skills necessary for practicing the profession of veterinarian. It has been constantly adapted, trying to meet national requirements, ESEVT standards and the evolution of the labour market; on the latter aspect in recent years, the study course has particularly focused on increasing consultations with stakeholders through the establishment of the Steering Committee and through periodic discussions between the teachers of the study course and the professional world. These consultations led to the adaptation of some course programmes, giving more space to topics such as bee diseases, Herd Health Management, aquaculture and the certification of products of animal origin. Since the study course is extremely attentive to the practical preparation of students, in order to optimise the PPT, in the year 2020-21 some changes have been made to anticipate the beginning of PPT activities at the 3rd year, thus ensuring an earlier contact with the profession and the patients, and a potential acceleration of the academic career; changes were made in order to improve traceability of students activities, to increase EPT and to ensure that all students are exposed to comparable training; also a specific training on veterinary education and students' assessment to external tutors was made compulsory for agreements formalisation.

In 2016, in order to improve teaching of internal medicine, the relevant teaching staff proposed to merge the classical subjects of medical pathology, semeiotics, clinical pathology and clinical medicine in three new subjects identified as Veterinary Internal Medicine 1, 2 and 3. The proposal was discussed in DVM-JFSC (with the participation of 5th year coordinator), that expressed a positive opinion: in particular, it was highlighted that the teaching load per student had not increased and that the teaching of the mobile clinic had been significantly increased. The proposed changes were then approved by the DVM Council.

Since 2016-2017, DVM Course syllabi include the explicit indication of the teaching delivery methods in compliance with ESEVT SOP: lectures; seminars; supervised self-learning; laboratory and desk-based work; non-clinical animal work; clinical animal work.

3.9. Suggestions for improvement on Area 3

The DVM curriculum could still benefit of particular actions:

- teaching of transversal (soft) skills also through courses offered by the Career Service of UniPi, subject to agreement with the University. Currently all students can participate in the workshops organised by this office (for example problem solving, time management, team working, but also preparation of a CV and notions on how a company works or how an employment contract is

made), though on a voluntary basis. The events are available online and students are informed annually during the orientation day on how to find information and participate;

- administration of questionnaires to professionals and recent graduates for feed-back on the study course and on the acquisition of ESEVT Day One Competences;
- evaluation of the results of the TECO project (Competence Test) coordinated by the ANVUR, to which the DVM Course participated ;
- the availability of animal and organ models and dummies needs to be increased by regularly scheduled purchase;
- implementation of an attendance certification method that is currently delegated to the teacher. It is not codified what must be done if the students do not have 70% of the expected attendance.

3.10. Notes on COVID-19 pandemic

The COVID-19 pandemic forced several actions since the first lockdown that started 9th march 2020; the teaching staff showed a high degree of adaptability to changes since remote lectures were already in place remotely after one week. The University strongly supported the changes with dedicated training activities for staff on remote teaching, learning and assessment. E-learning resources such as anatomy atlas , a digital slide repository  or a set of videos on slaughtering  (since abattoirs were not physically accessible) were provided. Remote PPT activities were performed: some did not return to normality, due to EPT institutions that still do not accept students. Adaptations were/are promptly communicated to students and are publicly available at a dedicated webpage .

Area 4. Facilities and equipment

4.1 General description

The premises of the DVS are in Pisa downtown and in San Piero a Grado, approximately 10 km away (Annex C). Buildings in Pisa (PiB) are located close to the city centre and the railway station. Most of the teaching activities of the first three years of the DVM curriculum take place in this location, whereas during the last two curricular years, activities are predominantly carried out in San Piero a Grado, whose buildings (SPB) include the VTH. Close to SPB are a small group of buildings denominated “Le Querciole” (QuB) and the Teaching Farm (within CIRAA, see below), where intra-mural facilities for poultry and for dairy/beef cattle are located, respectively.

PiB include the Department’s administrative and Head offices, most classrooms, other teaching facilities and laboratories, the main DVS library, study areas for students, offices for teaching, administrative and technical staff, as well as laboratories for teaching and research managed by the units of Veterinary Anatomy, Physiology, Parasitology, Animal Production, Animal Pathology, Infectious Diseases, Food Hygiene.

SPB include the VTH, facilities for small animals (SA) and large animals (LA) hospitalisation, isolation and research, classrooms for clinical teaching, meetings and seminars rooms, study areas for students, spaces for practical training with dummies, organs and animals, offices for teaching, administrative and technical staff. Laboratories for research and teaching managed by the units of Pharmacology, Internal Medicine, Surgery and Reproduction are also located in SPB.

QuB are located in front of the SPB, 0.5 km away on the opposite side of the road. Premises are currently used for chicken breeding (local breeds) and for research activities. This structure will soon be included in the main SPB space.

The Teaching Farm belongs to CIRAA  (700 hectares), an interdepartmental research structure whose mission embraces biodiversity protection, maintenance of soil fertility, reduction of pollution and environmental sustainability. Most of the academic staff operating at CIRAA comes from the DVS and the DAFE . In particular, DVS is responsible of the health of all animals housed in the farm, namely 110 dairy cows/calves, 80 beef cows/calves, and 10 small ruminants on average. The premises are located 3 km away from SPB.

Extra-mural facilities, such as private clinics, farms, breeding centers, slaughterhouses, fish markets, food processing industries, shelters and sanitary kennels are also used for training activities. The main sites are reported in Table 4.1.1, while the complete list is available at dedicated DVS webpage .

Table 4.1.1. Main extra-mural facilities used for teaching

Training area	Extra-mural facilities	Distance (km)
Internal medicine	Ente Parco Migliarino, San Rossore, Massaciuccoli (Pisa)	10
Reproduction	Equine Tuscany Region stallions stud, San Rossore (Pisa)	13
Physiology	Dog shelter <i>Soffio di Vento</i> , Pisa	14
Internal medicine		
Parasitology	Dog shelter, Pontetetto, Lucca	35
Physiology		
Internal medicine	Pig breeding farm Stassano Alessandro, Cedri di Peccioli (Pisa)	60
Animal production	Sheep farm Pedrazzi, Coltano (Pisa)	7
FSQ-VPH	Italpork Srl, Buggiano (Pistoia)	55
	Consorzio Macelli, San Miniato (Pisa)	50
	Coop. Mitilicolti Spezzini Srl, Lerici (La Spezia)	75
	Avi.Coop Sca Amadori, Monteriggioni (Siena)	120

Training area	Extra-mural facilities	Distance (km)
	Central canteen DSU, Pisa	9
<i>Animal production</i>	Rabbit farm Marchini Piera, Fosdinovo (Massa Carrara)	72
	Farm Fulceri di Modica Maurizio, Lajatico (Pisa)	55
	Beekeeping Metalori Aldo, Capannori (Lucca)	41
	Poultry farm <i>La Fattoria di Margherita Vanni</i> , Peccioli (Pisa)	51
	Intensive farming of beef cattle <i>La Regina</i> , Santo Stefano a Macerata (Pisa)	16
	Intensive farming of beef cattle <i>Fattorie Toscane</i> , Santa Luce (Pisa)	42
	Organic farming of beef cattle <i>Az. Agr. Salvadori Furio</i> , Coltano Radio (Pisa)	9
	Horse breeding facility <i>Il Melograno</i> , Serravalle Pistoiese (Pistoia)	75
	Show jumping centre Pineta Salviati, Migliarino (Pisa)	20
	Associazione Regionale Allevatori, Sesto Fiorentino (Firenze)	93
<i>Reproduction</i>	Stud and equine breeding centre <i>La Piaggia</i> , Staffoli (Pisa)	40
<i>Animal nutrition and feed technology</i>	Dairy cows cattleshed, Novellara (Reggio Emilia)	222
	Tenuta di Paganico, Grosseto	170

Strategy and programme to maintain and upgrade facilities and equipment – PiB were built in the sixties and are maintained with funding from UniPi (see Area 2 for details). Since the nineties, however, the premises began to appear inadequate, thus the project of moving all facilities to San Piero a Grado was initiated. Due to the size of the project, it was divided in three parts. The first two parts are complete: the construction of the Surgery and Reproduction Clinics (completed in year 2000) and later of the Internal Medicine Clinic, completing the VTH, with the shelters for hospitalising both SA and LA (completed in 2009). Today the project for the third lot, with the construction of the remaining Department facilities and of the teaching facilities is approved, with 35.700.000,00 € allocated for completion (Annex 5).

Maintenance and upgrading of the Campus facilities is the responsibility of the UniPi Building management unit . IT infrastructures are planned and maintained by the UniPi Digital infrastructure management unit . Requests for maintaining/upgrading facilities are conveyed to the Building management unit or the Digital infrastructure management unit by a support staff referent that is trained to use the adopted UniPi procedure. A referent for PiB and one for SPB (including QuB) are identified. Within the limits of its budget, the DVS is responsible for further needs related to maintenance and upgrading of the educational equipment. A formalised procedure is in place in the VTH: the VTH Director is in charge to ensure full functionality and upgrade on equipment in order to guarantee workplace health and safety and quality of services/research; he/she receives proposals from the Operative Unit coordinators and collect all the information for discussion and decision within the VTH Council.

The Teaching Farm management is under the control of CIRAA through its direction and dedicated staff . A DVS member is involved in CIRAA direction (i.e., Deputy Director). Currently, the farm is affected by structural problems caused by the age of the buildings. Regular maintenance interventions are performed and a funded project for a full renovation is in place.

To build new premises in San Piero area, a complex approval process is required due to the Regional Park of San Rossore, Migliarino, Massaciuccoli: bureaucracy somewhat delayed the DVS completion and is hindering the Teaching Farm renovation. The DVS project in San Piero is now fully authorised and the next step is contracting the construction; the Teaching Farm project is waiting the “landscape protection unit” approval from Pisa Municipality whereas funding has been already allocated.

Compliance with relevant legislation – The compliance of physical facilities with all relevant legislation is the responsibility of UniPi, in particular, as said above, the Building management unit and the Digital infrastructure management unit. Furthermore, high standards of safety and biosecurity, are ensured by the Prevention and Protection Service (Servizio Prevenzione e Protezione, SPP)  that periodically verifies all instruments and is in charge to organise mandatory inspections of all lifting

equipment and trolleys, compressors, X-ray equipment, hoists, fire extinguishers, etc. The three offices, working together ensure full compliance to the national legislation.

According to the Italian Law no. 81/2008 on health and safety in work and teaching places, all the structures can be verified at any time by the competent VPH authority, without notice.

Relevant equipment is under periodic inspection in line with requirements of the quality management system UNI EN ISO 9001:2015 which some laboratories/services comply with.

Operational policies and procedures communication – Operational policies and procedures are continuously updated and communicated to relevant stakeholders through the DVS website, by e-mail, and by health and safety signals in the DVS premises. The DVS implemented a course on biosecurity and animal handling that ends with a test that students must sit during the 2nd year, before entering 3rd year laboratory activities and clinical rotations : the course includes laboratory, slaughterhouse, necropsy room, radioprotection and breeding facility security training. Full details related to both students, staff and visitors are provided in paragraph 4.9.

4.2 Teaching facilities

A short description of the facilities is reported in the following tables, in which the building codes are followed by (0) if located at ground floor, (1) if located at first floor, and (2) if located at second floor. Table 4.2.1 includes all the premises used for **lecturing**, all of which are fully equipped with video projection system, microphone, and access to the UniPi network.

Table 4.2.2 shows **group work** rooms: premises localised in Pisa host book collections (some of which of historical values) that belong to the UniPi Library System (Sistema Bibliotecario di Ateneo, SBA, see Area 6) and are used as study rooms, for internal meetings, seminars, and exams. Table 4.2.3 shows premises for **practical work**, like teaching laboratories, the Veterinary Anatomy Museum, and a room for practical clinical training that is also now used as a “temporary **Clinical Skill Lab**”. The Clinical Skill Lab will be located elsewhere when the DVS will entirely merge in the San Piero area. Preclinical practical work takes place also in the **research laboratories** (Table 4.2.4) and diagnostic facilities, while clinical practical work takes place mainly in the VTH (see Table 4.3.2 and Table 4.3.3), in the Teaching Farm or in extra-mural facilities during EPT. Teachers and students may also use the facilities of Polo 5 (or Polo Piagge, from the name of the area of the city where the PiB of the DVS is located), for teaching, tests and exams .

Table 4.2.1. Premises for lecturing (classroom)

Site/Building code	Premise	Room code (area m ²)	Places
PiB/B22 (0)	E	0001 (95.6)	92
	CM1	0013 (66.0)	72
	R	0030 (54.8)	42
	CM2	0011 (41.2)	34
	CC	0004 (40.5)	42
PiB/B22 (1)	CC2	1028 (85.5)	96
PiB/B23 (0)	Aula magna	0001 (154.4)	98
	A	0008 (68.6)	72
	B	0007 (71.1)	72
PiB/B24 (0)	C	0029 (61.1)	50
PiB/B25 (0)	D	0001 (28.0)	18
SPB/G28-1 (0)	LA	0011 (44.2)	45
	SA	0053 (43.8)	38
CIRAA/G-01	Aula Benvenuti	- (66.7)	70

Table 4.2.2. Premises for group work

Site/Building code	Premise	Room code (area m ²)	Places
PiB/B24 (0)	Reading room Physiology	0043 (29.8)	8
	Reading room Animal Production	0018 (44.6)	25
PiB/B24 (1)	Library room Parasitology	1010 (35.4)	20
	Reading room Anatomy	1031 (41.7)	10
PiB/B24 (2)	Reading room Pathology	2026 (33.0)	20
	Reading room Infectious Diseases	2016 (18.4)	10
SPB/G28-1 (0)	Meeting room 1 (White Room)	1028 (89.0)	40
	Meeting room 2 (Black Room)	1056 (94.9)	40
SPB/G28-1 (1)	Radiology self-study corners	1045 (10.0)	4-6
	Reading room	1001 (119.0)	24
	Reading room	1037 (28.6)	4

Table 4.2.3. Premises for practical work

Site/Building code	Premise	Room code (area m ²)	Places
PiB/B22 (0)	Computer room	0005 (51.6)	20+1
PiB/B23 (1)	Veterinary Anatomy Museum	1003 (117)	-
PiB/B24 (0)	Anatomy Dissection room	0028 (43.9)	25
	Necropsy room & adjoining facilities	0032 (37.4), 0033 (12.5), 0034 (11.6), 0035 (5.6), 0036 (11.3)	20
PiB/B23 (1)	Microscopy laboratory 1	1004 (51.1)	20
PiB/B25 (0)	Microscopy laboratory 2	0007 (42.1)	20
PiB/B27 (0)	Biology/Chemistry laboratory	0004 (133.3)	40
SPB/G28-1 (0)	Room for practical clinical training	0026 (51.1)	20

Premises for study and self-learning – SBA facilities, not only inside the DVS buildings, are available to all UniPi students. Within SBA, the DVS has its own library, with books and journal loan service, two study rooms for a total of 54 places, a computer stations' room, a lockers' room, Wi-Fi connection and air conditioning. The library is open from 8:30 to 20:00, Monday to Friday and is located in PiB, Building B23 (1), rooms 1005, 1006, 1007, 1008. In addition to the library, further spaces are available in PiB and SPB (see Table 4.2.2). Free wireless access to Internet is available almost everywhere in PiB and SPB, including gardens.

Catering, canteens – On both PiB and SPB there are currently no dedicated catering or canteen services. There are, however, automatic machines for delivery of coffee, food and beverages. Pisa is a “University Campus”, students easily reach the University student's canteen and all other services. In SPB a dedicated canteen is foreseen, due to the distance from the city centre. Being the DVS not yet completed, there is a kitchen that can be used by staff and students (Building G28-1 (0), rooms 0020 and 0023), and microwaves for students in the study room (Building G28-1 (0), room 64, use for eating allowed between 1 and 3 PM). From this study room students can also access a covered terrace, where chairs and a table are available.

Locker rooms – A locker area for students in PiB (Building B23 (1), room 1001, 67 lockers) and other locker rooms in SPB (Buildings G28 (0), room 149, 208, and G28(1), room 49) are present.

Accommodation for on call students – Students on duty during the night shifts at VTH have access to one bedroom with one bed close to the intensive care unit (SPB, Building G28-1 (0), room 0019).

Leisure – PiB and SPB premises include leisure areas with tables in the garden. Before COVID-19 pandemic, students were used to organise every year a barbecue in Pisa area, where staff was invited.

Toilets and showers – Toilets, washing/showers are located all over the VEE buildings.

Offices and research labs – There are 86 offices in PiB and 38 offices in SPB for academic staff, PhD students, contracted veterinarians, technical and administrative support staff (PiB: in all buildings; SPB: Building G-28 (1)). Research laboratories are summarised in Table 4.2.4, while the relevant equipment is described in Annex 6.

Table 4.2.4. Research laboratories

Site/Building code	Premise	Room code (area m ²)
PiB/B22 (0)	Food Inspection (FishLab)	0015 (13.3), 0016 (37.8), 0017 (8.1), 0018 (7.9), 0019 (15.9), 0020 (12.1)
	Genetic Biotechnologies	0039 (13.3), 0040 (8.2), 0041 (25.2), 0042 (8.0)
	Biochemistry and Proteomic	0033 (28.1), 0038 (10.0)
PiB/B22 (1)	Physico-chemical Analysis of Foods of Animal Origin	1001 (46.2)
	Food Microbiology	1016 (40.6), 1017 (26.4), 1018 (26.4)
	Meat Quality	1041 (38.7)
PiB/B24 (0)	Milk Quality and Animal Feed	0001 (24.3), 0002 (13.9), 0003 (35.8), 0006 (26.1)
	Physiology and Ethology	0056 (50.4), 0058 (5.2), 0060 (24.2)
PiB/B24 (1)	Micology	1006 (24.4)
	Parasitic Diseases Serology	1003 (13.6)
	General Parasitology 1	1004 (25.6)
	General Parasitology 2	1008 (25.8), 1009 (16.3)
	Histology	1042 (12.1), 1044 (35.6), 1045 (33.8)
PiB/B24 (2)	Histopathology	2033 (10.2), 2034 (11.7), 2036 (23.2), 2037 (5.3), 2038 (32.7), 2047 (1.7)
	Bacteriology	2001 (25.3)
	Avian Pathology	2010 (25.7)
	Molecular Bacteriology	2002 (6.4)
	Serology	2003 (25.4)
	Sterilisation, culture media preparation and -80°C storage	2006 (26.7), 2008 (14.2), 2009 (24.3)
	Molecular Virology	1001 (9.4), 1005 (11.3), 2004 (25.7)
	Virology	2007 (25.7)
PiB/B24 (1/2)		
PiB/B24 (2)		
PiB/B27 (0)	Biochemistry and Apidology	0001 (16.8), 0003 (16.8)
SPB/G28-1 (0)	Pharmacology and Toxicology	0027 (18.4), 0032 (22.9), 0035 (25.6)
	Ecotoxicology	0037 (2.79), 0039 (25.0), 0040 (8.65)
	Clinical Pathology	0044 (37.8), 0047 (12.9), 0050 (16.1)
	Hematology/Cytology	0051 (44.9)
	Reproduction Technologies	0002 (15.2), 0003 (15.8)
QuB/G21-1 (1)	Avian Reproduction	1009 (7.9), 1010 (25.8), 0001 (33.2), 0002 (12.9), 0011 (12.8), 0012 (16.3), 0013 (16.4)

4.3 Livestock facilities, animal housing, core clinical teaching facilities and equipment

Healthy animals – Overall, the DVS owns an average of 100 mares as embryo recipients. In SPB, half of them are housed throughout the year, while the other half are pregnant or lactating at the facilities of the owners of the embryo donors. Two teaser stallions are maintained in box with access to the paddock on daily basis. Of these, a small number are used for practical rotations and PPT activities.

CIRAA owns around 110 dairy cows housed in a free-stall system and about 80 grazing beef cattle. The dairy farm breeds its own heifers and milks cows twice a day. Students are present in the farm to practice breeding skills and clinical examination procedures. CIRAA also hosts an experimental apiary (20 families).

The poultry farm in QuB is divided into 30 aviary fences, 20 of which are on sandy soil and 10 on a concrete platform, all with partial or total coverage and equipped with perches, collective nests and

basic equipment for feeding and the watering. A masonry building, made up of various rooms, houses the hatchery, divided into: room for egg storage, incubation room with two Victoria incubator machines (maximum total capacity 2000 chicken eggs) and hatched room. A room is intended for chicks equipped with cages and artificial mothers, and a 10-hole battery for hens. An external room is used as a feed warehouse and various other rooms are intended for the storage of poultry equipment. The animals present are chickens raised with an extensive system and outdoors from the second month of life, the breeding animals in families, the maximum consistency is 250 animals.

Research animals – Since 2000, a Laboratory Animal Facility (LAF) is set up in PiB (Building B27, rooms 0006 to 0019) belonging to UniPi experimental animal facilities . In 2003 the LAF was accredited by the Italian Ministry of Health for housing of small rodents (hamsters, rats, mice, guinea pigs, gerbils) and since then, an average of 100 animals per year has been housed as models for experimental protocols. In the last years, a zebrafish facility was built within LAF. Since 2016, facilities for housing LA for research (horses, cattle, small ruminants, pigs) were authorised by the Ministry of Health (authorisation number 07/2016-UT) in SPB (Building N).

Hospitalised animals – The number of animals which can be hospitalised at the VTH is summarised in Table 4.3.1.

Table 4.3.1. Places available for hospitalisation in the VTH and animal species that can be accommodated

Premise	Building code	Room code (area m ²)	Places	Species
Hospitalisation	G28-F	0001 (143.55)	6 boxes	Horses*
	G28-1 (0)	0020 (16.52), 0021 (18.92), 0022 (14.17), 0024 (12.12)	26 cages (in Intensive care)	SA
	G28-D	0018 (60.80)	10 boxes	Dogs
	G28-E	0018 (10.80)	4 boxes	Wild animals
Isolation facilities	G28-E	0018 (36.45)	4 boxes and 12 cages	SA
	G28-Q	0004 (143.55)	6 boxes**	Horses
	G28-C	0046 (77.7)	3 boxes	LA
Research facilities	G28-N	0044 (144.77)	6 boxes	Farm animals and horses

* If needed, cattle, small ruminants, and pigs can be hospitalised in horses' boxes (G28-F);

** Isolation for stallions in reproduction activity.

Facilities and equipment for clinical activities – As anticipated, the VTH  is within SPB. The ground floor is completely dedicated to clinical activities including teaching and research. Two classrooms are also present. Clinical facilities are described in Table 4.3.2 and Table 4.3.3, while the relevant equipment is described in Annex 6. Alongside these facilities there are service rooms (changing rooms with lockers and showers for academic and technical staff, storage rooms, etc.).

Table 4.3.2. Clinical facilities for SA

Site/Building code	Premise	Room code (area m ²)
SPB/G28-1 (0)	Reception area	0052 (100.8)
	Waiting rooms	0013 (19.2), 0014 (21.3), 0056 (29.4)
	Ophthalmology SA	0010 (12.8)
	Reproduction SA	0008 (17.3)
	Ultrasound SA	0007 (14.8)
	Surgery-Orthopaedics SA	0006 (17.7)
	Radiology SA	0058 (16.7)
	CT SA	0060 (28.3)
	Anaesthesia, preparation SA	0070 (20.2), 0074 (13.6)
	Auxiliary premises for operating room (in common with LA)	0076 (5.6), 0077 (12.0), 0078 (5.5), 0081 (5.6), 0082 (5.7), 0083 (5.3), 0086 (24.4)

Site/Building code	Premise	Room code (area m ²)
	Surgery SA	0071 (16.3), 0072 (16.4), 0079 (14.8), 0080 (18.9)
	Sterilisation (in common with LA)	0086 (24.4)
	Pharmacy	0041 (9.5)
	Haematology SA	0018 (16.1)
	Nephrology SA	0017 (16.5)
	Gastroenterology SA	0016 (16.5)
	Dermatology SA	0015 (13.8)
	Cardiology and Echo-cardiography SA	0012 (21.4)
	Emergency and Intensive Care Unit, SA	0019 (16.3), 0020 (16.5), 0021 (18.9), 0022 (14.2), 0024 (23.1), 0030 (12.7)
	Clinical Pathology lab	See Table 4.2.4
	Hematology/Cytology lab	See Table 4.2.4
	Pharmacology and Toxicology lab	See Table 4.2.4
	Dialysis SA	0036 (21.5)
	Chemotherapy SA	0033 (9.2)
SPB/G28-O	Whelping room SA	0050 (8.85)
SPB/G28-L	Canine artificial insemination	0016 (6.99)
PiB/B24 (0)	Pets' behaviour consulting lab	0059 (23.1)

Table 4.3.3. Clinical facilities for LA in the VTH

Building code	Premise	Room code (area m ²)
G28-1 (0)	LA visiting room/standing surgery/radiology	0025 (53.8)
	Equine Artificial Insemination/Embryo Transfer	0001 (50.4)
	Equine Embryo Transfer lab	0002 (15.2)
	Equine Artificial Insemination lab	0003 (14.8)
	LA operating suite	0088 (60.7)
	LA anaesthesia, induction and recovery room	0062 (11.8), 0070 (20.2), 0074 (13.6)
G28-L	Equine semen production centre	0006 (16.8)
Wooden boxes	High-speed treadmill room	0007 (15.71), 0008 (15.71), 0009 (15.71)
	Equine gynaecology visiting room	0001 (15.52), 0002 (15.63), 0014 (15.52)

There are no specific LA radiology, nor ultrasonography rooms. However, the diagnostic activities can be performed, with mobile instruments, in the equine examination rooms devoted to the Internal Medicine or Reproduction units.

Facilities and equipment for diagnostic services including necropsy

The Clinical Biochemistry and Haematology Laboratory service is open Mo-Thu from 8 am to 5 pm and on Fridays from 8 am to 2 pm (a smaller lab in the Emergency and Intensive Care Unit can perform urgent analyses during nights and weekends). It processes samples for haemato-biochemical exams generally used in the clinical management of cases of the species of common interest (dog, cat, horse, and cattle). The service also manages other specialised exams thanks to agreements with a number of national and international reference laboratories. Blood and plasma transfusion are provided in the Veterinary Transfusion Centre . The lab is UNI EN ISO 9001:2015 certified.

The Necropsy service provides diagnostic pathology support for all users, including the VTH. Necropsies are performed on numerous species including pets, farm animals, birds, reptiles, amphibians, laboratory animals, and zoo animals. Necropsies for VTH cases are concentrated in the morning to provide maximal teaching value for the students. Veterinary pathologists weekly rotate on-duty and frequently consult with each other regarding cases. They also train veterinary students, PhD students and residents in diagnostic pathology through valuable hands-on, case-based educational experience. Services also include the evaluation samples submitted by veterinarians who have

performed necropsies at their local practices (field necropsy) and forwarded samples to the laboratory for diagnostic evaluation. Evaluation of fresh tissue samples also include gross and microscopical examination of organ samples from regional slaughterhouses. The service is in conjunction with those of bacteriology, virology, parasitology, and toxicology and include interpretation of the results by the coordinating pathologist. Equipment of the necropsy room is described in Annex 6.

The Laboratory of Veterinary Pharmacology and Toxicology supports the veterinary clinic activities providing consultations on drug-related problems including adverse effects, interactions, and therapeutic monitoring. Furthermore, the laboratory has the expertise to assess, diagnose, and manage poisoned and overdosed animals. The Clinical Pharmacology Service provides the therapeutic drug monitoring of several drugs to ensure that the medications are taken properly and to search for any potential drug interactions. The Clinical Toxicology Service assesses and provides advice on poisoned patients supported by a dedicated clinical toxicology database. The service manages telephone enquiries from healthcare providers concerning the management of patients with acute poisoning. The unit also performs the service of diagnostic toxicology by different analytical methods (HPLC, ELISA, Electrochemical) on biological samples from poisoned animals. The analyses performed include pesticides, heavy metals, contaminants and drugs. The lab is UNI EN ISO 9001:2015 certified.

VTH activities are also supported by the fully equipped parasitology, virology and bacteriology laboratories described in Annex 6.

Facilities and equipment for others services

The Andrology Laboratory, in located in G28-L (entirely devoted to animal semen technologies) which is divided in three main activities/labs:

- 1) The equine semen production lab (UNI EN ISO 9001:2015 certified), is fully equipped for equine semen collection, evaluation, cooling and freezing and is officially authorized for the production of semen for Italy and for the EU. According to the Italian law, this lab is divided in a semen collection theatre, with phantom, in a washing and sterilizing room, in a lab for semen evaluation and processing, including freezing, and in two rooms for frozen semen stockage. The laboratory is completed by dedicated changing room with bathroom and shower and it is connected with 6 boxes reserved for semen producing stallions' housing.
- 2) The animal semen evaluation room is equipped by a Computer-Aided Sperm Analysis (CASA) system for objective evaluation of motility semen parameters of all species. This room and the CASA system are part of the Center for Instrument Sharing of the University of Pisa .
- 3) The canine artificial insemination room is devoted to and equipped for artificial insemination in dogs, both by trans-vaginal conventional technique and the new colposcopy approach.

The Equine artificial insemination and Embryo Transfer labs, in G28-1(0) consist in a large room, provided by a stock, for managing mares, and two laboratories, one for semen and the other for embryos processing. These labs, officially authorized by the Italian law, are fully operating since 2000. The labs are strictly connected with the facilities for housing and managing of the private and DVS's mares (boxes, paddocks and room for mares examination). The DVS's Equine Embryo Transfer activity is unique in the Veterinary Schools in Italy and it is rare among European VEEs.

Premises used for the practical teaching of FSQ & VPH – In order to ensure that students receive adequate training in FSQ and VPH, the DVS has agreements with several slaughterhouses, fish markets and food processing plants and with the Local Health Authorities in charge for the official control in Tuscany and outside the Region. During the practical rotations and EPT students visits three different slaughterhouses. Students observe the workflow required for a hygienic conversion of livestock into meat (Reg. EC no. 853/2004). All the visits are conducted together with the veterinarian, belonging to the competent authority, that describe the official activities, according to the current legislation (Reg. EU no. 625/2017, 624/2019, 627/2019).

Italpork Srl, Buggiano (Pistoia) - This is a small–medium-sized pig abattoir slaughtering more than 12,000 animals per year (~2400 animals per week) located in northern Tuscany (Central Italy). The slaughterhouse receives mainly heavy pigs (mostly hybrids of Landrace, Large White, and Duroc of about 160–170 kg live body weight), from several regions of the North and Centre of Italy. Starting from 2006 also cattle are slaughtered (including Chianina and Vitellone Bianco Igp) in the new dedicated area of the plant (~2300 animals per year). The bovine slaughterhouse is also qualified for ritual slaughter.

Consorzio Macelli, San Miniato (Pisa) - This is a small sized abattoir where both cattle, swine, horses and sheep and goat are slaughtered. In this plant 3000/3100 cattle and 9000 pigs per year are slaughtered. In February 2014, it obtained recognition for the butchering of farmed game meat and (from 30 July 2015) for the Hunted Game Processing Center.

Avichianti S.r.l a Monteriggioni (Siena) - The plant belongs to the Amadori company that is one of the largest agri-food companies in Italy, specialising in the poultry sector. Amadori directly manages the entire integrated supply chain, and is present on the national territory with 6 hatcheries, 6 feed mills, 6 food processing plants. The plant, located in Monteriggioni (SI), consist of slaughterhouse and a cutting plant dedicate to the turkey meat production.

Coop. Mitilicoltori Spezzini Scrl, Lerici (La Spezia) - The Coop. Mitilicoltori Spezzini is composed of mussels and oysters' farmers located in the Gulf of La Spezia. There are different areas, all classified as B, where the entire supply chain takes place. Once animals reach the commercial size they are taken from the sea and moved to the plant composed by a purification centre and a dispatch centre. Before being packaged, they are passed through a cleaning and screening process, so as to have a first selection, necessary to discard the unsuitable product. After the hours necessary for purification (12 h for mussels, 24 h for other kind of seafood), the product is brought to the packaging area where it undergoes another selection in order to be packaged and to start the cold chain.

4.4 Clinical teaching facilities and equipment

Organisation and management of the VTH and ambulatory clinics – In the VTH are the clinical facilities used to perform teaching and research, as well as the instruments employed for external consultations of medical, surgical and reproductive cases for all common domestic species. The part of the Department in SPB, inaugurated in the year 2000, has been continuously active since then for consultation of SA and LA and for hospitalisation of horses in boxes and paddocks. A second set of newer buildings was inaugurated in 2009 and, since then, the VTH is opened 24/7 all year round for dogs, cats and horses. For ruminants, pigs and wild animals on-call service is available 24/7 as well. Hospitalisation is also active for all species since 2009.

Specialised consultations are in the fields of ophthalmology (Tuesday and Wednesday), dermatology (Tuesday and Thursday), oncology (Tuesday and Thursday), haematology (Monday, Wednesday and Friday), SA reproduction (Monday to Friday), surgery (Monday to Friday), orthopaedics (Tuesday, Wednesday and Friday), imaging diagnostics (Monday to Friday), anaesthesiology (Monday to Friday), nephrology (Monday to Friday), gastroenterology and endocrinology (Tuesday and Wednesday), cardiology (Monday to Friday), pneumology (Monday), algology (Monday), blood donation (Monday, Wednesday and Friday), LA (on call).

The VTH Council, which include academic staff, technicians and post-graduate students, takes the decisions on the management of the hospital. The VTH Director chairs the meetings and takes also the final responsibility for the running of clinical activities. These are organised in six main services:

1. SA and LA surgery (abdominal, thoracic, orthopaedics, video endo-surgery), Anaesthesiology, Diagnostic imaging and Ophthalmology;
2. SA and LA internal medicine (gastroenterology, nephrology, neurology, endocrinology, dermatology, cardiology, haematology, oncology);

3. SA and LA reproduction (neonatology, andrology, reproduction, assisted reproductive technologies);
4. Clinical biochemistry and Haematology;
5. Pharmacology and Toxicology;
6. Emergency and Intensive care (including post-operative care).

Since 2001 all patients (SA and LA) visited at the VTH have a numbered medical record that contains all the clinical data. There is a fully computerised software (OCIROE) for appointments and medical records, reachable from every visitation room and from staff offices. Also, the laboratories in PiB can use the software to update diagnostic data for the VTH patients. When the patient is discharged, all data about the clinical procedures and laboratory examinations are available to the administration for invoicing purposes. Rates charged for clinical services are established by the DVS Council. At the CIRAA Teaching Farm a recording system suited for dairy farms (AfiFarm®) is present, where all the milk production, health and reproduction records are available for consultation.

Students are involved in clinical activities in a progressive way and share the daily life of the hospital during all 4th and 5th year, as the classrooms for these curriculum years were located within the VTH before the COVID-19 emergency. Since then lectures are performed in PiB and practical activities at the VTH where also most of the practical training linked to clinical subjects is carried out. To guide the student's learning, a LogBook lists all activities and procedures that they must accomplish during PPT and rotations. Since the previous EAEVE visits in 2009 and 2012, the DVS increased the number of contracted veterinarians working in the VTH to augment the available specialties and the case load. An explicit reference to their involvement in students' training is present in their hiring contract. Practical rotations in the ambulatory clinic are performed by contracted teachers that carry out extra-mural activity on ruminants, pigs, and dogs.

To maximise hands-on training of all students, practical rotations are carried out in small groups of 6-8 students while PPT activities are carried out in smaller groups (1-3 students) supervised by academic staff and/or a reference veterinarian (who may be a hired practitioner).

Clinical activities performed within the VTH and during ambulatory clinics are managed in a QA framework that includes procedures aimed at meeting ESEVT standards; procedures in place deal with: 1) Ordinary client management; 2) Emergency client management; 3) Equipment purchase; 4) Use of boxes by DVS personnel; 5) Management of the cold room; 6) Surgery - management of patients in emergency and intensive care; 7) Management of cases in emergency and intensive care; 8) Special waste management; 9) Sections of Operative Units; 10) Management of sections and Operative Units; 11) Clinical record request; 12) Client complains and suggestions; 13) Patient acceptance, hospitalisation and discharge; 14) Chemotherapy toxicity management; 15) Isolation LA; 16) Isolation SA; 17) Experimental animal facility disinfection. In addition, students are exposed to activities performed in laboratories certified UNI EN ISO 9001:2015.

The VEE meets the National Practice Standards.

4.5 Diagnostic and therapeutic equipment

Most of the equipment available in the VTH has a dual purpose, as it is used for teaching and clinical services. Students rotating in the different clinical services have access to visiting rooms, intensive care facilities and operating theatres, thereby using spaces and instruments together with the academic staff. The clinics are well furnished with high standard equipment for routine examination and surgery, as commonly performed in general practice, in addition to state-of-the-art imaging, laparoscopy, endoscopy, dialysis and laboratory equipment. These instruments are routinely used for teaching during practical sessions and rotations, and the students participate and assist in surgical and diagnostic procedures. Operating room cameras are available for recording and/or projecting real-time surgery during lectures. At the PiB there is a necropsy room (described in Table 4.2.3) to which all students have access to follow the practical teaching of the courses in Anatomic pathology and autopsy (See Area 3). Overall, the design of the mandatory PPT programme ensures that all students have access to

available diagnostic and therapeutic facilities and a variety of patients of the different species. As detailed in Area 3, after formalities have been completed following the communicated procedure students can start PPT clinical training. During the PPT, students are engaged in the management of hospitalised animals and in intensive care activities at the VTH for a total of 125 hours (5 ECTS, they were 9 – 225 hours till 17/18 cohort), divided into day and night shifts even on holidays. In addition, they participate in the management of medical, surgical and obstetric-gynaecological emergencies of all patients admitted at the VTH, including wildlife.

4.6 Isolation facilities

Isolation units for companion animals, equines and farm animals, are present within SPB. Details about number, size and species are reported in Table 4.3.1. They are located in a well-defined area structurally and functionally separated from the other VTH facilities by a perimeter security barrier. Access to isolation requires the use of individual protection devices and disinfection materials. Specific protocols are in place in the isolation unit to enforce optimum biosecurity and prevent dissemination of pathogens between stalls and from the isolation facility to the remainder of the Campus. The waste is treated as "special waste" with separate collection and disposal.

The isolation facilities are intended for the isolation of patients with suspected/confirmed infectious diseases that can be potentially transmitted to other animals or to humans (zoonosis). The rooms/boxes/stalls have cleanable nonporous surfaces, including walls and flooring (mats). Disinfectable water buckets and feeders are present and separate equipment (wheelbarrows, pitchforks, etc.) used only in the isolation barn and disinfected after use. Trucks carrying suspicious animals undergo disinfection and washing of the wheels and side parts.

LA isolation facilities are expected to undergo extraordinary maintenance for space distribution optimization and regulatory compliance in early 2022.

4.7 Ambulatory clinic for production animals

The theoretical basics of field veterinary medicine and Herd Health Management are provided to all students in the frame of core courses taught by members of the permanent teaching staff during the 3rd ("Animal production", "Infectious Diseases", "Parasitic Diseases", "Epidemiology and VPH"), 4th ("Veterinary Internal Medicine 1-2", "Reproduction Technologies", "Reproduction Pathology") and 5th ("Veterinary Internal Medicine 3") curricular years.

In clinical rotations, students are trained in Herd Health Management and practical skills, e.g., transrectal palpation, pregnancy diagnosis by ultrasound, blood and milk sampling, as well as herd data analysis during their visits to both the Teaching Farm and the private farms joining the Herd Health Management service. All students have opportunities for volunteering at the Teaching Farm. Since 2018, the Herd Health Management service of the DVS is run by academic staff and aimed to help farmers in improving the health of their animals and supervising the students in the herd health related activities. The service is especially focused on fertility, udder and metabolic health, calves and rearing heifers' health and management in both dairy and beef farms. The service counts regular clients (who have contracted a regular service and is routinely visited) and farmers who call for specific problems (i.e., abortion, high mortality rate in calves, lameness, high somatic cell count, etc.). Client visits are part of practical rotations, each visit is preceded by a phone interview with the farmer in order to better organise the visit and to build a preliminary discussion with the students who join the academic supervisor in the farm visit. These discussions are organised before the visit and are focused first on general herd health approach, then go deep inside the main topics of each single case. Herd Health Management of non-ruminants is taught in the regular curricular courses (Infectious Diseases of Animals, Parasitic Diseases, Veterinary Internal Medicine, Pathology of Reproduction).

Field veterinary medicine remains a small portion of the ambulatory clinic service which usually includes evaluation of neonatal disease (i.e., pneumonia, diarrhoea, sepsis, orthopaedic problems),

emergency cases (dystocia, c-section, trauma), or severely sick animals. Although the local zootechnical population cannot ensure practical rotations activities in clients herd health facilities, students are exposed to cases during PPT and if they are preparing their graduation thesis in large animal medicine.

Ambulatory clinic service is performed with either academic staff- or DVS-owned vehicles depending on the number of involved students (i.e car, vans, minibus, bus). Vehicles can be fully equipped with:

1. cases containing drugs and sanitary materials;
2. two ultrasounds' machines, one used for the evaluation of reproductive status (linear transrectal probe), and one used in case of abdominal or thoracic ultrasonography (linear transrectal probe and convex probe both with Doppler); a cardio-probe is also available for ultrasonography;
3. a blood ketometer for β -hydroxybutyrate, one refractometer, one blood lactate analyser, two stethoscopes, and two thermometers are always present in the car;
4. a portable digital radiologic machine.

4.8 Transports

The VEE owns the following vehicles: minibus that can transport 18 students; two vans for 6 students; two service cars. The DVS has no vehicles for the transportation of live animals, all of which move to or from the VTH by transports organised by their owners. For transportation of organs and small cadavers there is a van with containers approved for this use. For LA cadavers, a private company has the responsibility for their transport. All DVS-owned vehicles operate in compliance with current regulations dealing with the qualification of individual drivers, vehicles insurance, periodic revision, seasonal use of winter tires; disinfection and cleaning.

For transportation of larger group of students (e.g to extra-mural facilities) 25 to 50-seats buses are rent by private companies.

4.9 Area operating procedures and communication

As described throughout this Area, changes in facilities, equipment and biosecurity procedures are mostly performed in a UniPi framework in which the DVS plays a central role.

Facilities: as said, maintenance and upgrading of the Campus facilities is the responsibility of the Building management unit. IT infrastructures are planned and maintained by the Digital infrastructure management unit. The DVS can convey its need to the mentioned unit both as a formal request or by indicating the need for maintenance of specific structures. The decision for building of new facilities is the responsibility of UniPi Board of Directors that approve a triennial plan related to the entire Campus.

Equipment: safety and biosecurity equipment is again under the responsibility of UniPi both for changes and regular revisions (chemical hoods, fire extinguishers etc.); teaching, research and service equipment is responsibility of the DVS. As described in paragraph 4.1, for maintaining/upgrading current equipment and/or acquiring new ones, a specific procedure is in place in the VTH: the VTH Director is in charge to ensure full functionality and upgrade on equipment in order to guarantee workplace health and safety and quality of services/research; he/she receives proposals from the Operative Unit coordinators and collect all the information for discussion and decision within the VTH Council. The same applies to DVS needs (the DVS Head being in charge to manage the process) despite a dedicated procedure is not in place.

Biosecurity procedures: the DVS promotes safety and biosecurity of its staff, students, visitors and any stakeholder. It works with the SPP of UniPi to ensure high standards of safety and biosecurity. In this context, the DVS implemented a course on biosecurity and animal handling that ends with a test that students must sit during the 2nd year: the course include laboratory, slaughterhouse, necropsy

room, radioprotection and breeding facility security training. Staff is periodically (every two years) trained on safety and biosecurity updates and procedures under the responsibility of the SPP. The entire set of procedures in place in the DVS, that covers the complete spectrum of activities performed, is collected in a biosecurity manual that is available on the website and annexed to the SER (Annex 7). Procedures included in the biosecurity manual include waste management. This is organised according to the different types of materials. Hazardous waste is collected in specific containers in the laboratories. The water used for cleaning the necropsy rooms, two parasitology laboratories and the isolation units is collected in special tanks for subsequent chemical disinfection. Discarded formalin and chemical solutions are stored in special tanks for final disposal by a specialised company.

Good practices are taken in high consideration by the DVS as demonstrated also by efforts for the implementation of UNI EN ISO 9001:2015. The VTH itself has procedures in place for admission and management of clients within the hospital, for the management of clinical activities, for the management of patients admitted in the emergency and intensive care unit, and for the management of special wastes, although not certified by third parties.

Specific procedures are also in place for client management. Clinical, laboratory and farm services, including a regular monitoring of the feedback from students, staff and clients is made by the DVS through a specific procedure; the system for collection of reports and complaints is made available on the website homepage.

4.10 Comments on Area 4

The disadvantages of a fragmented Faculty: the DVS has the necessity to complete as soon as possible the new premises in San Piero a Grado. By merging the DVS community, chances to collaborate and to understand each-other needs will provide a boost to teaching and research activities.

The public connections with San Piero a Grado are still scarce, although improved through the years, and it should be a goal of the DVS to further improve the timetable of the buses. It is also important to reduce the discomfort that students suffer by not being able to purchase meals nearby, which today is done by the installation of a vending machine for some kinds of fresh and preserved foods and the presence of a microwave area.

VTH buildings, equipment and ambulatory clinic: the two halls for theoretical teaching in SPB are small, although the number of students is not high. Before COVID-19 pandemic the solution was to cable the two rooms in order to allow using them simultaneously, when needed (despite this did not occur very often).

PiB, despite being 60 years old, is substantially adequate, especially from the point of view of the teaching halls and of the available equipment. The quality of the equipment used for clinical activities and practical teaching in San Piero a Grado is adequate for undergraduate teaching, although specialised equipment such as magnetic resonance is missing.

A mean for transport of SA and LA, if needed, is missing. The need is not felt as most clients own their vans for animal transport, or use private transport companies.

CIRAA: with resolution 74/2017 of March 16, 2017, UniPi financed a very important modernisation and redevelopment plan for the Center which envisages, as a first step, interventions related to the safety and reconstruction of structures, systems and equipment of the Teaching Farm, for an amount of approximately € 3,000,000. These works will allow the Center to maintain reference role for researchers interested in agro-environmental problems, for students of Agricultural Sciences and Veterinary Sciences, and to increase its self-maintenance capacity.

4.11 Suggestions for improvement on Area 4

The DVS through its management must monitor the progress for the construction of the new buildings for the completion of the final merged premises. Attention must be made to related services (e.g., public transportation between Pisa and San Piero) working in a constructive way with the Pisa municipality. Priority should be given to equipment continuous update within the VTH including vehicles for ambulatory clinic. The DVS must support CIRAA to pursue renovation of facilities.

4.12 Notes on COVID-19 pandemic

The entire activity of the DVS was obviously dramatically impacted by the COVID-19 pandemic including access to facilities and equipment needed to guarantee quality remote teaching. Specific rules govern the access to work premises since COVID-19 occurred. The VEE provides informative material for different visitors about specific safety procedures. Moreover, personal protection equipment (i.e., surgical or ffp2 mask) is needed when accessing the DVS premises.

Major investments were performed by UniPi and the DVS to adapt teaching activities: instruments for remote teaching such as “bamboo slate”  were provided to academic staff. Wi-Fi connection was potentiated with the creation of a specific one dedicated to teaching.

Area 5. Animal resources and teaching material of animal origin

5.1 Use of animals and material of animal origin

Global strategy of the VEE – The VEE is organised to ensure that each student will gain the basic practical skills necessary to undertake the profession at Day 1 after graduation. In this view, together with theoretical lectures, students receive practical training, in the areas of basic sciences, clinical sciences, animal production, FSQ. Such training requires activities with specimens, cadavers and living animals. An annual monitoring of animal resources as well as the monitoring of relevant indicators was performed until September 2021 by the EAEEV Committee and communicated to the DVM Course coordinator which, in turn, proposes corrections to the Council. Since September 2021 relevant indicators are monitored by the D-JFSC.

As elsewhere mentioned, within the AVA QA system, the D-JFSC is in charge for the annual analysis of the DVS degree courses. This is accomplished by:

- monitoring of the educational offer and the quality of teaching service activity to students;
- the identification of the indicators for evaluating the results of the aforementioned activities;
- the formulation of opinions on the activation and suppression of study courses, on the consistency between assigned ECTS specific degree course objectives;
- preparation of an annual report on teaching activities.

The D-JFSC uses the information contained in various degree courses' documents (student's teaching assessment questionnaires, Review Group reports, SUA-CdS), data obtained from the University Statistical Office, as well as specific indicators (e.g., ESEVT indicators in the case of the DVM Course). Results emanating from the student's teaching assessment questionnaires are in advance analysed by the DVM Course coordinator and issues related to teaching staff are discussed within the DVM-JFSC to identify corrective actions.

Small group practical activity during curricular subjects is one way to ensure hands on training; non-clinical animal work starts from basic subjects via purchase of organs and carcasses for practical training in multiple disciplines; it continues throughout the core subjects to the 5th year PPT rotations that allow the students to gain hands-on training in all fields of veterinary medicine.

Activities within the VTH and the Teaching Farm ensure contact with different species and clinical cases. Teaching Farm activities are guaranteed by the integration between CIRAA and DVS. Procedures to ensure the welfare of animals used in educational and research activities at the DVS are consistent with the Italian Law no. 26/2014. The VEE recognises and values the principles of the 3Rs, Replacement, Reduction and Refinement, and has started the implementation of teaching with innovative and ethical methods. This includes e.g., the discussion of clinical cases with the POA method, and the use of simulators and phantoms, to reduce the number of live animals used for learning. A Clinical Skill Lab is under development within the DVS, and UniPi in the last two years regularly funded the purchase of phantoms (see also Area 6). These teaching methods cannot replace the practical teaching on real animals and patients, but will allow the reduction of their use as students would start the clinical rotations already trained and conscious of the different procedures.

How students receive the relevant core clinical training before graduation – Clinical training is included in several subjects and clinical rotations taking place during the 3rd, 4th and 5th year (see Area 3). Each clinical subject comprises theoretical and practical training; this latter is given in small groups (6-8 students, sometimes further subdivided) to ensure hands-on activities. In PPT rotations students are alone or in groups of two/three. Activities are organised by subject and species, thus guaranteeing the balance between species and clinical disciplines. All students are exposed to comparable activities, which are repeated by the same teacher for each group, with homogeneous distribution of animals and cases. Also, the personal LogBook is an unquestionable instrument to verify that each student receives the relevant core clinical training before graduation. During the 5th year, students are enrolled in the PPT clinical rotations on SA and LA (14 ECTS). These shifts are carried out at the VTH and include

all clinical disciplines: internal medicine, surgery, anaesthesia and image diagnostics, reproduction, emergency and critical care. To ensure a balance between first opinion and referral cases, since the 2018/2019 cohort part of the rotations are provided as EPT. Diagnostic pathology rotations are provided in intra-mural facilities.

Clinical PPT organisation (since 2018/2019 student cohort)

Subject	Total ECTS	Intra-mural	EPT
<i>Diagnostic pathology</i>	3	3	0
<i>Companion animals</i>	5	2	3
<i>Production animals and equine</i>	4	3	1
<i>Emergency and critical care</i>	5	5	0

Off-campus herd health visits (ruminants and pigs) and visits to poultry, rabbits and fish facilities are organised during the 3rd, 4th and 5th year of the curriculum by the relevant subject teacher. Activities at a beehive are organised during the PPT (1 ECTS).

For SA seen intra-murally, internal medicine (including dermatology) accounts for the 65%, surgery (including anaesthesia, neurology and diagnostic imaging) for the 25%, while reproduction is 10%.

Animal welfare – as anticipated, UniPi adopts all the procedures required by the national legislation on animals used for educational and research activities (Italian Law no. 26/2014). A local ethical committee, namely Body Responsible for Animal Welfare (Organismo preposto per il Benessere Animale, OPBA) is in charge to evaluate academic staff requests and to ensure that experimental and educational procedures are in compliance with the law. Procedures that may compromise animal welfare require the Ministry of Health approval after OPBA favourable advice.

Students must sit a test on biosecurity and animal handling before entering 3rd year practical activities and thus before the beginning of clinical rotations. Also, in the 2nd year animal ethology subject, they learn how to recognise signs of stress and how to approach patients correctly, both theoretically and during practical activities. Altogether, this allows the student to be respectful of animal welfare. Beyond rules in force, all activities performed by students during intra-mural and extra-mural practical training are supervised by staff members and/or tutors that beside ensuring training are also a warranty for animal welfare and for avoiding pain and unnecessary stress to handled individuals and groups.

Cadavers and material of animal origin for training in anatomy – The organs and cadavers used in the anatomy courses are listed in Table 5.1.1. Organs and carcasses are routinely purchased at local slaughterhouses. Fishes are purchased at a local supermarket. All specimens are intended to be used fresh. If refrigeration is needed because of organisational issues, the dissection room is equipped with dedicated refrigerators. Students are also exposed to the local Veterinary Anatomy Museum collection that includes fixed specimens. These latter samples are stored in formalin-free fixative to reduce chemical risk when manipulated. Skeletons and bones of horses and other domestic animals are available to study osteology, arthrology and sindesmology. Dedicated slide collections are used for microscopic anatomy training.

Cadavers and material of animal origin for training in pathology – In addition to the whole-body necropsies listed in Table 5.1.6., organs and pathological specimens are obtained from local slaughterhouses once a week during teaching periods and used for hands-on practice (lungs, liver, kidneys, hearts, spleens and other viscera of cattle, small ruminants, pigs and horses).

Cadavers on which necropsies are carried out are obtained from:

- hospitalised animals which died or were euthanised in the VTH;
- diagnostic necropsies referred by practitioners;
- diagnostic necropsies referred by owners;

- necropsies for teaching purposes referred by practitioners;
- necropsies for forensic examination, usually referred by owners or prosecutor's office;
- piglets collected for teaching purposes from local farms;
- wild mammals found dead or from containment plans in the province of Pisa.

Cadavers are either fresh (shortly after euthanasia or death) or thawed. Since 2021, a new cold room (3m x 2.5m x 2.5m) has been installed to increase storage of organs and cadavers for teaching, diagnostic, and research purposes. Animals for routine diagnostics are processed on arrival or refrigerated (4°C) until the following day, if necessary. After necropsies, multiple samples from systemic organs/tissues are refrigerated (for short term use), frozen (for long term storage or microbiological, toxicological and molecular biology exams) or fixed in 10% neutral buffered formalin (for long term storage and optical microscopy examination). Samples of necropsied animals and biopsy specimens are catalogued with a unique number. Paraffin-embedded samples and slides are stored in a dedicated archive.

Records of all necropsy reports are available in electronic format. Each report may include gross pathological and histological findings as well as results of virological, bacteriological and parasitological examinations.

The material originating from external sources is transported to the DVS by a vehicle authorised for the transportation of animal by-products as prescribed by the national legislation (Reg. EC no. 1069/2009). Cadavers, and any other material of animal origin for training in anatomy and pathology are destroyed by incineration at a specialised contracted company.

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

Species	2020-2021	2019-2020	2018-2019	Mean
<i>Small ruminants</i>				
<i>Cadavers</i>	0	8	8	5.3
<i>Isolated organs</i>	0	0	108	36
<i>Pigs</i>				
<i>Cadavers</i>	0	0	10	3.3
<i>Isolated organs</i>	0	0	84	28
<i>Poultry & rabbits</i>				
<i>Cadavers</i>	0	0	12	4
<i>Isolated organs</i>	0	0	0	0
<i>Aquatic animals</i>				
<i>Cadavers</i>	0	0	36	12
<i>Isolated organs</i>	0	0	0	0

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

Species	2020-2021	2019-2020	2018-2019	Mean
<i>Cattle</i>	10	35	10	18.3
<i>Small ruminants</i>	0	0	0	0
<i>Pigs</i>	0	0	0	0
<i>Companion animals</i>	72	88	88	82.7
<i>Equine</i>	24	24	24	24
<i>Poultry & rabbits</i>	0	0	3	1
<i>Exotic pets</i>	24	24	24	24

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

Species		2020-2021	2019-2020	2018-2019	Mean
Cattle		683	689	348	573.3
Small ruminants		4	7	3	4.7
Pigs		3	0	0	1
Companion animals		3,142	2,896	3,495	3,177.7
Equines		484	785	706	658.3
Poultry & rabbits		9	10	5	8
Exotic pets		5	5	1	3.7
Wildlife	Ruminants	34	31	32	32.3
	Canids	13	9	15	12.3
	Rodents	18	22	11	17
	Mustelids	6	5	4	5
	Wild boars	4	6	1	3.7

* Each patient is officially recorded in the electronic patient record system and individually examined/treated by at least 1 student under the supervision of at least 1 member of staff. Each live animal affected by one specific clinical episode is counted as 1 single patient, even if it has been examined/treated by several Departments/units/clinics.

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

Species		2020-2021	2019-2020	2018-2019	Mean
Cattle		14	2	41	19
Small ruminants		21	15	5	13.7
Pigs		1	2	3	2
Companion animals		5	0	4	3
Equine		77	60	65	67.3
Poultry & rabbits		0	0	0	0
Exotic pets		0	2	0	0.7

* Each patient is officially recorded and is individually examined/treated by at least 1 student under the supervision of at least 1 member of staff. Each live animal affected by one specific clinical episode is counted as 1 single patient.

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

Species		2020-2021	2019-2020	2018-2019	Mean
Cattle		80	71	53	68
Small ruminants		100	100	100	100
Pigs		100	100	100	100
Companion animals		30*	30*	30*	30*
Equine		55	55	70	60
Poultry & rabbits		0	0	0	0
Exotic pets		0	0	0	0
Others (wild ruminants, foxes, mustelids...)		100	100	100	100

* These data are not recorded and are a projection based on three months analysis: intensive care and emergency unit receive a higher number of first opinion patients compared to the other units.

Table 5.1.6. Cadavers used in necropsy

Species	2020-2021	2019-2020	2018-2019	Mean
<i>Cattle</i>	3	2	5	3.3
<i>Small ruminants</i>	1	1	9	2.7
<i>Pigs</i>	12	0	41	17.7
<i>Companion animals</i>	72	32	104	69.3
<i>Equine</i>	8	10	3	7
<i>Poultry & rabbits</i>	41	5	45	30.3
<i>Aquatic animals</i>	0	0	0	0
<i>Exotic pets</i>	0	0	1	0.3
<i>Other species</i>	29	19	85	44.3

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

Species	2020-2021	2019-2020	2018-2019	Mean
<i>Cattle</i>	44	56	54	51.3
<i>Small ruminants</i>	1	8	1	3.3
<i>Pigs</i>	0	1	10	3.7
<i>Poultry</i>	0*	0*	2	0.7
<i>Rabbits</i>	0*	0*	1	0.3
<i>Aquatic animals</i>	0*	2	2	1.3
<i>Horses</i>	2	2	2	2
<i>Honey Bee</i>	0*	0*	1	0.3
<i>Dog shelter</i>	4	4	4	4

* Visits to poultry, rabbits, aquatic animals and honey bee instalments are included in the practical activities of the teaching subject in the zoo-culture module held during the 6th semester of the study programme. COVID-19 pandemic forced remote activities and visits were not possible .

Table 5.1.8. Number of visits in slaughterhouses and related premises for training in FSQ (excluding EPT)

Species	2020-21	2019-20	2018-19	Mean
<i>Ruminant slaughterhouses</i>	0*	2	2	1.33
<i>Pig slaughterhouses</i>	0*	2	2	1.33
<i>Poultry slaughterhouses</i>	0	2	2	1.33
<i>Rabbit slaughterhouses</i>	0	0	0	0
<i>Bivalve evaluation</i>	0	2	2	1.33
<i>Cheese production premises</i>	1*	0	1	0.67
<i>Cured meat factory</i>	0	1	1	0.67
<i>UniPi staff canteen</i>	0	1	0	0.67
<i>Food industry (meat, milk, fish)</i>	1*	0	0	0.67

* These visits have been replaced by videos describing the official veterinarian activities including the supervision of the animal welfare from the arrival to slaughtering, general check of animal health status and *post-mortem* inspection available on a dedicated eLearning platform  (to see the introduction please login as guest).

Variety of animals and material of animal origin monitoring and revision activities – The EAEVE Committee was in charge to monitor the number and variety of animals and material of animal origin for pre-clinical and clinical training, the type and number of animals seen by the students during the practical activities and clinical rotations essentially by monitoring the ESEVT indicators till September 2021. Since then, the D-JFSC started this task by including annual monitoring of ESEVT indicators among data analysed in its annual report. Students, through their course evaluation questionnaires or as members of the D-JFSC/DVM-JFSC, also contribute to suggest corrective actions. The DVM Council is in charge to apply corrective actions suggested by both D-JFSC and DVM-JFSC and either to modify the educational path accordingly, or to promote hiring of temporary teachers for specific disciplines. As an example, in 2019 the VEE has placed actions to improve the students' activities in apiculture, rabbit and poultry farms, exotic animal clinic and extra-mural companion animal clinic, whose indicators were below the expected numbers. In particular, specific seminars and practical activities were introduced in the relevant teaching subjects and dedicated personnel was contracted for non-conventional animals and extra-mural companion animals' activity.

5.2 External training

Students, divided in three group (thus less than 20 students/group) visit external sites during the animal breeding course held in the 3rd year. They start to familiarise with methods, organisation and principal challenges of running a farming facility. During these practicals students visit dairy and beef cow, sheep, swine and equine breeding facilities. Details can be found in the course syllabus [📄](#). Each student, is stimulated to evaluate animal morphology and production category on 5-10 bovines, they are invited to observe and then perform milking, discuss housing and its relationship with welfare. Students are also stimulated to recognise and evaluate feeding and hypothesise/discuss the main risk for diseases of food origin present in the farm, also to calculate the food ration for the different animal categories. Similar activities are undertaken at a sheep facility. At the swine breeding facility, students evaluate housing and breeding organisation. The different management methods and nutrition of foals, breeding mares, stallions and training horses are observed and discussed at the equine facility. Students are also granted to participate to farrier's activities.

During the PPT in the animal production area, students (individually or in groups of 2) spend 2 weeks (2 credits) with the Regional Breeders' Association and 2 weeks (2 credits) within the internal Teaching Farm of the CIRAA, these latter mainly focused on nutrition. However, when at CIRAA, students may be involved in other aspects of animal breeding, depending on specific day activities, including births, milking and feeding. With the staff of the Regional Breeders' Association students evaluate animals of different breeds (morphology and attitudes), recognise production categories, evaluate facilities, perform periodic production evaluations in farm animals, aimed at production improvement and livestock development. Students also apply tags and microchips and participate in the management of the livestock registry. Since AY 2020-2021 students that have fulfilled all requirements (credits passed, including those in animal breeding and nutrition) may start this part of their PPT at the end of the 3rd year. This change was aimed at improving the knowledge and abilities of the students on animal husbandry and handling before they take part to the lectures and practicals included in clinical subjects. While students are involved in the clinical PPT in equids and production animals internal medicine (1 ECTS) and reproduction (1 ECTS), they spend again some days at CIRAA, involved in calving and calves' evaluations and feeding.

5.3 Nursing skills and procedures

Nursing training – The nursing care skills are implemented and taught to undergraduate students from the 2nd year of the curriculum to the end. They start by acquiring some information incorporated in a safety course that includes how to correctly handle, feed and clean LA (bovine and horses [📄](#)). Furthermore, students learn how to correctly approach animals during the Physiology, Ethology and

Animal Welfare course, with visits to a shelter and a cattle farm. They will learn how to correctly put a muzzle to a dog, place it on a vising table and correctly restrain it. During the 2nd and 3rd year they visit several other farms (dairy and beef cows, small ruminants, pigs) and again canine shelters where they see and learn how to handle these animals in practice. During the 4th and 5th year they handle animals in a clinical setting during practical activities with companion animals, equine and ruminant patients. In the 2nd semester of the 5th year, they participate to all routine activities in the VTH, including clinical evaluations in front of the owners, when they improve and apply their communication skills (e.g., when collecting the anamnesis, and explaining the procedures and treatments needed). Rotations include 5 weeks in the emergency and clinical care unit, with hospitalised animals. On graduation, students will have acquired the skills on how to correctly approach patients, safe handling and restraining methods, caring of hospitalised animals (including monitoring and health checking, feeding, cleaning and walking animals), administration of treatments (tablets, injections, fluids), biosafety procedures, collection of samples (urine, blood) and performance of basic analyses. Nursing care skills are taught by the teaching staff during practicals and by practitioners on duty at the VTH/Teaching Farm.

Group size to ensure hands-on training – Hands-on clinical training is provided during practicals of the clinical subjects practical and during the PPT. In the first ones, 4th- and 5th-year students are divided in 8 groups of 6-7 students each. During the PPT, students are usually 1 or 2 in each clinical service. This organisation apply both to intra-mural (SA, bovine, equine) and extra-mural (equine, small ruminants, swine) clinical training.

Hands-on involvement of students in clinical procedures – During all curricular years, students are involved in supervised procedures on live animals and material of animal origin within the curricular subjects.

During the **Physiology** course students perform physiological evaluations, identification of major blood sampling sites and collection of blood samples from dogs' cattle and horses. They also perform analyses to determine major blood parameters using basic laboratory equipment.

During the 3rd year, in the course of **Parasitic diseases**, students collect feces, blood, hair and skin samples from shelters dogs and then evaluated them for the presence of parasites ad fungi when back in the parasitology laboratory.

In the **VPH** course, students are trained on the general biosecurity procedures that must be in place in sanitary kennels and on the correct procedures to put in place after the diagnosis of notifiable, reportable and zoonotic diseases. They may identify animals by reading the microchip. The same training takes place also at a bovine breeding center, where sanitary evaluations and vaccination schedules are discussed with the breeder and the official veterinarian.

The hands-on involvement of the students in **Anatomic pathology and autopsy** also starts in the 3rd curricular year. Training includes necropsy techniques, morphological examination of organs and systems, sampling and reporting. Students perform supervised necropsies on different animals to become familiar with the general techniques. They evaluate diseased organs from slaughterhouses, to perform a gross pathology morphological diagnosis and to provide a list of differential diagnoses, when applicable. Students perform the examination on avian species and exotic/wild animals. In the 5th year during the PPT period in anatomic pathology, each student practices on pathological organs and full carcasses of animals spontaneously died or emergency slaughtered, to get acquainted with post-mortem diagnosis. Three students are on duty for three consecutive weeks in the necropsy room. Constantly supported by the necropsy room technician and under the supervision of a trained veterinary pathologist, students perform diagnostic necropsies, in addition to being involved in post-mortem analyses. Furthermore, students are also involved in report writing, sample processing and microscope examination. Necropsies are performed by small groups of students (usually composed of 4-5 students per cadaver) during practical training of the module Diagnostic Necropsy and during the PPT rotation. During the 4th and 5th year, students perform the practical activities in SA and LA internal medicine, surgery, (including anaesthesia and diagnostic imaging), and reproduction.

The **SA internal medicine** courses include curricular hands-on activities, which are both intra-mural, and extra-mural. Intra-mural activities are conducted at the VTH, and extra-mural activities are conducted at the municipal dog shelter via a contracted teacher. Students are actively involved in the complete patient work up, including history collection, physical examination, diagnostic problem-oriented decision making, and therapeutic strategies. Students receive instructions for the use of OCIROE, in order to be able to collect clinical and laboratory data, and to write medical records. Under the supervision of academic and trained clinical staff, students are asked to actively collect history from pet owners, and to fill the medical records. Students are involved in both general physical examination of patients, and particular examination of different systems (core courses focus on different systems each semester). They learn how to safely approach and handle patients during clinical examination, and sample collection, and how to collect different biological samples, using venipuncture, urethral catheterisation, fine needle aspiration, skin scraping, ear swabs, bone marrow aspiration. Students get exposed to the basic principles of echocardiography and hemodialysis, and they learn how to perform electrocardiographic monitoring and blood pressure measurement. Students are involved in hands on activities on patients requiring hospitalisation, and they take part to nursing activities of hospitalised patients. They assist the clinician in hair clipping and placement of intravenous catheters, in collecting blood and urinary samples, and in placing urinary catheters. Under the supervision of academic and clinical staff, students are asked to fill the daily hospitalisation sheet, with regards towards dose calculation, and way of administration of different drugs; fluid requirements in terms of typology of fluid solution, rate, and way of administration; daily caloric intake, typology of prescription diet, and way of administration (naso-gastric tubes, esophagostomy tubes). Students are made aware of biosecurity procedures and are actively involved in the maintenance of biosecurity standards, especially in relation to infective patient isolation. Students are also trained to store and safely transport different specimens to the laboratories, and they are asked to discuss, and critically analyse physical and laboratory findings, to formulate a list of likely differential diagnosis, and to suggest a therapeutic plan. They are exposed to the communication process with owners and referring veterinarians, and they familiarise with the electronic prescription system. In case of euthanasia, they assist the clinician in the communication with the owner and in the entire procedure.

Production animals and Equine internal medicine is also taught during the 4th and 5th years of study. Courses include curricular hands-on activities on equine, bovine, cattle and pigs. Students are actively involved in the complete patient work up, including signalment and history collection, physical examination, diagnostic problem-oriented decision making, and therapeutic strategies. Students use OCIROE to collect clinical and laboratory data, and to write medical records. Students are involved in both general physical examination of patients, and particular examination of different apparatus. They learn how to safely approach and handle patients during clinical examination, and sample collection, how to collect different biological samples, using venipuncture, urethral catheterisation, fine needle aspiration, tube for rumen fluid and BALF collection, catheter and needle for peritoneal fluid and joint tap. Students get exposed to the basic principles of thoracic and abdominal ultrasound, they are also exposed to the basic use of endoscopes, and they learn how to perform electrocardiographic monitoring and blood pressure measurement. Students learn the use of animal-side test (i.e., lactate, ketone bodies, etc.) and rapid screening test used in field practice. Students are involved in hands on activities on patients requiring hospitalisation, and they take part to nursing activities of hospitalised patients. They assist the clinician in hair clipping and placement of intravenous catheters, in collecting blood and urinary samples, in tubing colic animals and in feeding patients based on a dedicated diet specific for each case. Under the supervision of academic and clinical staff, students are asked to fill the daily hospitalisation sheet, with particular regards towards dose calculation, and way of administration of different drugs; fluid requirements in terms of typology of fluid solution, rate, and way of administration. Students are made aware of biosecurity procedures and are actively involved in the maintenance of biosecurity standards, especially in relation to infective patient isolation. Students are also trained to store and safely transport different specimens to the laboratories, and they are asked to discuss, and critically analyse physical and laboratory findings, in order to formulate a list of likely

differential diagnosis, and to suggest a therapeutic plan. They are exposed to the communication process with farmers and owners and referring veterinarians, and they familiarise with the electronic prescription system. In case of euthanasia, they assist the clinician in the communication with the farmer/owner and in the entire procedure. During extra-mural activities students enjoy “field” practice under the supervision of contracted LA veterinarians. They are involved in the main branches of private practice. Medical individual cases are approached as previously described for intra-mural activities. Herd health and flock health cases give to the student the opportunity of working on preventive medicine, infectious diseases, neonatology, metabolic status assessment and on-farm mastitis control. The herd approach always includes herd/flock data collection and data analysis, along with environmental and clinical inspection. A deep revision of farm’s target is discussed at the end of each visit. During the 10th semester, 1 ECTS of the PPT rotations is in the LA Internal Medicine service, which may include hospitalised or emergency patients.

During the 4th year, in the **Diagnostic imaging**, **Surgical semeiotics**, and **Surgical pathology** courses, students, are trained to: perform practical radiological technique activities in the X-ray room; perform ultrasound scans on patients referred to the VTH; they perform interpretation of radiological/CT examinations, and carry out simulations on phantoms; students execute the main semeiotic procedures, make sutures on 3 layers surgical training suture pads, thus holding surgical instruments.

During the 5th year, in the **Surgical clinic** course, students actively participate in outpatient activities on surgical clinical cases, orthopaedics, ophthalmology and general surgery of pets and non-conventional, exotic animals. Examination of lameness in horses and minor operations on autoptic samples are also performed.

In the **Surgical procedures** course students are trained to perform the following procedures: laparotomy, thoracotomy, insertion of chest drains, gastrotomy, splenectomy, tracheostomy, and simple tissues reconstructions on dogs and cats' cadavers. Students also perform hair clipping and skin scrubbing on cadavers. They also are trained to wear surgical clothing and prepare the instrumentation for surgical procedures. In addition, visceral surgery (i.e double-layer sutures) is performed by each student usually on swine organs, such as bladder and uterus, collected at the slaughterhouse.

In the **Anaesthesiology** course the first practical activity concerns the functionality of the anaesthesia machine and testing its effectiveness for the execution of a safe procedure. In the second activity are trained to simulate vascular access/orotracheal intubation on specific phantom so that the students can practice the technique several time before approaching patients. During the 3rd practice activity, students approach a patient, they make the clinical evaluation, practice the vascular access, the intubation, the induction and the monitoring of a real anaesthesia. The 4th session focuses on CPR and ventilation on phantoms. During the last rotation the student prepares an anaesthesia protocol. In addition, during the 10th semester PPT rotations (4 ECTS are in the field of surgery) they are involved in the management of surgical patients: signalment and medical history data collection and record, physical examinations, diagnostic investigations, anaesthesiologic procedures, assisting during surgery, administration of drugs and patient monitoring, under the supervision of the clinical staff. One out of 4 ECTS is spent in the SA emergency and intensive care unit.

During the 4th year, students also begin the practical activities in the field of reproduction. They perform physical examinations of male and female genital tracts of SA, equine and bovine species during the **Andrology** and **Reproduction technologies** courses in the 1st semester. They first examine uteri and ovaries collected at the slaughterhouse belonging to bovine, ovine, equine and swine species, on which they are also trained in the artificial insemination procedures in the different species. Secondly, students are required to blind palpate isolated cows' uteri and ovaries and write on a paper their diagnosis, occurrence of pregnancy or not, presence of ovarian follicles or corpora lutea, and to correlate these findings with the cycling status of the animal. In an *in vivo* session, students palpate cows at different stages of the cycle, prepare straws and guns for the artificial insemination and try the technique of passing the cows' cervix at CIRAA farm; students spend a full morning at recipients' facilities of the VTH handling mares and jennies, watching and discussing ultrasounds images and clinical cases, transrectally palpating mares and jennies and transvaginally palpating mares' cervix. Students also

administer drugs, always under the supervision of the teaching staff. In the field of SA, students evaluate vaginal smears, perform ultrasonography of testicles and prostate gland as well as orchiectomy and ovariectomy on phantoms. Students collect semen from stallions (on a voluntary basis), evaluate semen samples and prepare cooled insemination doses from stallions and dogs.

Students, in the 8th semester, during **Pathology of reproduction and Obstetrics**, examine Teaching Farm cows for pregnancy diagnoses/controls at 28, 40, 55-70 days. After having learnt, how to hold instrument and perform sutures, they perform ovariectomy on phantoms, and later orchiectomies and an ovariectomies in cats under staff supervision. Moreover, they approach real clinical cases in presence of the owners. Students also spend a morning in a large equine breeding centre, where they assist to ultrasound examinations performed by the local veterinarian for cycle evaluation, pregnancy diagnoses and controls, evaluation of post-insemination endometritis, etc. Students also evaluate motility of fresh, cooled and frozen semen samples, examine new-born foals, evaluate the placenta, participate to clinical evaluation of older foals. They participate to Caslick procedure. During the 10th semester, PPT rotations in the field of reproduction, students participate to all clinical activities: assist the clinicians during first aid of obstetrical cases, or other reproductive emergencies, perform daily clinical cases physical examination, discuss diagnoses and therapy, assist during reproductive surgery and provide nursing care of hospitalised cases. Students participate to the daily activities of the Embryo Transfer Laboratory, including performing palpations and/or ultrasonography of recipient mares, writing the findings in the database, discussing the choice of the recipient and assisting the clinician in the embryo recovery and transfer. Students also administer therapies under the supervision of staff. In the Teaching Farm, students again perform palpations and assist to deliveries. Thereafter they assist new-born and evaluate their clinical status.

In addition to curricular hands-on activities, students of the 4th and 5th year may attend the VTH daily routine activity as collaborator students, on an extracurricular voluntary basis. Students are invited to join the Journal Clubs organised by clinical services for interns, residents, PhD students and other junior staff. This represents an opportunity to deepen further their clinical training in specific disciplines and/or collect data for their graduation thesis.

During clinical rotations and PPT, students are involved with clinical cases from admission to discharge. They discuss clinical and laboratory findings with supervisors, evaluate and complete data recording, discuss differential diagnoses, treatment options and prognosis and participate to the final design of a therapeutic plan.

5.4 Patient record system

The “home-made” record system OCIORE (based on Claris FileMaker) was developed in 2010 and has since then been improved and tailored to our needs, including general examination filing pages and specialistic clinical sheets for all disciplines existing in the VTH and for inclusion of internal and external laboratory results. The same software is used by administration for billing. Through a dedicated functionality, appointments can be inserted by the reception and/or the clinicians, and it is thus also possible to have an overview of daily clinical activities planned by the different VTH services. In OCIORE, all data on VTH admitted patients (companion animals, equines, food producing animals and non-conventional animals) or visited in extra-mural activities are conveyed in a single centralised data-warehouse, allowing a complete retrieval of any patient, case management and administrative information. Diagnostic imaging reports are included in OCIORE, however digital images (from radiography, ultrasonography and TCs) are preserved through a separate software, namely “Horus”. OCIORE is fundamental for the quality of the VTH clinical activities and is also very useful for teaching and students’ searches. Students, teachers and clinicians have access to the record system while on site at VTH, however, due to privacy limitations, it is not possible to access the included data by Virtual Private Network (VPN) or other systems from remote. Nevertheless, staff use the data obtained from Ocioroe to prepare clinical cases for the students, in a way that they can be discussed in a

peer-to-peer way or with the teachers. Students learn how to access, retrieve information and compile clinical files during the practicals in clinical courses and the intra-mural PPT.

5.5 Comments on Area 5

Nursing skills teaching may begin earlier in the student's career. Currently students learn how to approach SA and LA during the physiology courses in the 2nd year and may begin the animal production PPT at the end of the 3rd year. However, their approach to the activities in the VTH do not begin until the 4th year.

In the years prior to this Visitation, all ESEVT indicators dealing with the number and variety of healthy and diseased animals, cadavers and teaching material of animal origin have been monitored by the EAEVE Committee. Based on surveys, actions were taken to fill major identified gaps: seminars and practical activities were introduced in the specific teaching subjects and dedicated specialised personnel was contracted for non-conventional animals and extra-mural companion animal activity.

In parallel, the use of simulators has been promoted to enhance manual skills in unexperienced students, thus reducing unnecessary stress to patients of all species. Provision of cadavers of companion animals for practical anatomical training is considered suboptimal as well as necropsies in different animal species also due to COVID-19 pandemic and the related smart-working activities that impeded sufficient support staff assistance in 2020 and part of 2021.

5.6 Suggestions for improvement on Area 5

It would be beneficial to anticipate part of the activities in the VTH, e.g., in the hospitalisation area, to acquire nursing skills earlier.

Currently it is not possible to access to OCIROE from outside the VTH. A method should be found to remove all sensible data from the accessed files, so that all information about the clinical case with the exclusion of those protected by privacy (financial data and owner's personal data) would be freely available in remote to teachers, in order to prepare their activities, and to students, to learn on real cases. Introduction of diagnostic images in OCIROE would also improve the student's experience. A preclinical use of OCIROE would help rising the motivation of early students.

The activities on non-conventional species were implemented in the last two AYs but still the numbers are low and should be augmented further, finding dedicated facilities and personnel.

The availability of cadavers for practical activities such as anatomy and surgery should be synergistically managed also through agreement with external parties, including VPH agencies, public and private kennels and veterinary practitioners. In general, necropsy cases must be increased.

5.7 Notes on COVID-19 pandemic

Anatomy dissections were partially made in 2019-2020 and not performed in 2020-2021 and were substituted by remote activities; the number of necropsies decreased in 2019-2020 mostly due to general VTH activity decrease and lack of support staff assistance (smart-working). Since the first lockdown, that started on March 9th 2020, it was not possible to visit poultry and rabbits' farms as well as pig instalments. Remote training activities were implemented as well as a set of videos on slaughtering due to the inaccessibility of abattoirs with students. Remote PPT activities were implemented as well.

Area 6. Learning resources

6.1 Adequacy of learning resources

In recent years UniPi staff has become increasingly aware of the attitudes and demands of the latest generation of students towards advanced interactive learning resources. Accordingly, the general strategy of SBA, the UniPi system that manages most learning resources, started to change versus the implementation of electronic resources (e-books, e-learning platforms). Undoubtedly the COVID-19 pandemic accelerated the process that was underway resulting in a rapid and widespread use of digital resources and tools. Also, the staff's adaptability was severely challenged by the rapid transformation, with adequate responsiveness also obtained thanks to the intense UniPi support. On the other hand, the COVID-19 emergency has postponed the DVS process to the implementation of a Clinical Skill Lab that was expected for AY 2021-2022.

The DVS manages its library and related learning resources in conjunction with other two UniPi Departments, the Department of Economy and Management (DEM) and the DAFE through Polo 1. Polo 1 belongs to the SBA. SBA manages the entire university bibliographic resources with a budget that exceeds 4 million euros per year of which more than 2.5 million are spent to cover subscriptions to journals provided by large international publishers such as Elsevier, Wiley, Springer. The remaining budget is allocated to the university libraries that are grouped in 6 poles. As said, the DVS library belongs to Polo 1. This latter is managed by a scientific committee composed by two academic staff members from each Department (n=6), three students and three support staff members: the scientific committee (managed by a scientific coordinator elected among the academic staff members) decides on budget allocation and meets regularly to discuss library related learning resource requests from stakeholders (students and academic staff), sometimes involved in the decision process by surveys proposed online. Each Polo 1 library annually organises courses for student and staff to teach/update about the access and use of bibliographic resources. The Polo 1 produces an annual report of its activities: it is responsibility of the DVS representatives to circulate a summary within the VEE to promote the library's activities and objectives for the coming year. Surveys and different Department representatives are essential players in the process of assessment of the learning resources adequacy and budget allocation revision that happen at the beginning of each AY during the budgetary planning for the next solar year.

A Moodle based e-learning platform hosts course materials, supplementary documents, suggestions for further reading, exercises, or educational activities, as well as formative and summative assessment tests.

Electronic resources are accessible from the DVS premises also by a fully equipped computer room (see Area 4, Table 4.2.3) or by remote VPN access (see below). Free wireless access to internet is available almost everywhere in Pisa and San Piero Buildings (PiB & SPB), including garden.

6.2 Library and electronic information

Library – As already stated, the DVS has its own library, with books and journals loan service, two study rooms for a total of 54 places, a computer stations' room, a lockers' room, Wi-Fi and air conditioning. The library is open from 9:00 to 19:00, Monday to Friday and is located in PiB. In addition to the library, further spaces are available in PiB and SPB (the reading rooms listed in Area 4, Table 4.2.2). Polo 1 is managed by a head librarian that holds a Master Degree and specific post-graduate education/experience; since August 2021 due to retirement of the former head librarian, the position (Pole Organisational Manager) was ad interim acquired by the SBA general coordinator. Specific services are provided by staff (4FTE). The annual budget managed by Polo 1 is allocated from the SBA and can receive contributes from the relevant Departments for specific investments as shown in Table 6.2.1.

Table 6.2.1. Polo 1 annual allocated budget (€)

Items	2018	2019	2020
<i>Facilities and equipment</i>	58,768.00	57,312.35	56,719.72
<i>Bibliographic material</i>	153,478.71	211,960.34	208,485.46
<i>DAFE contribution</i>	42,803.00	44,784.00	44,914.00
<i>DEM contribution</i>	32,862.00	50,510.00	34,000.00
<i>DVS contribution</i>	11,916.00	10,858.00	10,000.00
TOTAL	299,827.71	375,424.69	354,119.18

A specific search tool OneSearch[☞] allows to query all the UniPi catalogues and most of the subscription databases at once and to retrieve bibliographic data of books (printed and e-books), theses, articles, journals (printed and electronic) and other material owned or accessible by the University, allowing them to be located and/or downloaded. From the UniPi network, many databases for bibliographical search are accessible including cab abstract, scopus, web of sciences, NCBI Pubmed. Electrical connections are widespread in the main library and a computer room is available as mentioned above.

Subsidiary libraries are present within the DVS buildings which function mainly as study rooms for the students and deposit areas for historical books and less recent journal collections: library of the Veterinary Clinics in SPB, libraries hosted in the Animal Production, Animal Pathology, Parasitology, Anatomy, Physiology sections in PiB.

The DVS library offers its users comfortable spaces for study and free access for consultation to all the texts of the library. Users can borrow books for a period of 1 month, renewable by online booking. Journals, encyclopaedias, dictionaries, glossaries, handbooks, collections of laws, theses, ancient, rare and valuable books are excluded from the loan.

Typically, the veterinary library provides around 1600/1800 loans per year. In 2020, due to the COVID-19 related restrictions, the library provided only 700 loans.

For the retrieval of texts not available at UniPi in other libraries, the Inter Library Loan[☞] and Document Delivery[☞] services are active. The services are normally free for institutional users. The delivery time, the duration of the loan and the type of material (original, printed copy, digital copy) depend on the regulations of the supplying libraries.

Library users can use a multifunctional machine for the reproduction, scanning and printing service. Users access the service independently by registering online and are required to comply with copyright rules.

For any information need, the users of the library have a remote and on-site reference service available. The remote reference is managed through the *LibAnswers* platform[☞] which allows effective administration of information requests sent by remote users.

At the library, the staff provides assistance to users to make the best use of the bibliographic tools available for bibliographic and document search, in order to make users autonomous with available tools: the University catalogue and other electronic catalogues, journals both printed and electronic, databases, search engines and other digital resources. Furthermore, the staff is available for finding bibliographic and documentary information useful for teaching and research, carrying out in-depth bibliographic research and support for the preparation of detailed specialised bibliographies.

Electronic resources – Italy was connected to the Internet for the first time on April 30th, 1986, via a gateway that was located at the Centro Nazionale Universitario di Calcolo Elettronico in Pisa, Via Santa Maria, just a stone's throw from the Tower of Pisa. UniPi never betrayed this event and today the entire Campus, widespread along the city, is connected by optical fibre, including all students' residencies where they can surf the internet free of charge. Each Department of UniPi, including the DVS, is provided by an IT infrastructure that includes both cable and wireless connection. The IT facilities are

managed by dedicated support staff again belonging to the UniPi Departmental Computer System (Sistema Informatico Dipartimentale, SID ): as for the library learning resources, the IT resources are managed this time by Polo 5, in conjunction again with the DEM  and the DAFE . As SBA, SID is divided into 6 poles. Polo 5 provides 7FTE specialised personnel  to the three Departments. Any IT need is conveyed to Polo 5 that provides support via a ticketing system that start by mailing at the relevant e-mail address . The user is automatically assigned a “ticket” number and will be contacted by one of the IT specialists; in this way, all the Polo 5 staff will be able to know the reported problem and, if necessary, replace or continue the intervention.

The IT facilities available include a Moodle platform  and the Microsoft Teams platform fully integrated with Microsoft One Drive: both resources are accessible via University credentials and regularly back upped; the One Drive platform gives to each UniPi user 5 terabyte of usable cloud space. Also, the Google workspace including its application suite Classroom is accessible by UniPi credentials and Google Drive provides each user with unlimited cloud space. In terms of software each UniPi member has free access to Microsoft Office 365 full version.

E-learning resources can be either accessed from the Campus facilities (as mentioned free wireless access to Internet is available almost everywhere) and by VPN; along with cable connection, Wi-Fi connections available are :

- **UniPisa:** the official Wi-Fi network of UniPi provided to institutional user via specific credentials;
- **Eduroam:** available for teachers, staff of UniPi and for all guest users in possession of credentials provided by an external federated structure;
- **GuestUniPi:** “open” network that does not require any password or credentials. However, its use is limited to internal University services (e.g., information portals, e-mail);
- **Teaching:** only in teaching areas reserved to teaching staff (avoid overloads during lectures).

VPN is accessible through SonicWALL Connect Tunnel, compatible with Windows, OS X, Linux and mobile devices, which replaced in 2021 the connection with PulseSecure Client, no longer functional. It is a secure connection to the University network from any location connected to the Internet remotely (from home, abroad, etc.). This service is mainly aimed at the remote consultation  of the University's electronic resources (journals, databases, e-books) by all users in possession of University credentials.

6.3 Access to learning resources

Veterinary books and periodicals – The Veterinary library includes about 13,000 books and 658 journals. Library books are fully accessible on open shelves and are sorted by subject according to the Dewey Decimal Classification. Exceptions are ancient, rare and valuable books that are kept on closed shelves. All the books are included in the University catalogue and can therefore be searched through the OneSearch Discovery tool by title, author, publisher and topic. The library's journals are catalogued and therefore searchable in the Italian catalogue of periodicals ACNP .

The availability of books in electronic format has grown significantly in recent years; the veterinary library has 92 e-books, 33 of which were purchased during the COVID-19 emergency period to promote distance learning and 196 e-journals from major international scientific publishers.

In addition to the aforementioned resources of specific interest to the veterinary sector, UniPi guarantees its users (including students) access to over 280.000 e-books and 70.000 electronic periodicals. Electronic resources are all searchable and accessible through the University OneSearch, or directly through the proprietary platforms by IP address recognition from the University network, and remotely via VPN 24 hours a day and 7 days a week. The terms and conditions governing the use of these resources are defined in the relevant user license agreements in compliance with copyright laws (L. 633/1941).

The UniPi archives are also available to students and staff:

- Electronic Theses and Dissertations (ETD), the institutional electronic archive of the theses discussed at the University. ETD manages the compulsory filing, archiving and, where legally possible, the online publication of theses in digital format of all degree courses, postgraduate Specialisation schools, Masters and doctorates. The SBA, through a dedicated help desk, guarantees students assistance in filing the thesis, takes care of the formulation of descriptive metadata, prepares their publication in compliance with the permission of the authors and tutors, with the University regulations and with all current relevant legislation;
- Archivio della Ricerca dell'Università di Pisa, the Institutional Research Archive of UniPi, which collects the scientific research products of the authors of the University and allows free access in compliance with the rights connected to them.

E-learning platform – UniPi has also implemented the Moodle e-learning platform which finds vast applications in the DVS, from the minimal one of a simple repository of teaching material to that of the management of the entire online course, both in distance learning mode and as support for traditional teaching. Moodle allows to organise and manage online courses (e-learning, blended learning or self-learning), leaving students with social tools such as: a forum, a blog, a chat, a wiki and a glossary, quizzes, etc. During the COVID emergency period, this solution proved to be of fundamental importance for the management of distance learning. The Moodle platform is interoperable with the Turnitin plagiarism software, a service available to users of UniPi, which allows the verification of the originality of a document in order to guarantee and protect the reliable quality and authenticity of the content.

Clinical Skill Lab – The DVS, through the initiative of its academic staff and, since 2020, a dedicated Committee for Teaching Innovation, also devotes particular attention to the construction of a Clinical Skill Lab and to the implementation of remote/digital learning resources: by applying to the annual UniPi funding announcement for “special projects for teaching” the DVS was able to start a process that is ongoing for a full setup of the Clinical Skill Lab and a platform that (despite born to host histological slides) can host whichever kind of digital learning resource.

Table 6.3.1. Special projects for teaching funded in 2018-2021

Academic Year	Referent	Project
2018-2019	Micaela Sgorbini (Internal medicine)	Clinical Skill Lab equipment
2019-2020	Alessandra Rota (Reproduction)	Clinical Skill Lab equipment
2020-2021	Roberta Ciampolini (Animal production)	E-learning resource
2020-2021	Vincenzo Miragliotta (Anatomy)	Digital slide repository

The committee for teaching innovation organised a formative event in 2021 where one of the lectures was “Teaching clinical skills with models - Sarah Baillie, University of Bristol” in the view of implementing a full Clinical Skill Lab within the VTH.

In 2021 the DVS Council identified the premises for the location of the Clinical Skill Lab (see Area 4) and invested a considerable budget for the purchase of various phantoms, including the equine colic/palpation model with integrated neck venipuncture im injection and adjustable rolling stand. The Clinical Skill Lab opening is foreseen for the September 2022.

6.4 Comments on Area 6

The use of the library by students and their feedback expressed in direct contact with the staff, as well as through periodic surveys on the satisfaction of the services, reveal that the actions taken to offer them a functional environment and adequate tools and services for studying and doing research

represent an satisfactory response to needs. The library and library services are available to users for 50 hours a week. The large range of books and magazines in electronic format, also available remotely, extends the support of the library beyond the opening hours. Added to this are the e-learning tools and institutional databases for theses and research, which can also be used both on-site and remotely, to support teaching and research activities.

6.5 Suggestions for improvement on Area 6

The location of the library, although functional in terms of number of seats and opening hours, could be made more pleasant by renovating the interior fittings and re-evaluating the organisation of the spaces in order to also guarantee rooms for group study and relaxation spaces separated from study areas. In the summer, students solve these needs by using the large outdoor spaces that the DVS complex has, but during the winter this solution is not feasible.

It is also necessary to encourage students from the earliest years to familiarise themselves and use e-books and other electronic resources by increasing the offer of training courses by library staff.

Similarly, the library should continue to improve contacts and exchanges with doctoral students and professors on the topics of open access, publication management, research evaluation, taking advantage of the positive results of some meetings already held.

Academic staff should be encouraged in improving the knowledge of Moodle platform. The Clinical Skill Lab requires an annual budget for its functioning that should be yearly allocated by the DVS.

6.6 Notes on COVID-19 pandemic

In 2020, during the COVID-19 emergency period, the library, as other DVS facilities, was not physically accessible due to lockdown. Numerous specific initiatives were put in place to support users and allow them to carry out their studies remotely.

In particular, a special section was created on the library system website  to inform users about:

- methods of remote use of electronic resources on subscription (VPN / Shibboleth);
- contents and tools made available exceptionally free of charge by some publishers;
- content and tools available for free online.

An extraordinary operation (Campus wide) was also initiated for the purchase of texts included in the subject programmes in electronic format, where existing and available on the market. The manoeuvre involved a timely review of all the syllabi and the verification of the existence of relevant electronic resources. Between March and April 2020, 550 electronic texts were selected, purchased and included in the catalogue. The continuation of this work in the following months allowed the identification and purchase of additional 87 titles. To give maximum visibility to these texts, a specific webpage has been created .

As of March 2020, the veterinary library has managed and promptly informed users about the digital solidarity initiatives implemented by many publishers, including:

- extension of access rights to resources already underwritten;
- opening of new contents;
- online webinar to support the use of individual databases.

These initiatives have allowed a broader and more direct use of bibliographic resources in electronic format, thus allowing to cope with the new and huge demand for access to electronic content received by users.

Area 7. Student admission, progression, and welfare

7.1 Student “life-cycle” information

The main repository for all the educational information necessary for the student’s life is the UniPi website; specifically, at Matricolandosi  future students approach the University and find a constantly updated list of links to the educational programmes, admission procedures and tuitions fees; this section also includes procedures to obtain scholarships, accommodation and access to the dining hall service. By visiting each educational programme page, the prospective national and foreign students can access specific admission procedures and learning outcomes. A specific section of the UniPi website shows all services and opportunities offered to prospective students  and a links to a dedicated office for international students (Welcome International Students! ).

Furthermore, every year UniPi offers, to future students, orientation activities to both University’s educational facilities and educational programmes; such activities are advertised as well by a dedicated webpage  that is accessible from UniPi home page .

The general academic calendar is yearly deliberated by the Academic Senate, whereby each Department organises its activities . Class timetable are as well communicated in advance .

In the framework of UniPi orientation events, specific activities of the DVS are “Open Days”: one session in Viale delle Piagge and another one at the VTH in San Piero a Grado; staff people have clear responsibilities for the abovementioned activities . Within DVS orientation activities a project is in place since 2020-2021 (“POT-SSVET - Supporto agli Studenti di Medicina Veterinaria”) intended for high school students who plan to join the DVM Course: by writing at the relevant e-mail address  prospective students have the opportunity to interact directly with University students and, when necessary, with the DVM Course coordinator and/or with academic staff in charge for tutoring and orientation services. Once enrolled, students can find a well-structured assistance .

7.2 Student number consistency

A formal procedure is in place to adapt the number of students admitted to available resources in terms of staff, facilities and equipment. Briefly, the D-JFSC yearly monitors all degree courses including the DVM one. In its annual report, also considering ESEVT indicators (where number of undergraduates or students graduating annually are used for calculations) the D-JFSC identifies potential issues and makes recommendations to the DVM Course. Furthermore, the Review Group of the DVM Course annually produces a monitoring report where among indicators a specific one is related to the ratio between staff and students’ number. The DVM Council, considering the received suggestions proposes to UniPi Academic Senate a number of students to be enrolled at the 1st year of the following AY. Details are reported in paragraph 7.3.

Numbers reported in the following tables come from a UniPi implemented internal database on students’ admission, progression and welfare that is accessible from the UniPi network (i.e. UniPiStat) . Number of students graduated annually, which are reported per solar year in UniPiStat, were provided by the statistic service unit of the University .

Table 7.2.1. Number of new veterinary students admitted by the VEE

Type of students	2020-2021	2019-2020	2018-2019	Mean
<i>Standard students</i>	65+5*	60+5*	56+5*	60.3+5*

* Number of places reserved for non-EU students

The veterinary programme at UniPi attracts a large number of applicants (an average of 550/year). As a result, there is no difficulty in filling allocated places.

Table 7.2.2. Number of veterinary undergraduate students registered at the VEE

Year of programme	2020-2021	2019-2020	2018-2019	Mean
1 st year	67	56	65	62.7
2 nd year	51	61	54	55.3
3 rd year	62	53	43	52.7
4 th year	51	43	43	45.7
5 th year	42	41	61	48
Off-course *	87+33**	96+38**	101+48**	94.7+39.7**
Total	360+33**	350+38**	367+48**	359+39.7**

* Off course students are those students registered at the Degree Course for more than 5 years

** Old degree programme

In the last three years, the mean number of incoming Erasmus students attending specific courses and/or traineeship in the framework of international exchange programmes was 24.

Table 7.2.3. Number of veterinary students graduating annually

Type of students	2020-2021	2019-2020	2018-2019	Mean
Standard students	47	43+1**	68+8**	52.7+3**

** Old degree programme

Table 7.2.4. Average duration of veterinary studies

	% of students who graduated on			Mean
	2020-2021	2019-2020	2018-2019	
+ 0	42.6	32.6	36.8	37.3
+ 1 year	27.7	27.9	33.8	29.8
+ 2 years	17.0	11.6	14.7	14.4
+ 3 years or more	12.8	27.9	14.7	18.5

Based on data by the ANVUR, the percentage value of students graduating within the normal duration of the programme is above the national average.

Table 7.2.5. Number of postgraduate students registered at the VEE

Programmes	2020-2021	2019-2020	2018-2019	Mean
Interns	2	0	0	0.7
Residents	3	3	3	3
PhD students	30	29	24	27.7
Post-doc	0	0	2	0.7
Masters	29	70	66	55
Specialisation schools	31	42	44	39

7.3 Selection and progression criteria

Selection criteria – All the Italian DVM programmes cannot directly enrol students: both numbers (total admissible students in Italy) and procedures are centrally determined by the MUR following

proposals from the veterinary professional associations and the DVM Councils of each University through their respective Academic Senates. Selection is by admission test that is simultaneously administered to all applicants on the same day and at the same hour for all veterinary schools at the national level. Italian students applying for the exam must have completed the mandatory education courses required by Italian law. Foreign students must have a Declaration of Value of their diploma issued by the Italian authorities in their home country (embassy) and which verifies that they have already attended 12 years of schooling. Alternatively, international students could bring the ENIC/NARIC (European Network of Information Centres in the European Region/National Academic Recognition Information Centres in the EU) certificate. As said, admission tests are regulated and organised by the MUR at a national level, and normally consists of a number of multiple-choice questions to be answered in a determined number of minutes. Students achieving a minimum score are listed in one national ranking list and assigned to a DVM Course on the basis of: i) score obtained; ii) number of available places at each University; iii) student geographical preferences (students must indicate three Italian Universities in order of preference). More details can be found on UniPi dedicated webpages.

Policy for disable and ill students – Students with disability certificates or Specific Learning Disabilities (SLD) are ensured special admission test rules for DVM Courses (e.g., additional time, non-scientific calculators, video-magnifiers, tutor assistance, etc.). A specific service of UniPi provides assistance for disable and ill students. Specific procedures are in place for international students with disabilities.

Composition and training of the selection committee – Although the selection process is managed exclusively by the MUR, an internal committee (designated annually) ensures the correct application of general procedures and of the policy for students with disabilities.

Appeal process – Students excluded from the national ranking list can appeal to the Regional Administrative Court against the MUR selection criteria/process.

Advertisement of the criteria and transparency of the procedures – All DVM Course admission exam procedures and criteria are made public every year on the DVS, UniPi, and MUR websites, far in advance of the admission test date. Following the admission test, candidates are given individual protected passwords to access DVM Course national ranking lists.

Adaptation of the number of admitted students to the available educational resources – As mentioned above, every year the DVM Council proposes to UniPi Academic Senate a number of students to be enrolled at the 1st year of the DVM Course. This is a result of an internal analysis that considers ESEVT relevant indicators, the historical number of admitted students, the staff FTE and available facilities. As mentioned in other chapters, the D-JFSC is in charge for the annual analysis of the degree courses provided by the DVS. This is accomplished by:

- monitoring the educational offer and the quality of teaching as well as the service activity to students by academic staff;
- the identification of the indicators for evaluating the results of the aforementioned activities;
- the formulation of opinions on the activation and suppression of study courses, on the consistency between assigned ECTS to the training activities and the objectives specific to the course of study;
- preparation of the annual report on the progress of teaching activities, based on the reports presented by the individual courses of study.

For the monitoring of the above activities, the D-JFSC uses the information contained in various documents (student's teaching assessment questionnaires, Review Group reports, SUA-CdS), data obtained from the University Statistical Office, as well as specific indicators (e.g., ESEVT indicators in the case of the DVM Course). Results emanating from the student's teaching assessment

questionnaires are in advance analysed by the DVM Course coordinator and issues related to teaching staff are discussed within the DVM-JFSC to identify corrective actions; Review Group reports can be the AMR or the CRR, both documents, after being issued, are discussed and approved by the DVM Council following the relevant procedures  . The SUA-CdS is annually produced by each Italian degree course and is intended to be the unitary place in which to bring together and rationalise information regarding the activity and quality control of study curricula, for the benefit of Universities, students and families .

Academic Senate approved number is forwarded to the MUR appropriate office that determines the number of students that can be enrolled by UniPi considering the overall Italian University places requested and the professional needs of the social and productive system (stakeholder requests). For AYs 2018-2019, 2019-2020 and 2020-2021 the DVM Council proposed 65 students per year plus five additional places per year (reserved for non-EU students). According to the indications provided by the MUR, places reserved to non-EU students which remain vacant can be assigned to Italian students. No significant changes are expected with regard to the number of new students admitted by the VEE.

7.4 Disabilities and illnesses

UniPi has been progressively working towards the removal of any obstacles that may interfere with students with special needs and their University life experience. The aim is to allow students with disabilities to participate in all activities carried out in the various University structures starting from the admission procedures to the graduation. There is a Services Office for the Integration of Students with Disabilities (Ufficio Servizi per l'Integrazione di Studenti con Disabilità, USID ) for facilitating access and success for students with special needs which is open to the public and has dedicated administrative staff and a coordinator responsible for support needs, appointed by the Rector. The following services are offered:

- *educational and specialised tutoring* for the provision and facilitation of study skills and to identify alternative methods of taking exams;
- *planning of classrooms and schedules* to facilitate access to the classrooms and to other University facilities;
- *support with transportation* to ensure necessary transfers for those with impaired mobility. The University has three dedicated vehicles equipped with lifts;
- *technological assistance/aids* by using IT tools and specialist software to provide assistance for different types of support needs;
- *economic and administrative support* for stays abroad;
- *monitoring of architectural barriers* to control the accessibility of facilities and to promote immediate action for the removal of obstacles;
- *welcome project* to promote the support available for students and assist them in planning their academic career.

Moreover, UniPi provides a dedicated service (Sportello DSA) for students with Specific Learning Disorders (SLD). The service helps participants in admission competitions or assessment tests, mediation with teachers in view of oral or written exams, specific tutoring (writing notes, recording lessons) for teaching activities, individual meetings, diagnosis and certification for students without a diagnosis or with an outdated diagnosis. These services are advertised on the DVS website  and a DVS Head delegate, supported by the DSV Group for Disability and SLD, is specifically devoted to these specific student needs. Students with disability certificates or SLD are ensured special admission test rules (e.g., additional time, non-scientific calculators, video-magnifiers, tutor assistance, etc.). Any needs can be reported to the DVS disability group . The teaching staff within the *Insegnare a insegnare* course (see paragraph 9.3 for details) is specifically trained also on inclusive education of students with disabilities. The provided assistance is aimed at ensuring that all students must be capable of meeting the ESEVT Day One Competences by the time they graduate.

7.5 Student progression

Students can be differentiated according to the position in their career as follows:

- **on-course students:** students who have passed a specific number of exams and of ECTS enabling their admission to the following year.
- **“frozen” students:** students enrolled to the 4th+n year who have not passed all exams of the first two years and one of the third: these students cannot attend lectures and practical activities of the 4th/5th year. These students are expected to fulfil the aforementioned requirements before entering the final two years. These students will inevitably become off-course students.
- **off-course students:** students that after completing the 5th year are enrolled to 5th+n year.

Progression criteria and procedures for all students – The requirements for progression are regulated in the curriculum and made available to the students on the DVS website. Students can convey their needs through their representatives in the DVM-JFSC and DVM Council.

Students enrolled in the DVM curriculum must attend at least 70% of teaching (including lectures and practical activity) within each course in order to sit the course exam/s. In order to verify that the relevant learning outcomes (normally specified in the syllabi as composed by knowledge, skills and behaviours) have been acquired, a written/practical/oral exam is administered to students at the end of each subject (see Area 8 for details). According to the teaching regulation of the DVM Course, in some specific cases students are also expected to complete propaedeutic courses  before being able to sit an examination. Information concerning exam timetables is available online  for the entire upcoming AY; Venues are available in the system that students use to register to sit exams .

Student enrolment to the following AY automatically takes place upon payment of fees until the 5th year. However, since AY 2018-2019 students enrolled to the 4th+n year who have not passed all exams of the first two years and at least one of the 3rd year cannot attend lectures and practical activities of the 4th/5th year as stated above (“frozen” students). Students that do not graduate by the 5th year’s last graduation session (February of the sixth year), will qualify as students enrolled outside of the prescribed time and will have to pay new annual tuition fees (off-course students). Students will be able to graduate upon completion of all subjects included within their study plan, including PPT.

After enrolling in the 1st year, a specific procedure applies to those students who have not met the necessary number of correct answers in Biology (less than 1/3 of the maximum achievable score), in their admission test. In this case, based on their test results students would still be admitted to study veterinary medicine, however, in order to sit 2nd year examinations, they are requested to meet Additional Learning Requirements (Obblighi Formativi Aggiuntivi, OFA ). The complete procedure is available online .

The UniPi teaching regulation introduced in 2012 the “loss of student status”: students that have not acquired more than 6 ECTS before the end of the 1st year or 18 ECTS before the end of the 2nd year are automatically excluded from whatever curriculum, including the DVM Course .

Remediation and support for students who do not perform adequately – Students who do not perform adequately receive additional support from the Tutoring Service (each teacher takes responsibility of a number of students, i.e., 8-10), which, in addition to providing students with advice on how to improve their performance, is also useful to better understand students’ needs and to receive their feedback . Furthermore, whenever necessary, students may meet with their teachers and/or the DVM Course coordinator during their office hours or by appointment. Also, a Peer Tutoring Service is provided from students to their peers . In 2020-2021 a new support (“Piano di Orientamento e Tutorato - POT”) has been provided to student with difficulties in their career: a Microsoft Teams channel and dedicated e-mail addresses were implemented  . Three kinds of tutoring activities were undertaken within POT: for students with OFA (see Area 3); for students accessing 1st year lectures later due to administrative delays; for off-course students.

Since AY 2019-2020 a new tutoring type was implemented: the VEE provides a number of academic staff tutors to each students’ cohort on a year basis as detailed here .

Advertisement to students and transparency – Criteria and procedures are permanently available on institutional webpages as UniPi website [UniPi website](#) and DVM Course website [DVM Course website](#).

Rate and main causes of attrition – Dropout rates are relatively low and have been stable over the last years. By analysing data related to students enrolled between AY 2016-2017 and AY 2019-2020 (4 AY), 5 did not enrol to the 2nd year from the 2016-2017 cohort, 4 from the 2017-2018 one, 3 from the 2018-2019 and 9 from the 2019-2020. On average, 8.4% (5.25/62.7) of 1st year students did not continue to the 2nd year: this mostly due transfer to other degree courses such as Medicine. The dropout rate after the 1st year cannot be precisely estimated because data are related to students enrolling for the first time to University and do not consider students coming from other degree programmes. Based on data provided by the ANVUR, values are below the national average.

Assessment and revision of admission procedures and criteria – As mentioned, admission procedures and criteria are not under the VEE control and are decided and communicated by the MUR. As stated in paragraph 7.3, the VEE proposes a number of students to be enrolled but the final decision is under the control of the MUR in a national landscape. Admission criteria for years other than the first one (transfers from other DVM Courses in Italy or in a foreign country) are annually established by UniPi [UniPi](#), number of available places are based on dropouts.

DVM Course admission exam procedures/criteria are communicated every year on the DVS [DVS](#), UniPi [UniPi](#), and MUR [MUR](#) websites, far in advance of the admission test date. Following the admission test, candidates are given individual protected passwords to access DVM Course national ranking lists [DVM Course national ranking lists](#). Progression criteria, and services to students are planned, implemented, monitored and revised by the DVM Council as final decision body. Students are involved in the process due to their representatives participating in all the pertaining committees. The figure below provides a schematic view of how the DVM Course is managed.

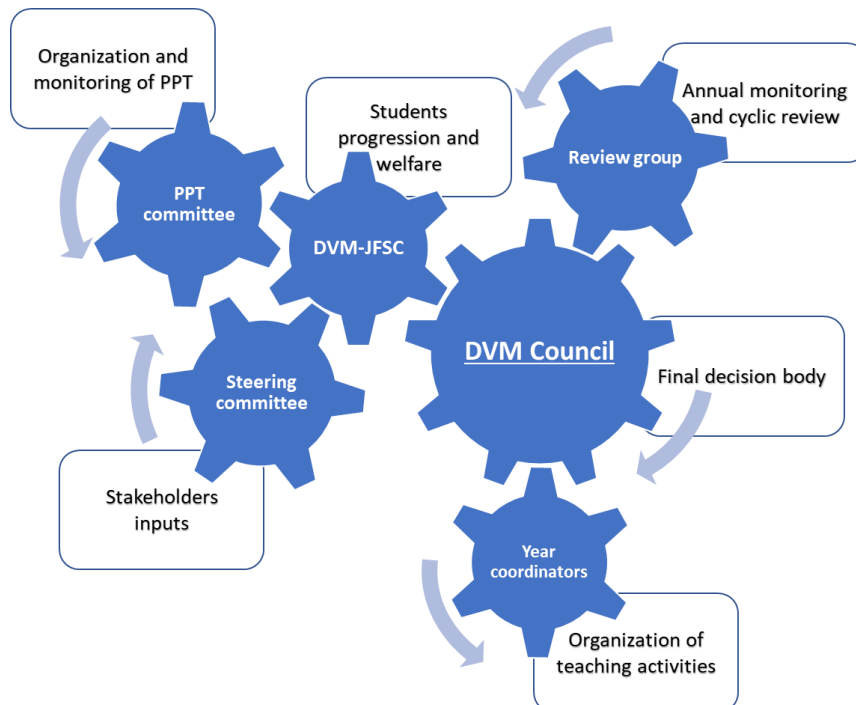


Figure 7.5.1. Schematic view of the DVM Course management

Planning and implementation – The DVM Council adopts ameliorating or corrective actions by implementing inputs obtained from different bodies:

1. The DVM-JFSC is the major internal body on teaching quality and services offered to students. The DVM-JFSC analyses the results of teaching assessment questionnaires and together with the

DVM Course coordinator analyses corrective actions identified by lecturers responsible of subjects where critical issues have been pointed out; the DVM-JFSC also deals with the preliminary phase of adaptations of the degree programme related to curriculum changes, students' progression and welfare (whose inputs may be produced by the PPT Committee or the Steering Committee).

2. The PPT Committee deals with all the aspects related to PPT both intra and extra-mural; identifies potential deficiencies related to ESEVT Day One Competences and proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.

3. The Steering Committee brings the training course closer to the needs of the labour market and collaborates in defining the needs of stakeholders; monitors the adaptation of the curriculum based on previously provided indications and evaluates the effectiveness of employment outcomes. Proposes corrective actions that are adopted by the DVM Council with or without the preliminary opinion of the DVM-JFSC.

Actions related to organisational aspects, going from the class schedule implementation and continuing adaptation (changes due to absence of teachers due to personal or institutional impediments) to the grouping of students for practical activities, communication of activities related to teaching and assessment of teaching quality, are performed by the Year Coordinators.

The full document yearly updated containing information on the educational offer is the SUA-CdS  that, as mentioned, is intended to be the unitary place in which to bring together and rationalise information regarding the activity and quality control of study courses, for the benefit of Universities, students and families.

Monitoring activities are performed at different levels:

1. By the DVM Council by approving the AMR provided by the Review Group. The AMR is a part of the AVA QA process that includes a synthetic comment to the indicators provided by the ANVUR related to: teaching; internationalisation; teaching assessment; student progression and welfare; student satisfaction and job placement; adequacy and qualification of academic staff.
2. By the DVS Council by discussing and approving the D-JFSC annual report. As stated, the D-JFSC uses the information contained in various documents (student's teaching assessment questionnaires, Review Group reports, SUA-CdS), data obtained from the University Statistical Office, as well as specific indicators (e.g., ESEVT indicators in the case of the DVM Course) to produce an annual document that analyses all the DVS curricula and proposes corrective actions when needed.
3. By UniPi that annually checks the D-JFSC reports by mean of the UniPi PQA and provides reviews and comments through the University Independent Evaluation Unit annual report.

Revision activities are again performed by the DVM Council by discussing and approving the CRR drafted by the Review Group every five years (next one foreseen in 2023). After approval, the report is first submitted to UniPi and then to the ANVUR. Corrective and/or improvement actions shall be identified in case of mild to severe criticism. The 2018 CRR gained ANVUR accreditation in 2019 as elsewhere specified.

7.6 Student exclusion

Mechanisms for the exclusion of students and appeal processes – As stated above, one of the exclusion reasons is related to the number of ECTS obtained in the first two years: students that have not acquired more than 6 ECTS before the end of the 1st year or 18 ECTS before the end of the 2nd year are automatically excluded from whatever curriculum. Other exclusion criteria, including tuition fee related reasons are established by UniPi teaching regulation (art. 30 ). Exclusion criteria do not apply to students with disabilities, students that have acquired all the ECTS excluding the final thesis, foreign students that are allowed to live in Italy thanks to a study VISA, imprisoned students.

Exclusion is communicated to students in advance. Students can appeal within 45 days from exclusion as established by the teaching regulation. Every student that has lost his status can enrol again asking the complete recognition of the previously obtained ECTS. To obtain the ECTS recognition and thus to obtain a new enrolment to the DVM Course, the admission procedures described above (e.g., the admission test) must be followed once again.

7.7 Response to students' physical, emotional, and wellness needs

Registration, teaching administration – There is a specific section of the UniPi website targeted to students and services dedicated to them. Central orientation services and events such as orientation for students, “Open Days” etc. are organised regularly. Central secretariat and student information is accessible via internet. Registration information is available online as well. Services available to students attending the DVM Course are coordinated by the local teaching office that works closely with the central UniPi offices responsible for admission, registration and any other administrative matters, both for undergraduate and postgraduate studies. Students can communicate directly with the DVM Course teaching office or write to the relevant e-mail address. A specific web and local office is dedicated to international students.

Mentoring and tutoring, careers advice, listening and counselling – A member of teaching staff acts as reference tutor for students enrolled on each year. Mentoring and tutoring of students attending the PPT has a specifically dedicated service through tutors that offer guidance and advice; their names are listed in a specific procedure. Career guidance is the mission of the Career Service of UniPi and the DVM Course has a local representative that takes care of an annual job placement session as described in the DVS website. The Career Service foster student contact with practitioners from all areas. A listening and counselling service is in place for students encountering psychological difficulties.

Assistance in case of illness, impairment and disability – To guarantee study rights equality and social integration within the University community, UniPi provides the following assistance:

- USID;
- a consulting spot for students with SLD (Sportello DSA);
- health protection insurance and assistance;
- a committee promoting equal rights opportunities and welfare at work and against discrimination (Comitato Unico di Garanzia - Guarantee Act Committee, CUG). The CUG works to protect and promote personal dignity at work and guarantee and improve environmental and context conditions to staff and students.

Clubs and organisations – The University has a chorus, and an ensemble to which all members of UniPi (students and staff) could participate. Student associations are present and their activities are sustained by specific funding advertised every year.

UniPi has a dedicated sport centre which aims to promote and develop amateur and competitive University activities, spreading and nurturing the culture and values related to sport since 1946. A specific project has been implemented for students with disabilities, namely “Spin - Sport per l’Inclusione”.

Mechanisms for resolution of student grievances – The abovementioned CUG is a UniPi committee that promotes equal opportunities for students and staff by proposing measures and actions against any discrimination. Any grievances communicated through the mechanisms reported in the following paragraph will be considered. The DVM Course coordinator is regarded as the first contact person students may refer to for grievances. Additionally, students are provided with personal tutors to which they may refer chosen from the teaching staff.

7.8 Students' needs, complaints, comments, and suggestions to the VEE

Students can convey their needs and queries through their representatives in the DVM Council, DVS Council and D-JFSC. They can also provide suggestions, comments and complaints by writing, to the relevant e-mail address [✉](#) which guarantees the anonymity of the complaint, as published in the DVS webpage specifically dedicated [✉](#). Furthermore, UniPi provides a service named “Whistleblower” for students and staff, that is aimed at denouncing crimes of any nature [✉](#).

At the end of any course students are requested to anonymously evaluate it. Results of this analysis are used for improving the quality of the entire DVM Course. In 2019-2020, the DVS Council adhered to an experimental post-examination test administered to students by UniPi in order to obtain their evaluation on the assessment process: results were recently available and are included in Annex 9.

7.9 Comments on Area 7

The MUR admission procedures do not take adequately into account students' motivations to the veterinary profession; to this regard the Board of Directors of Veterinary Departments in Italy has recently asked the MUR to include a motivation questionnaire that candidates must fill when registering to sit the admission test. No actions can be taken at the DVM Course level.

Admission exams are scheduled in September but since the allocation to the different veterinary schools is performed on a national basis, several students of the 1st year start their class with a considerable delay because of the time needed to complete the enrolment procedure. No actions can be taken at the DVM Course level.

Off-course students do not attend lectures and practicals. However, they determine a significant increase of both the total number of students enrolled and the number of students graduating annually. These numbers negatively impact on relevant ESEVT indicators.

The introduced 4th year “freezing” was aimed at avoiding having students with poor basic knowledge attending clinical subjects. This stop stimulated student progression since the number of blocked students decreased from 17 in AY 2018-2019 to 4 and 6 in AY 2019/2020 and 2020/2021 respectively. Master programmes are proposed as post-graduate activities in the fields of ethology, anaesthesia, diagnostic imaging, oncology, gastroenterology. Teaching activities are organised mainly during weekends and involve external professors and practitioners. This activity attracts many students and creates a positive network among professionals working in the same or closely related fields.

7.10 Suggestions for improvement on Area 7

Regarding admission procedures, pressure should be to be applied at MUR level in order to anticipate admission test dates and to evaluate student vocation to veterinary medicine and to increase the number of scientific questions against general knowledge questions.

Although the proportion of students that graduate within the study period has increased constantly and is today higher than the national mean, this can still be improved by a constant evaluation of the reasons that may slow down student progression, followed by actions for resolution.

A dedicated DVS video for incoming orientation events may be created. Analysis of dropout reasons might be worth as well.

7.11 Notes on COVID-19 pandemic

In 2020 a remote orientation event was organised, recorded and made accessible on a dedicated Youtube channel [✉](#). The same content was made accessible by a Power Point presentation [✉](#).

UniPi ensured facilities fulfilling anti-covid requirements to perform admission procedures as presence activities even in 2020 and 2021.

The “loss of student status” introduced in 2012 by the UniPi teaching regulation does not apply to the years affected by the pandemic.

Area 8. Student assessment

8.1 Student assessment strategy

The DVM Council, mainly through its DVM-JFSC, is in charge for any assessment related issues, in compliance with the UniPi teaching regulation. On a yearly basis, the DVM Course strategy (including assessment) is further monitored by the D-JFSC, whose proposals must also be discussed and approved by the DVM Council. These activities led to the development of specificities that are not included into the UniPi general rules. Noteworthy, while the UniPi teaching regulation specifically describes how examinations must be organised and what they are expected to guarantee, aspects dealing with assessment in the veterinary teaching context have been deepened by the aforementioned bodies and either specified in the degree teaching regulation or in a dedicated internal policy.

After the end of each course students are assessed when ready to sit the examination. There are no limits on the number of times students can re-sit examinations. Every year the DVM Council sets up and advertises exam sessions at the beginning of the AY. For each course, a minimum of 6 exam sessions/year are offered during intervals between teaching periods, while two extra sessions are reserved to off-course and working students, parents with children under 8 years, students on maternity leave as required by the UniPi teaching regulation. The DVM Council approves and publishes exam dates in September for the entire following AY.

Students are required to pass propaedeutic (barrier) exams before sitting specific exams (as reported in paragraph 7.5). The list of barrier exams is published on the DVM Course website.

Class attendance is compulsory and certified by the academic staff at the end of each course. Certification is released limited to students who have attended 70% or more of lecture and practical activities. Without class attendance certification, the students are not allowed to sit the corresponding exam; as per UniPi teaching regulation, exams can be delivered in written, oral or practical form; examination methods and assessment criteria are available for consultation on the internet in the course syllabus at the beginning of each AY.

For PPT, 100% attendance is needed. The student has a tutor during the rotation that, together with the internal referent (member of the academic staff), will certify that all competences listed in the LogBook have been acquired.

The final grade and the DVM title are obtained following the oral presentation of a research work, the undergraduate dissertation thesis, in front of a nominated academic committee after all exams are passed and all ECTS have been obtained. The final grade is the results of student career and thesis dissertation score and the maximum score that can be obtained is 110 cum laude (with honours).

During 2021, the DVM Council adopted an internal policy in the form of guidelines for the alignment of learning outcomes with ESEVT Day One Competences and with assessment methods (Annex 3). The growth of a new culture in veterinary education, including assessment, was recently boosted by the participation of members of the DVS academic staff to an event of national scope organised by the University of Bologna in 2020: this event included the deepening of relevant assessment topics selected amongst the robust structured training offered by the Royal Veterinary College (MSc in Veterinary Education). As consequent action, a public event (*Veterinary education, challenges and opportunities*) was organised by the DVS with vast participation by the teaching and support staff. These opportunities created a renovated vision and increased the awareness of the teaching staff on how the teaching activities (including assessment) can be organised/managed/performed in compliance with the most advanced visions at the international level. The DVS familiarised with the related literature in the field of veterinary education (Baillie, Warman & Rhind, 2014; Rhind & Baillie, 2018), recognising, as an example, the Miller's pyramid as a pertinent model to illustrate the veterinary training progression and the relative positioning of assessment methods.

In line with training initiatives and the new awareness, the policy adopted by the DVM Council in 2021 has specified the endorsed assessment methods as follows: a) individual oral presentation; b) group oral presentation; c) individual oral examination; d) assessment during practical activities; e) practical

examination; f) written report (with/without discussion in the presence of the teacher); g) individual written examination.

The following table summarises the specific rules adopted by DVM Council to supplement the UniPi teaching regulation.

Table 8.1.1. Rules adopted by the DVM Council to supplement the UniPi teaching regulation

Assessment strategy	UniPi teaching regulation Art. 23	VEE specificities
Exam session number	6+2	6+2
Propaedeutic (barrier) exams		Adopted 
Class attendance		Compulsory 70%
Assessment methods	Oral, written, practical	a) Individual oral presentation; b) Group oral presentation; c) Individual oral examination; d) Assessment during practical activities; e) Practical examination; f) Written report (with/without discussion in the presence of the teacher); g) Individual written examination
PPT attendance		Compulsory 100%
Practical skills		Registered in a LogBook
Students with disabilities	Specific procedures	Specific procedures
Learning outcomes	Aligned with assessment methods	Aligned with ESEVT Day One Competences and assessment methods
Student's appeal		Specific procedure for assessment related issues

Different methods are used, as specified in the syllabi, to assess theoretical knowledge, preclinical and clinical practical skills.

Theoretical knowledge is usually evaluated through oral or written examinations. This latter type of assessment, which may vary according to the topic that is dealt with, includes: (i) multiple-choice questions, as well as short answers; (ii) open-ended answers with limited writing space; (iii) 1-2 pages essays. One or more interim tests to evaluate the acquisition of the different topics covered during classes are sometimes provided, normally in the multiple-choice questions format. Oral examinations are used to test theoretical knowledge and are supported by the use of scoring rubrics that have been introduced to decrease subjective bias; oral examinations are intended as a way to assess problem solving attitudes and train/assess communication skills, including the use of appropriate terminology.

Pre-clinical practical skills are assessed either formatively during practicals, and/or summatively on occasion of the final exam. In the case of PPT, both lecturers and tutors are entitled to certify the fulfilment of tasks listed in the LogBook using a continuous assessment approach. In the case of exams, skills are assessed by practical tasks whose format can vary depending on the subject: usually they are the oral-practical or the written-practical format.

Clinical practical skills are mainly evaluated during the last two curricular years. They are listed in the LogBook and represent an important part of the global assessment system to verify that students have acquired the Day One Competences listed by ESEVT SOP 2019. As already mentioned for pre-clinical skills, assessment of clinical practical skills occurs in a formative way during practicals and PPT, and in a summative way during the practical part of clinical exams.

Most soft skills are not formally assessed, however, a positive outcome of activities such as exams, clinical rotations and the PPT programme also implies that students have received adequate training to develop a wide range of soft skills.

The adopted guidelines indicate that a mixed format of assessment is required at least for subjects that contain practical skills linked to ESEVT Day One Competences among their learning outcomes. This was already common throughout the curriculum as shown in Table 8.1.2.

Table 8.1.2. Assessment methods summarised from published syllabi (2020-2021)

	Curricular year					TOTAL
	1 st	2 nd	3 rd	4 th	5 th	
<i>Number of teaching subjects</i>	7	6	5	6	3	28
<i>Individual oral examination</i>	5	5	4	6	2	22
<i>Evaluation during practical activities</i>	2	4	5	6	3	20
<i>Practical examination</i>	3	0	2	2	0	7
<i>Individual written examination</i>	4	4	4	3	3	18
<i>Mixed format of examination total and %</i>	5 (71.4%)	4 (66.6%)	5 (100%)	6 (100%)	3 (100%)	23 (82.14%)

8.2 Assessment process

As said, the UniPi teaching regulation (art. 23) sets the general framework whereby assessment procedures must be implemented. Requirements worth to be mentioned are: a) eight (6+2) exam sessions per year; b) a minimum of 20 days between consecutive sessions; c) no overlap between exam sessions and lecture periods; d) exams may consist of one or more tasks in an oral, written or practical format; e) exams are public and must always be held in University premises accessible to the public; f) dates of the exam session of each course must be published at least sixty days before the start of exam period. Any subsequent changes to the calendar cannot include the anticipation of the session with respect to the scheduled date, nor a postponement of more than seven days and they must be communicated in written form to the DVM Course coordinator and to the DVS Head.

Within the DVS, the DVM Course teaching regulation sets further requirements about class attendance, practical skill acquisition, explicit requirements for progression (barrier/propaedeutic exams).

- *Assessment methods and grading criteria*, along with learning outcomes, course contents, readings, teaching methods and tools, and office hours for each course and teacher are set out in the course website syllabus that must be published before the beginning of the related teaching period by the lecturer responsible of the specific subject.
- *Exam calendar* is established annually by the DVM Course (at the beginning of the new AY) and made publicly available.
- *Propaedeutic exams* are regularly updated if the DVM Council sets new requirements; propaedeutic exams are also indicated in the tab “pre-requisites” of the course syllabi for each teaching unit.
- *Graduation exam calendar* is established annually by the DVM Council (at the beginning of the new AY) and made publicly available.
- *License to practice exam* can be sit twice per year (June and November).

Grades are expressed in numbers. In all examinations, the minimum approval grade is 18 and the maximum grade is 30 “cum laude” (with honours). The examination board for each teaching unit must include at least two members of the teaching staff. Individual students are notified of exam grades at the end of oral and practical components or, for written exams, by electronic mail. Grades are registered by the president of the Graduating Exam Committee after explicit acceptance provided by the student. Students cannot sit twice the same exam if the mark was properly accepted and registered. Assessment criteria of each subject, and passing requirements are reported in detail in the course syllabi, such a

document must be yearly updated or confirmed by the lecturer responsible of the specific unit. Lecturers are invited to inform students on assessment criteria and procedures at the beginning of the course.

The graduation exam is regulated by specific procedures that include deadlines and methods. It takes place in front of a Degree Committee appointed by the DVS Head on the recommendation of the DVM Course coordinator. It consists of the presentation of the graduation thesis that must be completed within a maximum time of 15 minutes; the discussion, with questions addressed to the student, must last a maximum of 10 minutes. In formulating the graduation grade, the evaluation of the thesis is considered, in terms of scientific validity of the work, the communication ability, the quality of the presentation material and the ability to respect times. The members of the Graduating Committee express their vote which will be between 0 and 12. The final exam grade is the arithmetic average between the thesis evaluation by each member of the commission and the overall score that the student has acquired during his/her career (which results from the printouts provided by the Student Secretariat). The calculation of the average of the marks obtained in the exams is obtained from the curricular average of the marks obtained in the individual exams, weighted on respective ECTS. The president of the Graduating Exam Committee, before assigning the graduation mark, presents, in a closed meeting, the candidate's academic career to the Committee, highlighting merit conditions, especially in relation to the length of the University course. The maximum grade that can be attributed is 110/110. In case of achieving the maximum vote, the Committee may grant honours, exclusively if unanimously (further details are in paragraph 10.2).

As mentioned in Area 7, two barriers exist within the DVM Course:

1. Students who, despite having been admitted to the Course, have obtained a grade lower than 1/3 of the maximum achievable score in the biology section of the admission test, will be assigned an OFA which must be completed within the first AY. Students cannot sit exams of the 2nd year without absolving OFA by following the specific procedure detailed in Area 7.
2. Students cannot enrol to the 4th year if they have not completed the exams of the first two years and at least one exam of the 3rd.

Students who wish to receive feedback may do so by either e-mailing the teacher or seeing them during the dedicated office hours. Further meetings outside of office hours may also be arranged when needed. Teachers must provide feedback on the exam outcome, including counselling for improvement, where necessary.

Any issues regarding student assessment or other aspects of student life at DVS can be reported by the student representatives to the DVM Council. Moreover, students can file web-based complaints. UniPi also has a student/staff whistleblower that guarantees anonymity as established by a specific regulation. In the more recent policy adopted in 2021, a specific appeal procedure pertaining to assessment concerns was introduced (Annex 8). Briefly, students that require clarification on exam procedures and marks should first contact the relevant teachers before officially reporting an issue. Only later they may proceed with the formal report for the individual instance. The application should be e-mailed to the QA delegate that will ask advice of the DVM-JFSC. The individual student must submit her/his request for re-assessment within 15 working days of the exam results being published. The report will be structured as follows: a) exam date and denomination; b) why the report is forwarded; c) any supporting documentation. The DVM Course coordinator, following consultation with the DVM-JFSC and after auditing the relevant lecturers, will review the report at the first opportunity and will deliberate within 30 days from receipt, at latest. Potential outcomes of the review will be as follows: a) the report is not considered valid, so it is archived once the student has been informed; b) the report is considered valid, but the exam result/mark will not be rectified due to the minor irregularities found; c) the report is considered valid due to obvious irregularities or deviations from the exam procedures announced in the relevant course page. If applicable, the exam result/mark will be rectified once the binding opinion of the President of the concerned Exam board has been acquired. If deemed necessary, the exam must be repeated.

8.3 Student assessment review

Description of the process – As mentioned, the DVM-JFSC is in charge of initiating any changes related to assessment within the DVM Course. This is part of its duties related to teaching activities, students' progression, and welfare. DVM-JFSC proposals are communicated and discussed within the DVM Council that stands as the final decision-making body. In this line, in the past years, profound reviews have been launched by the DVM-JFSC on how teachers must compile the course syllabi, including assessment methods and criteria. Students are deeply involved in the entire process due to the parietic nature of the DVM-JFSC and to their presence in the council. After the DVM Council adopts a specific measure, it is formally communicated to staff and promptly published on the DVM Course webpage. If decisions need a capillary communication, Year Coordinators are asked to promote specific activities. Assessment revision activities are initiated by the DVM-JFSC on specific subjects whenever an issue is raised from students; every year, during the annual monitoring activities performed by the Review Group, indicators related to assessment procedures are considered. The DVM Course coordinator is delegated to propose corrective actions directly to the staff member or to be discussed inside the DVM Council. As an external monitoring body, the D-JFSC annually reviews the performances of all the DVS degree courses; in its report, a specific section (Quadro C) deals with "reliability of methods for assessing the knowledge and skills acquired by students in relation to the expected learning outcomes" including analyses and proposals addressed to each degree council .

Link between learning outcomes and assessment design – As stated above, thanks to the process of approach-to-ESEVT-compliance, interdepartmental educational activities (nationally speaking) are common. In this framework of sharing principles and learning from other Italian VEEs, in 2021 the DVM Council adopted internal guidelines that include a strategy on assessment criteria and methods, in compliance with the UniPi teaching regulation provisions on minimal requirements related to assessment calendars, communication to staff, students and stakeholders. Within the VEE, this new culture was first communicated to teaching, support staff and students in order to generate a community awareness. Then, all the formal steps involving institutional committees were undertaken: first the DVM-JFSC discussed and amended an initial draft of the document, that was then approved by the DVM Council, communicated to students and published on the DVS website . This document also indicates that it is compulsory for the DVM teaching staff to register students that do not perform sufficiently and students that either do not accept the mark or do not sit the examination after having registered to the session. This will allow the monitoring of passing rates that are not available as for now.

In compliance with the adopted guidelines, that specify how learning outcomes must be aligned with Day One Competences and assessment design, considering that the predefined format that UniPi teaching staff must complete includes the description of how each learning outcome is assessed, it is responsibility of each subject teacher to ensure consistency between the learning outcomes and the assessment design at the subject level, besides highlighting it explicitly in the published syllabi . Students can indicate inconsistencies through their representatives to the DVM Course coordinator that, again, will discuss them within the DVM-JFSC first and then in the DVM Council if needed. The DVM-JFSC is entitled to periodically verify consistency and identify possible mismatches.

8.4 Student achievement certification

Unlike other international academic systems, comprehensive end-of-semester assessment sessions are not common in our country, and each subject has a specific exam.

Achievement of learning outcomes is certified in four ways:

1. a positive grade in the final exam of any teaching unit (for learning outcomes listed in the corresponding subject syllabus);
2. a positive grade (or "approved") in an interim test, when applicable;
3. a signature (by a lecturer or a tutor) on any box of the LogBook (see Area 3);

4. the grade awarded following discussion of the graduation thesis.

Due to privacy regulations, no teaching staff member is granted free access to students' certified grades. However, students' career may be checked by authorised support staff members to verify the compliance with prerequisites (e.g., fulfilment of training requirements and possession of mandatory competences before discussion of the graduation thesis). Cohort level data are made available to the DVM Council to allow identification of concerns, issue discussion and strategy management.

All data are recorded on a specific platform  while LogBooks are archived by the Administrative Didactic Unit of the VEE after a quality control on completeness has been done by the DVM Course coordinator before graduation can occur.

Students are encouraged to take an active part in the learning process through a general strategy:

- Involving students in curriculum management. Students are involved in all the decision bodies of the VEE and their support is strongly encouraged. They sit in all relevant committees of both the degree course and the Department; their presence in the joint committees (DVM-JFSC and D-JFSC) plays a unique role in managing the curriculum
- Adopting solutions capable of stimulating a pro-active attitude by students. The proactive attitude of students is stimulated by linking the ESEVT Day One Competences to specific subjects/PPT activities (Annex B). They are involved in the building of the VEE adopted guidelines on the alignment among learning outcomes, ESEVT Day One Competences and assessment methods.
- Offering students targeted tutorship activities within the DVS .
- Providing feedback upon requests by students and easy access to learning material. During the lectures, tutorials, and practical work carried out in each teaching unit, the students are encouraged to ask their teachers to clarify any points that they have not understood. To facilitate learning, the teachers upload all course material on the teaching platform as well as self-assessment tools, guidelines for the final assessment, and support documents such as tutorials. Finally, each teacher remains available to answer students' questions at any time, either by e-mail or by appointment.

8.5 Achievement of minimum level of competences

To ensure that every graduate has achieved the minimum level of competence, assessment methods have been analysed and, as per Table 8.1.2, mixed examination formats have been adopted in 82.14% of the teaching subjects (23/28). To increase the reliability of oral examinations, used in the 78.57% of teaching subjects (22/28), a grading criteria matrix has been adopted. As described, specific internal guidelines prescribe the alignment between learning outcomes, ESEVT Day One Competences and assessment methods. Furthermore, practical skills, as set out in the ESEVT Day One Competences, are monitored by teaching staff during practicals and exams. LogBooks are assigned to each student at the 2nd year, to be completed during core courses practicals, ambulatory clinics, rotations at VTH and PPT. Student LogBooks are certified by teaching staff on the basis of EPT tutor recordings. In accordance with the procedure in force , at the end of PPT the LogBook must be returned to the DVM Course coordinator, who verifies its completeness. The LogBook must be completed before graduation in order to ensure that all clinical procedures, practical and hands-on training planned in the study programme have been fully completed by each individual student.

Day One Competences are further certified by the license to practice exam. In Italy, this is mandatory to access the veterinary medicine profession. Related exams are held by a committee that includes veterinary practitioners, public health veterinarians and UniPi teaching staff, and consist of four main sections: 1-Internal medicine and avian pathology; 2-Surgery and reproduction; 3-Animal production; 4- FSQ and VPH. There are two sessions per year, in June and November.

8.6 Comments on Area 8

The personal development training provided by UniPi *Insegnare a insegnare* (detailed in Area 9) also includes an “assessment” module. Teaching staff is strongly encouraged to take part to the course. Also, by the end of 2020, the VEE has instituted a Committee for Teaching Innovation that started its activities organising formative events in the field of veterinary education (including assessment) and was the promoter of the specific policy that the VEE adopted to formally ensure the alignment among learning outcomes, ESEVT Day One Competences and assessment methods.

Complete data for monitoring assessment procedures (including passing rates) will be available from the next AY, since lectures will start to record students that do not perform sufficiently and students that either do not accept the mark or do not sit the examination after having registered to the session.

In AY 2019-2020 the VEE experimented a student post-assessment questionnaire whose results, provided in December 2021 by UniPi are included in Annex 9. The DVM Council deliberated to participate to this UniPi experimental survey on next AYs.

8.7 Suggestions for improvement on Area 8

The VEE should continue to encourage participation of the teaching staff to the *Insegnare a insegnare* UniPi course. This will allow all motivated colleagues to increase the awareness on assessment methods and may inspire for the use of innovative tools (e.g., IT platform) to administer different kind of examination. Teaching staff would start to create question banks, to monitor results in a retrospective way and to analyse mark distribution.

The institutional monitoring of the assessment strategy (including passing rates) should start by the end of 2022 with data obtained in the current AY.

8.8 Notes on COVID-19 pandemic

Since March 2020, following the evolution of national and UniPi requirements against the pandemic situation, oral exams were mostly performed via Microsoft Teams/Google classroom platforms. Most teachers implemented Moodle based written examination.

Area 9. Academic and support staff

9.1 Staff qualification in compliance with national legislation and local procedures

Under the DVS supervision and responsibility, the DVM Council ensures that the required skills for the veterinary programme are covered. Every year the courses are assigned to the teaching staff in accordance with their fields of expertise. In the Italian system, academic staff is culturally identified according to “Scientific-Disciplinary Sectors” and the corresponding “recruitment fields”.

According to the Italian Law no. 240/2010, permanent academic staff include full and associate professors while assistant professors hold a temporary position and comprise Type A assistant professors (untenured) and Type B assistant professors (with tenure-track).

To access an assistant professor position holding a PhD is a pre-requisite; to access a permanent position (either associate or full professorship) candidates must first achieve the NSQ  and then go through either local or national competitive selection. The Italian Ministry of Education through the ANVUR periodically revises parameters needed to apply for NSQ; local selections procedures are limited to the 20% of the available budget as a way to tackle academic endogamy.

Within the DVS, in the years included in this SER, the totality of permanent teaching staff was full-time, ensuring they have sufficient time to assist students and keep their knowledge and skills up to date. Also, more than 2/3 of teaching staff involved in the veterinary curriculum hold a DVM diploma (Table 9.2.2) and postgraduate qualifications. Nine members of the academic staff hold a European Board of Veterinary Specialisation (EBVS) diploma (detailed in paragraph 10.3).

A formal training (including good teaching and evaluation practices, learning and e-learning resources) is available to all teaching staff: UniPi is indeed committed to improving and modernising teachers’ teaching and assessment skills (see paragraph 9.3: e.g., *Insegnare a insegnare*) and to further enhance e-learning resources (see paragraph 9.3: e.g., Moodle platform). At Department level, teachers are stimulated to participate to staff development courses, and internal events on veterinary education were organised in 2020 and 2021.

Staff is also trained on security and biosecurity matters: security and biosecurity services are organised within the University and Departments in a well-defined manner .

All procedures are regularly communicated to staff (both academic and support staff) and published on the UniPi website, where also the UniPi regulation for health and safety is accessible). To this regard, in 2019, UniPi organised a formal training on risks during teaching and research activities also in the light of updates of the national legislation. On this basis, each staff member had to attend a mandatory course set up by the SPP.

QA procedures are regularly communicated to staff at DVS and DVM Council meetings: also, the 2019 ANVUR accreditation visit required a dedicated training.

In order to assure that all the staff is aware of ESEVT SOP (including Day One Competences), a formative update on EAEVE accreditation issues is given at each DVS Council meeting since 2016: in these occasions the staff is regularly trained on different Areas and Standards.

More than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians, thanks to the high proportion of teaching staff involved in the veterinary curriculum holding a DVM diploma. In 2021, a formative tool in the shape of a PowerPoint presentation was implemented for the basic training of external PPT tutors and VTH practitioners .

9.2 Staff recruitment, progression, and training

As mentioned above, the recruitment budget is annually assigned to the DVS from UniPi on the basis of several parameters, including turnover. The number of FTE academic and support staff of the veterinary programme is not expected to change significantly in the next 3 AYs.

Table 9.2.1. Academic staff of the veterinary programme

Type of contract	2020-2021	2019-2020	2018-2019	Mean
<i>Permanent (FTE)</i>	36.7	38.2	38	37.6
<i>Temporary:</i>				
<i>Type A + Type B Assistant prof.</i>	5	3.7	2.8	3.8
<i>External/Practitioners</i>	4.3	4.2	5.6	4.7
Total (FTE)	46	46.1	46.4	46.2

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

Type of contract	2020-2021	2019-2020	2018-2019	Mean
<i>Permanent (FTE)</i>	76.6%	73.3%	72.6%	74.2%
<i>Temporary (FTE)</i>	93.5%	82.3%	90.5%	88.8%

Table 9.2.3. Support staff of the veterinary programme

Type of contract	2020-2021	2019-2020	2018-2019	Mean
<i>Permanent (FTE)</i>	43.5	45.5	45.5	44.8
<i>Temporary (FTE)</i>	1.3	1.3	1	1.2
Total (FTE)	44.8	46.8	46.5	46

Table 9.2.4. Research staff of the VEE

Type of contract	2020-2021	2019-2020	2018-2019	Mean
<i>Permanent (FTE)</i>	5.7	5.6	5.5	5.6
<i>Type A + Type B Temporary (FTE)</i>	5	3.7	2.8	3.8
Total (FTE)	10.7	9.3	8.3	9.4

Teaching staff – As part of the UniPi Strategic Plan, the DVS adopted a specific strategic axis aimed at conducting a transparent staff recruitment and development process on a merit basis and at enhancing staff training and continuing education .

Recruitment and promotion of academic staff depend on available public funding. From an operational perspective, each year a variable number (or fractions) of dedicated “budget points” are assigned to DVS by UniPi. One point is defined by the MUR as the budget required to recruit a full professor. The number of points allocated to the DVS depends on the general provision of resources by the MUR, and a range of locally established parameters, including fulfilment of research and teaching goals, the student population size, the teaching hours and the expected academic turnover. The internal allocation of resources is discussed within a dedicated DVS committee (SPC) whose proposals are submitted for deliberation to the DVS Council. The SPC, chaired by the DVS Head, is in charge for identifying the staff needs (including teaching and support staff) and evaluates requests for new positions presented by the different “Scientific-Disciplinary Sectors” on the basis of criteria comprising teaching load, support to clinical activities, maintenance/expansion of teaching competences. The DVS Council deliberations are then analysed by the UniPi Board of Directors for the final advertisement of the position (Figure 9.2.1).

As described, the recruitment procedures are already set to guarantee a high teaching staff qualification. In particular, the possession of the NSQ for a specific academic discipline ensures that the permanent academic staff can provide up-to-date research-based education.

After a call is advertised, each candidate applies through the MUR online platform and his/her scientific curriculum is evaluated by a committee of professors belonging to the same recruitment field. Committees are made up of an odd number of members and only one of them represents the UniPi. For the recruitment of permanent academic staff, competitive national/local examinations are called by the Universities. There is a specific UniPi recruitment procedure, established in accordance with the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers.

Academic staff is periodically evaluated for teaching and research activities. Academic staff research activities are evaluated by UniPi and, periodically, by a national quality system (VQR, by the ANVUR). Members of the permanent academic staff are requested to complete an annual report including teaching, research and organisation activities.

The DVS Head, by the means of a specific committee of academic staff members, verifies the self-certifications. Staff with negative evaluations are excluded from the qualification, selection and career progression committees for academic staff, as well as from the evaluation bodies of research projects. UniPi every 2 years evaluates the academic staff on the basis of their research, teaching and service activities, and a positive evaluation is linked to a salary increase.

A formal programme for the training of academic staff including teaching methodologies and a module on assessment is offered by UniPi (detailed in paragraph 9.3); as mentioned above, at Department level, teachers are stimulated to participate to staff development courses, and internal events on veterinary education were organised in 2020 and 2021, this latter available on UniPi YouTube channel.

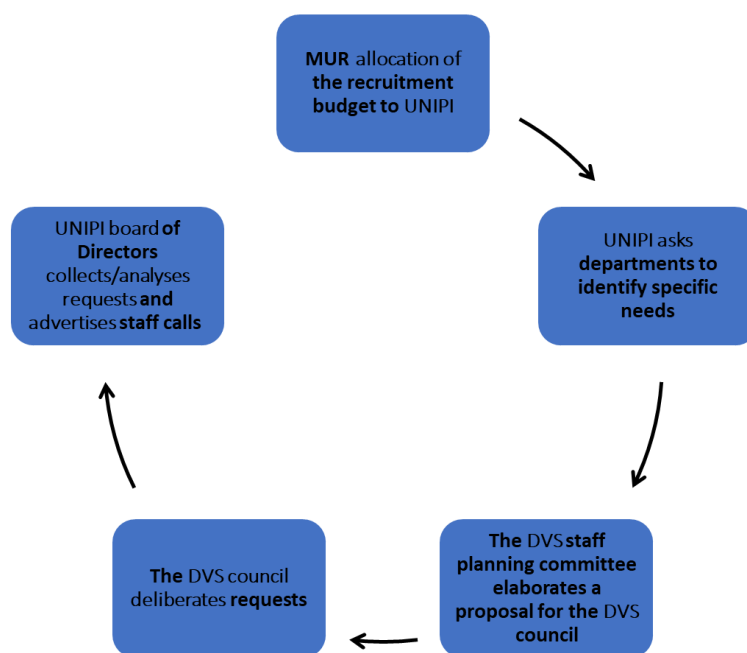


Figure 9.2.1. Process of resource allocation for staff recruitment and progression

Support staff – The DVS periodically identifies specific new support staff needs, both for administrative and technical duties, and makes recruitment/promotion proposals to UniPi. If these are accepted, recruitment procedures with specific selection criteria begin. Candidates are selected via competitive examinations. Therefore, the selection and recruitment of support staff falls within the competence of the Rectorate. The selection procedure is based on a profile describing the required specific/general skills. The Support staff qualifications are ensured by the competitive selection process they go through for recruitment/promotion and by the continuing education courses, mainly organised by UniPi, that they periodically attend.

Support staff horizontal progression is possible after continuing education courses with final examination. Vertical progression is possible through open competitions, with no more than 50% of places reserved for internal staff progressions. Training activity for support staff includes both

internal and external courses[☞]. Moreover, UniPi has recently carried out a survey about the training needs of support staff and a report is present on UniPi website[☞].

Outside work allowance – UniPi has specific rules governing external staff activities[☞]. Full-time Professors and support staff cannot undertake outside work with some exceptions (e.g., reviewer, consultant work, etc.) that in some cases require the approval of the DVS Head and/or the Rector. Part-time academic staff (250 hours of teaching activities instead of 350 per year and a lower salary) may undertake outside work. Support staff can also apply to work part-time.

9.3 Staff employment peculiarities

Work contract – As stated above, according to Italian Law no. 240/2010 the Italian University system includes the following academic staff levels:

1. Full Professor (permanent position)
2. Associate Professor (permanent position)
3. Assistant Professor (Fixed-term position – three years)
 - a. Junior (Jr.) or A
 - b. Senior (Sr.) or B

The assistant professor A contract can be extended for two years. The B one becomes associate professor position upon achievement of the NSQ and positive evaluation from the DVS Council. Before the Italian Law no. 240/2010, the assistant professor position was permanent. Within the DVS some “old type” assistant professors are still present, although their roles are being replaced by A and B assistant professors as they retire or move up to the associate or full level.

A precise balance between teaching, research and services and flexibility among recruited staff is not regulated in the Italian system. Only the teaching load (120 h/year) and the complete workload linked to teaching is specified as follows: full-time professors are required to dedicate no less than 350 h/year to teaching, including mentoring, tutoring and learning assessment. Part-time academics are instead expected to deliver 250 h/year (200 for assistant professors). Type A assistant professors are required to teach at least 60 h/year $\pm 10\%$ while type B must take a teaching load between 48 and 96 h/year. Table 9.3.1 summarises these data.

Partial reductions of the teaching workload may be asked in case of heavy and challenging academic duties/roles (e.g., DVS Head). In general, the required workload is perceived compatible with research, professional development, and other activities. Stability and continuity of academic staff are implicit in the civil servant status.

Table 9.3.1. Academic staff compulsory teaching load (hours/year)

Position	Teaching load		Teaching/mentoring/tutoring/assessment	
	Full time	Part time	Full time	Part time
Full professor	120	80	350	250
Associate professor	120	80	350	250
Type A assistant professors	60 $\pm 10\%$	60 $\pm 10\%$	350	200
Type B assistant professors	48-96	48-96	350	200

Teaching staff allocate a percentage of their time to research, professional development and other activities (e.g., the so called Third Mission defined by the ANVUR). Great pressure is put on academics engaged to also cover organisation roles. Nevertheless, neither explicit recognition for career progression nor economic incentives (with the exception of the DVS Head) are provided.

Currently neither UniPi nor DVS provide a formally approved reward system for excellence in teaching. This is typical of the Italian system which is unequivocally unbalanced toward recognition of

the sole excellence in research. According to the University QA system, the Degree Courses monitor teaching quality by collecting and analysing students' opinions. At the end of each AY the Planning, Evaluation and Statistics Office , provides data to the CdS coordinator who discusses significant matters within the DVM-JFSC (a specific procedure is in place ) and identifies corrective actions where critical issues are detected. DVM Course teachers obtaining a high grade in the student evaluation are acknowledged in the annual DVM-JFSC and D-JFSC reports.

For all teaching and support staff, the salary is fixed by law. After a positive evaluation of teaching and research activities by UniPi, academic staff are guaranteed a standard salary increase every 2 years (see paragraph 9.2). Support staff are evaluated periodically for category pay rises. Support staff with higher professional positions who are linked to specific allowances are evaluated every year.

Continuing education – Different courses and seminars have been proposed by UniPi to improve teaching skills. A specific programme to improve quality of teaching (*Insegnare a insegnare* ) was launched in 2018 and is now active. It is a faculty development project aimed to increase the teaching competences of UniPi academic staff. The project relies on the most recent research theories in the didactic field, enhancing active learning and focusing on the centrality of learners through reflective, experiential, and transformative learning models. It pursues two fundamental objectives: 1) to provide participants with the basic skills to plan, lead, communicate and assess the teaching and learning activities carried out in the classroom with students; 2) to build an interactive professional community which develops approaches, strategies, methodologies, and practices aimed at constantly improving its teaching methods.

Teachers may enrol in the courses voluntarily and the training of newly recruited teachers is a priority. Therefore, junior assistant professors have the priority respect to full and associate professors and tenured assistant professors. The number of seats is doubled (from 30 to 60) from the first (2018/19) to the subsequent years of the course. 33% of academic staff involved in the veterinary curriculum was trained by this mentioned course.

Recently, to further support the on-line teaching activities a series of webinar have been organised by the University to improve teaching staff competences in the utilisation of remote-learning tools such as Google GSuite, Moodle, Microsoft Teams . Moreover, an on-line multimedia mandatory course for all teaching and support staff on privacy and data protection at University level (five modules, total time 168 minutes) has been implemented .

As an additional training tool, the University libraries organise, on their own initiative or on request, bibliographic information courses aimed at institutional users of the UniPi, who want to know, in more depth, techniques, tools and resources for bibliographic research. The courses, held by specialised library staff, are free  and can be accessed either by students and staff.

Finally, continuing education programmes offered by UniPi allow academic staff to further develop their skills and competences through different exchange programmes, including the Erasmus+ and Mobility Programmes for EU and non-EU countries , and incentives for visiting fellow ("Bando Incentivi di Ateneo per i Visiting Fellow" ).

The DVS included academic staff training among the objectives of its Strategic Plan. In particular, the professional training represents a useful stimulus to accompany the professional growth of people in the processes and services provided by the DVS.

From 8th to 11th July 2019 two teaching staff members participated to the course *Fundamentals in Veterinary Education* organised by the Department of Veterinary Medical Sciences (University of Bologna) in collaboration with the Royal Veterinary College of London. On January 28th, 2020, the DVS organised a seminar during which the teaching staff who attended the course in Bologna illustrated the course contents to all staff of the Department. The seminar, entitled *Teaching tools and methods*, was open to all DVS teaching staff, doctoral students and students.

Other activities are organised at the DVS level: a new committee (see Area 1) focused on veterinary education was established in January 2021 and some events, such as a workshop with Italian and foreign experts in the field of veterinary education, took place in June 2021.

In addition, DVS facilitates participation of support staff in training activities organised by UniPi.

9.4 Staff development and contribution to the VEE direction

The DVS is strongly focused on the growth and development of individuals as a road for the growth of the entire institution: in the last three years, initiatives related to both research and teaching can be mentioned.

On the research side, after having organised internal “Research Days” aimed at creating a multidisciplinary environment, in 2019 the DVS was the first Department within UniPi to organise the meeting “Ricerchiamoci”, inviting the entire UniPi to brainstorm on themes included in the DVS Strategic Plan. Also, most academics are affiliated with scientific societies and regularly participate to national and international events and meetings in their main field of research/professional activity. This ensures life-long learning and continuous professional growth.

With regard to the teaching side, the DVS recently established a Veterinary Education Committee as mentioned in paragraph 9.3: dedicated events on veterinary education were organised in 2020 and 2021. Support staff growth and development is ensured by activities organised by UniPi.

Formal appraisal of the academic staff occurs in several ways: from the student evaluation to the attainment of the NSQ. The VEE operates through the DVS SPC that formulates proposals to the DVS Council for allocation of resources related to both recruitment and promotion of permanent staff (see paragraph 9.2). However, promotion cannot be planned on an individual basis: as mentioned, permanent academic staff can be promoted via competitive selection procedures advertised by UniPi and regulated by a specific regulation complying with national laws. Competitive selection procedures can be open to all NSQ qualified participants or restricted to UniPi qualified academic staff.

Support staff are evaluated periodically by UniPi in view of pay rises (horizontal mobility). Moreover, every year support staff are evaluated by the DVS Head for the assessment of the “Individual Performance”.

Academic and support staff work under the guidance of one or more senior members of the VEE. Individual advice, coaching and training is provided as a result of a collaborative environment. In the last years, DVS strongly promoted the participation of newly recruited academic staff to the recent UniPi initiative *Insegnare a insegnare* (see paragraph 9.3).

All members of the academic staff as well as support staff representatives participate in the DVS Council, the main decision-making body of the DVS.

9.5 Teaching staff assessment

Students regularly assess teaching staff through a mandatory and anonymous online evaluation system available on the online UniPi platform “Valutami”. The questionnaire questions follow the scheme of the AVA (ANVUR) guidelines (see Area 1).

Students are asked to evaluate:

- the possession of adequate pre-requisites (i.e., if background knowledge is adequate for students to follow lectures);
- the consistency of study workload with the course assigned ECTS;
- the adequacy and availability of didactic material;
- the transparency and clarity of assessment formats;
- compliance with teaching timetable;
- the ability of teachers to encourage/motivate students;
- the clarity in teaching;
- the usefulness of practical sessions with respect to the objectives and outcomes of the course;
- the consistency of the course organisation with information reported in the catalogue of subject forms;
- teachers’ availability to see students during office hours or for tutoring.

A similar questionnaire is in place for the assessment of PPT activities and tutors.

While teaching staff is evaluated at the end of each module, a second questionnaire for the evaluation of the organisation and services is to be completed only at the end of the year of teaching delivery or in June. Starting from 2018, students must complete the teaching staff evaluation before registering to sit the examination, as requested by the ANVUR.

The results of questionnaires for each course are, as mentioned, elaborated by the Planning, Evaluation and Statistics Office, provided to the DVM Course coordinator who discusses significant matters within the DVM-JFSC. At a subsequent step, the DVM-JFSC, which guarantees the teaching QA, examines the results and makes a report, in which, in the case of negative results, corrective actions for the DVM programme are proposed. The report is discussed and approved by the DVS Council. The DVM-JFSC report will be eventually examined by the D-JFSC and its resulting report by the PQA. Reports approved by the DVS Council are available within the minutes of the Council and can be made available to external referees if needed. Students' opinion is publicly available in section B6 of the SUA-CdS.

UniPi has not yet drawn up procedures to make publicly available the results of individual teacher assessment by students. At Department level, the DVS Council in 2019 (Deliberation 74, 27/03/2019) decided to share the questionnaires results of each course among all members of the Degree Programmes and of the DVS Council, on a reserved area of the departmental website. Moreover, students of each Degree Programme can look at the results of each course, except free comments, and at a general analysis of them on the online UniPi platform “Valutami”.

In AY 2019-20 an experimental students' evaluation of the assessment process was organised by UniPi and DVS chose to participate to the trial. Results were made available in December 2021 and no issues were observed, although a formal internal analysis has not been performed yet (Annex 9).

9.6 Comments on Area 9

Number and qualifications of teaching staff currently involved in the veterinary programme are considered quite adequate; the decrease of permanent FTE observed in 2020-2021 is somewhat counterbalanced by the increase of newly recruited Type A + Type B assistant professors. The high percentage (93.5%) of temporary FTE holding a DVM diploma in 2020-2021 is evidence of the DVS commitment in involving veterinarians into veterinary training.

It is commonly known, within the academic community, that the Italian NSQ and the entire process of recruitment and progression is mostly focused on research while teaching and service aspects do not gain the same importance. Teaching load within the DVS is not uniformly distributed among teaching staff with cases of heavy teaching load not linked to salary increase or professional progression. Provision of a reward system for excellence in teaching and the linkage of results of teaching staff evaluation to career progression is not common nationally speaking. Nor PPT tutoring activities neither institutional duties are formally included in the staff workload.

The faculty development project *Insegnare a insegnare* offered by UniPi provides participants with the basic skills to plan, lead, communicate and assess the teaching and learning activities carried out in the classroom with students. It is expected that trained staff will be able to promote an innovative culture on teaching and assessment methods within the DVS.

9.7 Suggestions for improvement on Area 9

The DVS should continue to invest a remarkable proportion of its budget to the recruitment of new academic staff holding a DVM degree in order to comply with ESEVT indicator I2.

The DVS should continue to provide academic staff with initiatives on innovative veterinary education and facilitate staff continuing education and personal development: to this regard, the totality of academic staff including temporary staff should complete the programme *Insegnare a insegnare* offered by UniPi.

Training courses on ESEVT, and more specifically on Day One Competences and their assessment, should be offered to Veterinary Officers and other external personnel supporting extra-mural PPT in VPH and other PPT areas.

The number of diplomates in core clinical disciplines should be further enhanced. This could be pursued by recruitment of diplomates and/or by allowing/stimulating young assistant professors to pursue this title.

Students' evaluation of the assessment procedures should be implemented/continued, either at a UniPi or at a DVS level.

9.8 Notes on COVID-19 pandemic

Both academic and support staff was not prepared to undertake remote work and most people were not aware about the already available platforms to carry out delocalised activities. Despite this, after only one week from lockdown, most lectures were already performed remotely by using either Microsoft Teams or Google classroom. A quick and capillary action was performed for the initial training of the staff; during summer 2020, more specific training activities were performed on e-learning platforms such as the above-mentioned Microsoft Teams and Google Suite as well as the Moodle platform (videos still available [here](#)). Teaching staff was also provided, on request, with a device to quickly digitise and share notes and drawings on paper.

Area 10. Research programmes, continuing and postgraduate education

10.1 Research activities

UniPi conducts internationally recognised research, including applied clinical research. This is confirmed by international rankings (e.g., QS Ranking 2021, in which UniPi is placed 383rd worldwide and at the 7th place among Italian Universities). As stated in its statute, UniPi is committed to supporting research, promoting its development and guaranteeing its autonomy. The number of indexed publications (Scopus indexed journals) of the DVS academic staff was 572 in the years included in this SER (153 in 2018, 179 in 2019 and 240 in 2020 (Annex E)). The average is around three full papers in indexed journal per year per person, not including congress communications/abstracts and not indexed contributions. The research-oriented attitude of the teaching staff can be passed on to students by “osmosis” first and then through hands-on activities carried out during the preparation of the graduation thesis.

The DVS considers research activity as a central tool for student education and training. Teachers consistently take advantage of their research topics which contributes to education in several ways: influencing the lecturer’s pedagogical approach (e.g., through the selection of a few relevant themes/subject to look at in depth), providing real-world scenarios, orientating the clinical caseload and providing essential background for students to be able to write their graduation thesis. In addition, students participate hands-on in research activities during the thesis preparation (15 ECTS).

Research funding come from different sources/agencies:

- UniPi either based on a ranking and through multidisciplinary projects;
- Tuscany region;
- MUR;
- MIPAAF;
- European agencies;
- Research contracted by private companies, industries or other institutions.

Table 10.1.1. List of the major funded research programmes and contract research in the VEE which were ongoing during the last full AY year prior the Visitation (2020-2021)

Agency/Company/Institution	Scientific area	Amount	Duration
Horizon 2020	Agricultural economics	154,000.00	2019-2023
Horizon 2020	Agricultural economics	650,562.50	2020-2025
MIPAAF	Animal production	327,955.02	2021-2023
Umbria region	Agricultural economics	13,000.00	2020-2022
Toscana region	Agricultural economics	10,000.00	2021-2023
Toscana region	Agricultural economics	12,000.00	2021-2022
Toscana region	Agricultural economics	12,000.00	2021-2022
PRIN-MUR	Anatomy	57,276.00	2019-2022
Azienda Ospedaliero-Universitaria Pisana	Reproduction	7,000.00	2020-2021
Arcoblu	Parasitology	1,921.57	2020-2021
Az. Agricola Fanucci	Internal medicine	3,471.49	2020-2021
Regione Toscana	Internal medicine	36,000.00	2020-2022
Regione Toscana	FSQ	70,000.00	2020-2021
Ente Parco Arcipelago Toscano	Biochemistry	15,000.00	2020-2021
Trakia University/Stara Zagora Bulgaria	FSQ	3,100.00	2020-2021

Agency/Company/Institution	Scientific area	Amount	Duration
<i>Unicoop Firenze</i>	FSQ	11,000.00	2020-2021
<i>Soc. Conapi</i>	Biochemistry	15,000.00	2020-2022
<i>Soc. Ekuore</i>	Internal medicine	700.00	2020-2022
<i>Consorzio 6 Toscana Sud</i>	Biochemistry	84,000.00	2020-2022
<i>Ente Parco Migliarino, San Rossore, Massaciuccoli</i>	Reproduction	30,000.00	2020-2022
<i>Crea</i>	Biochemistry	24,590.00	2020-2021
<i>Ecol Studio Spa</i>	Zoology	3,000.00	2020-2021
<i>Az. Agricola Abate Vincenzo</i>	Internal medicine	2,732.24	2021-2022
<i>General Beverage Srl</i>	FSQ	12,500.00	2021
<i>Sig. Ra Maria Pia Gentili</i>	Anaesthesiology	5,000.00	2021-2023
<i>Az. Agricola Mecherini Fosco</i>	Internal medicine	1,928.64	2021-2022
<i>IZSLT 12/20</i>	FSQ	40,000.00	2021-2023
<i>Trakia University/Stara Zagora Bulgaria</i>	FSQ	3,100.00	2021-2022
<i>Ente Terre Regionali Toscane</i>	Reproduction	9,000.00	2021
<i>GEM Srl</i>	Pathology	10,000.00	2021
<i>Innovative Diagnostics</i>	Infectious disease	1,320.00	2021-2022
<i>Conapi Soc. Coop. Agricola</i>	Biochemistry	15,000.00	2021
<i>IZSLT</i>	Animal production	5,000.00	2021
<i>Scuola Superiore Sant'Anna</i>	Internal medicine	7,00/day/animal	2021-2022
<i>Comune di Scarlino - Bandite di Scarlino</i>	Animal production	15,000.00	2021-2022
<i>Ente Terre Regionali Toscane</i>	Reproduction	8,403.78	2021
<i>Comune di Camaiore</i>	Agr. economics	5,000.00	2021
<i>Roberto Gottarelli</i>	Pharmacology	3,000.00	2021-2022
<i>Ente Parco Arcipelago Toscano</i>	Biochemistry	30,000.00	2021-2022
<i>Terre Regionali Toscane</i>	Reproduction	22,500.00	2021-2023

10.2 Student research training

The importance of evidence-based medicine and the scientific approach to the various tasks of the veterinary profession is emphasised in a number of ways across the curriculum. Academic staff encourage students to develop a scientific approach in all the learning activities by presenting relevant case studies arising from research activities, holding class discussions about their own or others scientific papers, and giving suggestions on outstanding literature to late students involved in their thesis work. During the curricular years, students become acquainted with the language of research and the importance of numbers, statistics and effective data presentation. Students are increasingly exposed to evidence-based thinking, in particular when engaged in small-group practical activities, clinical rotations and other PPT activities, and while conducting their thesis work. Students' interaction with the supervisors, as they conduct and correct the thesis, is a key moment for the acquisition of scientific and critical thinking methods, as well as report writing and bibliographic search skills. Assessment of the graduation thesis work includes explicit evaluation of the aforementioned skills.

DVM course students are invited to take part to research-oriented events, such as:

- European "Researchers' Night" initiatives (Bright project );

- Seminars and conferences, often related to specific research activities, organised by the DVS, the Specialisation Schools and the PhD programme;
- Specific events such as “Ricerchiamoci”⁴, directed at researchers of UniPi with the aim to share knowledge and skills from different scientific sectors to develop multidisciplinary projects;
- PhD theses annual audits and final defence;
- Journal Clubs for students, residents and PhD students (with the possibility of illustrating and commenting a scientific article);
- Research seminars with external speakers organised by PhD students for teaching staff and students.

Participation to congresses or other accredited educational events can be included amongst the elective ECTS.

Induction training – Within the general services offered by SBA (please see Area 6), the DVS library⁵ organises short courses aimed at the use of bibliographic tools for scientific research.

The courses are aimed at undergraduates, PhD students and anyone wishing to make full use of the bibliographic resources/tools that UniPi makes available. Courses are generally held for a minimum of 2 and a maximum of 5 participants in the library multimedia room. During the COVID-19 emergency these courses were provided remotely.

Since 2020, an annual seminar (4 hours) on how to efficiently perform a bibliography search and write the thesis in a scientific format is organised for students of the 4th and 5th curricular year. Introduction to scientific writing is not a learning objective for undergraduate students. Nevertheless, students may participate in the drafting of scientific articles (or abstracts) based on their thesis work.

Moreover, scientific writing courses are organised by the Linguistic Interdipartimental Centre and available for post-graduate students.

Student participation to research programmes – Undergraduate students are not generally involved in research programmes apart from the compulsory graduation thesis work. In the greatest number of cases, students contact directly the teaching staff of the knowledge area of his/her prevalent interest. In a more limited number of cases, the academic staff informs students on the availability of specific thesis topics. Once the students have chosen their thesis topic, they regularly participate to research activities while performing their experimental thesis work. During this period, on a non-compulsory basis they may participate in other ongoing research activities performed by the hosting research unit. The interaction with the thesis supervisor and other researchers of the same unit offers to students ample opportunities to discuss the applied scientific methods and experience evidence-based thinking.

Graduation thesis – As specified in a precise regulation⁶ students must submit the application for their thesis at least 8 months before the graduation call, after having obtained a minimum of 180 ECTS. The thesis supervisor is chosen by the student among the teaching staff of UniPi. For the preparation of the thesis, the assistance of a co-supervisor, who may belong to another university, even abroad, or be a non-academic professional, is possible. The student, a supervisor, a co-supervisor and an examiner (or opponent) are involved during the graduation thesis preparation.

On the day of the thesis discussion, the supervisor and the co-supervisor, if any, and the opponent give an opinion on the activity carried out by the student.

The final degree mark is made up of the sum of the two scores deriving from the following phases:

1. *Evaluation of the thesis*: the criteria that the Graduating Exam Committee must take into consideration for the attribution of the score for the final exam are:
 - a. Opinions formulated by the supervisor, by any co-supervisor and by the examiner on the student's activity during the preparation of the thesis.
 - b. Scientific validity of the work.
 - c. Presentation skills.
 - d. Quality of the presentation support material
 - e. Ability to respect presentation times.

The members of the Committee express their marks of between 0 and 12.

The mark of the final exam is the arithmetic average of the marks cast.

2. Evaluation of the candidate's career up to the moment of the presentation of the final exam.
 - a. Average of marks – The Committee takes note of the overall score that the student has acquired during his/her career and which results from the printouts provided by the Student Secretariat.
 - b. Career – The President of the Graduating Exam Committee, before assigning the graduation mark, presents the candidate's academic career, highlighting particular conditions of merit, especially in relation to the length of the university course.

The final graduation mark derives from the sum of Evaluation of the thesis and Evaluation of the candidate's career scores. The maximum score that can be attributed is 110/110. If the maximum is reached, the Committee, on the proposal of the President, can grant honours, only if unanimously.

The thesis must be submitted exclusively in electronic format (ETD), according to the rules established by the University regulations on the subject, and published on the website [🔗](#).

10.3 Advanced postgraduate degree programmes

The available DVS post-graduate programmes are as follows:

- PhD in Veterinary Sciences [🔗](#);
- Specialisation schools (180 ECTS):
 - a. Inspection of Food of Animal Origin [🔗](#);
 - b. Animal Health, Breeding and Zootechnical Productions [🔗](#);
 - c. Pathology and Clinics of Companion Animals [🔗](#);
 - d. Equine Medicine and Surgery [🔗](#).

Furthermore, post-doc fellowships and research scholarships are available upon academic staff funding. From 2016, 7 post-doc fellowships, and 24 research scholarships were advertised. During the writing of this SER, there were 11 active research scholarships (3 lasting at least 1 year), while no post-doc fellowships were active. Some academic and non-permanent staff are currently involved in EBVS programmes either with internal or external tutors. Within the DVS staff, 9 EBVS college diplomates were present during the years included in this SER, as follows: 2 ECAWBM, 2 EVPC, 1 ECVP, 1 ECVTP, 1 ECVIM-CA, 2 ECAR.

Table 10.3.1. Number of students registered at postgraduate clinical training

	2020-21	2019-20	2018-19
EBVS programmes			
<i>ECAWBM</i>	1	1	2
<i>ECAR</i>	2	2	2
<i>ECVIM-CA</i>	1	1	1
<i>ECBHM</i>	1	1	1
<i>ECEIM</i>	1	1	1
TOTAL	6	6	7
Clinical Specialisation schools			
<i>Pathology and Clinics of Companion Animals</i>	11	11	12
Clinical Masters			
<i>Cat and dog gastroenterology</i>	25	-	-
<i>Anaesthesia, analgesia, and intensive therapy of companion animals</i>	25	25	-

	2020-21	2019-20	2018-19
<i>Diagnostic imaging of companion animals</i>	20	20	20
<i>Veterinary clinical ethology</i>	-	25	-
<i>Veterinary oncology</i>	28	28	26
TOTAL	98	98	46

Table 10.3.2. Number of students registered at postgraduate research training

PhD programme	2020-21	2019-20	2018-19
<i>Veterinary Sciences</i>	25	24	21
TOTAL	25	24	21

Table 10.3.3. Number of students registered at other postgraduate programmes in the VEE but not related to either clinical or research work (including any external/distance learning courses)

Non- clinical Specialisation schools	2020-21	2019-20	2018-19
<i>Animal Health, Breeding and Zootechnical Productions</i>	10	19	9
<i>Inspection of Food of Animal Origin</i>	10	10	20
TOTAL	20	29	29

Table 10.3.4. Number of attendees to continuing education courses provided by the VEE *

	2020-21	2019-20	2018-19	Mean
<i>Number of courses</i>	22	30	38	30
<i>Number of attendees</i>	802	885	876	854

* For a list of courses with the respective number of attendees please see Annex 10.

Prospected number of students for the next 3 AYs – The number of students enrolled in postgraduate programmes (Specialisation schools, PhD programme) is expected to increase, considering that a new Specialisation school (Specialisation school in Equine Medicine and Surgery) started in 2021-22 (15 programmed places), and that the other Specialisation schools and the PhD programme are expected to maintain the current number of annual students.

Postgraduate clinical training contribution to undergraduate veterinary education – Postgraduate trainees provide a great support to academic staff both during undergraduate students' hands-on professional training and clinical activity at the VTH. Their qualified contribution is especially useful during practical training sessions in small groups. Undergraduate and postgraduate students (PhD students, Specialisation school students) collaborate under the supervision of the academic staff during the clinical activities and share profitable knowledge and skills about the clinical cases management. PhD students and other post-graduates are also giving seminars to the students, often in topics related to their research projects. Training of residents and interns is not in conflict as the caseload is various, with different degrees of complexity: having both undergraduates and post-graduates working together is instead a resource for creating an environment conducive to learning.

Matching of continuing education programmes to the needs of the profession – Continuing education programmes are part of the Third Mission activities performed by the DVS and have two functions: delivering services to veterinary professionals but also pursuing a contact with ex-alumni that remain permanent stakeholders. Veterinary continuing education is mandatory in Italy and professionals can demonstrate it by achieving at least 150 ECM (Educazione Continua in Medicina - Continuing Education in Medicine) credits in three years. ECM events are only sporadically organised by the DVS directly, while members of the DVS are lecturing in events organised by different

providers. Seminars focused on relevant topics held by speakers of high academic or professional value (involving the National Health System: IZS, National, Regional and Local Health Authority members) and open to stakeholders and practitioners are organised, within the Specialisation schools and the PhD programme. The VEE involves relevant professionals as external lecturers both in Specialisation school subjects and seminars to match continue education programmes to the needs of the profession.

10.4 QA system in research activities

Quality of research activities performed by academic staff is submitted to a specific national and local evaluation system, which explores the standard of research outputs and provides a comparison with results of the corresponding research units operating in other VEEs in Italy. Thus, it indirectly gives information regarding the positive impact of research on the teaching activities of the degree programme.

Overall, the whole QA process ensures the adequacy of research quality, that constantly contributes to research-based education. Mechanism used by the VEE to ensure that its research activities contribute to research-based education include organisation of events (see paragraph 10.2) open to students, where research projects of both internal and external academic staff are often presented and discussed.

The continue monitoring of the Department's research activities is carried out at three levels: 1) DVS; 2) UniPi; 3) ANVUR. At the departmental level, the Research Committee collaborates pro-actively for the evolution and improvement of DVS research, monitoring internal ratings, evaluating them in the light of the main national and international benchmarks, encouraging transversal collaborations among research groups, promoting initiatives to stimulate research communication. The Research Committee works following formalised guidelines and its activities are communicated during DVS Council meetings and published on the DVS website when needed. A specific activity of the Research Committee concerns the preparation of the annual SUA-Research report as requested by UniPi PQA. The UniPi level of research monitoring and evaluation is aimed at promoting the continuous improvement of research quality and has a fundamental role in the process of growth and dissemination of scientific knowledge. It is realised in particular by the analysis of scientific products published by the UniPi staff. Academic staff is annually evaluated on teaching activities and service to students as well as research activities. UniPi allocates a portion of its budget to direct academic staff funding ("Fondi di Ateneo"); such funds are assigned following the annual evaluation of research products of the last 4 years (please see also Area 2).

At the national level, the ANVUR, the national agency for the evaluation of the university and research, uses the VQR system to carry out a regular evaluation of research of Universities and Research Institutions, mainly through peer review. The results of the first cycle of VQR, covering the publication years 2004-2010, were released in 2013; the results of the second cycle of assessment covering the publication years 2011-2014 were released in 2017. In 2016, the Italian Law no. 232/2011, art. 1, co. 339, established the five-year cadence of the VQR evaluation; the current cycle therefore covers the period 2015-2019. The VQR results are used for the allocation of the premium share of the Ordinary Financing Fund. The VQR is aimed at evaluating the results of scientific research of the Institutions and their internal structures (Departments and similar structures). The exercise is also aimed at evaluating the Third Mission activities carried out by the Institutions and their internal articulations. The maximum number of products that can be associated to each researcher is 4. VQR reports are discussed at the University and DVS Council level for the identification of corrective actions: research ratings were considered in the process of allocating recruitment budget; beside this, low productive researchers were involved in UniPi research projects led by more active colleagues.

In terms of continuing and post-graduate education, the DVS offers a 3-year PhD programme in Veterinary Sciences, four Specialisation schools and several Master Degrees.

PhD programme – The PhD represents the highest level of education in the Italian academic system and provides the necessary skills to perform highly qualified research activity. The aim of the PhD

course in Veterinary Science[☞] is to provide research-based training in the broad veterinary medicine and animal production field. The programme is managed by a Council and a coordinator: the council is responsible for defining, monitoring and approving individual training projects as well as transversal educational activities that are offered to all the cohort. The composition and functions of the PhD Council are established by a specific regulation[☞]. The accreditation process of PhD programmes is under the responsibility of the MUR[☞] and considers different requisites including academic staff scientific qualification. The PhD Council can be annually modified for less than 20% of its composition and goes cyclic accreditation every three years. Staff research ratings are considered to identify different members to be proposed for accreditation.

Specialisation schools – They provide knowledge and skills for activities required in the exercise of specific professional fields[☞]. The programme must be consistent with predetermined cultural profiles, whose learning objectives, characterising subjects/activities and competences have been defined by the MUR[☞]. Each school is governed by a Council that includes all participating DVS academic staff, contracted professors and student representatives (in a percentage corresponding to 20% of attendees). Access to the schools is by competition with a programmed number of places. The schools are organised into three-year programmes providing specific training in several disciplines, with yearly exams and a final thesis and lead to Italian specialist qualification. The Council is responsible for defining competition procedures, composition of board members for annual and final exams, academic calendar, new agreements for extra-mural activities.

Master Degrees – These are postgraduate advanced training courses of a professionalising nature, with a duration of one or two years (60 ECTS/year)[☞]. They are organised and managed by a coordinator that, with at least three UniPi academic staff members, proposes an educational project to the DVS Council that is then evaluated by UniPi. Once activated a Master Degree is managed by the coordinator through the Master Council that ensures the correct delivering of the educational project. The Master Degree is awarded after passing a final test, and there is a minimum attendance required to obtain the final title[☞].

10.5 Comments on Area 10

The DVS is devoted to conduct international-level research and provide post-graduate and continuing education programmes matched with needs of the veterinary profession and the academia.

When examining the scientific productivity of the years included in this SER, an obvious increase in the first COVID-19 affected year may be appreciated in comparison with the preceding two years (+34%): number of publications was indeed 153 in 2018, 179 in 2019 and 240 in 2020. In our opinion, this result is partly attributable to the forced mitigation of time constraints related to teaching and administrative duties, that inevitably impact on publication efficiency by the teaching staff.

EBVS colleges and corresponding residency programmes are not recognised by the Italian system and the DVS offer remains the initiative of individual specialists in agreement with EBVS regulations.

Number of PhD attendees relies on the MUR funded scholarships with no further places available, although some resources from Horizon2020 projects and other sources were available recently.

10.6 Suggestions for improvement on Area 10

To increase publication efficiency the DVS should operate for a fairer distribution of the organisation tasks: corrective actions should be taken to prevent high workloads for teaching and administrative duties in order to increase publication of research results.

The DVS should promote, synergistically with other Italian VEEs, the national recognition of European and American Veterinary Colleges.

Efforts are needed to attract more funding (either private sponsorship or institutional contracts) for additional PhD fellowships.

ESEVT Indicators on the years 2017/2018 – 2018/2019

		VEE values	Median values ⁽¹⁾	Minimal values ⁽²⁾	Balance ⁽³⁾
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.13	0.15	0.13	0.00
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.50	0.84	0.63	-0.14
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.62	0.88	0.54	0.08
I4	n° of hours of practical (non-clinical) training	794.50	953.50	700.59	93.91
I5	n° of hours of clinical training	746.00	941.58	704.80	41.20
I6	n° of hours of FSQ & VPH training	462.00	293.50	191.80	270.20
I7	n° of hours of extra-mural practical training in FSQ & VPH	112.00	75.00	31.80	80.20
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	46.60	62.31	43.58	3.02
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	5.76	2.49	0.89	4.87
I10	n° of equine patients seen intra-murally / n° of students graduating annually	9.05	4.16	1.53	7.52
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	0.68	3.11	1.16	-0.48
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0.03	5.06	0.43	-0.40
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	0.61	16.26	8.85	-8.24
I14	n° of equine patients seen extra-murally / n° of students graduating annually	1.42	1.80	0.62	0.80
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	0.72	1.29	0.54	0.18
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.04	0.11	0.04	0.00
I17	n° of companion animal necropsies / n° of students graduating annually	1.79	2.11	1.40	0.39
I18	n° of ruminant and pig necropsies / n° of students graduating annually	0.70	1.36	0.90	-0.20
I19	n° of equine necropsies / n° of students graduating annually	0.03	0.18	0.10	-0.07
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	1.26	2.65	0.88	0.38
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.20	0.27	0.06	0.14
I22*	n° of PhD graduating annually / n° of students graduating annually	0.07	0.15	0.07	0.00

(1) Median values defined by data from VEE with Accreditation/Approval status in May 2019; (2) Recommended minimal values calculated as the 20th percentile of data from VEE with Accreditation/Approval status in May 2019; (3) A negative balance indicates that the Indicator is below the recommended minimal value; * Indicators used only for statistical purpose

Comments on Indicators

Despite the VEE is indeed focused on monitoring indicators and takes active corrective actions, some of them are below the minimal values calculated as the 20th percentile of data from VEEs with Accreditation/Approval status in May 2019.

Indicators for this SER were calculated, as per the relevant version of the SOP, on the last two COVID free AYs. Years 2017-2018 and 2018-2019 are moreover characterised by a higher number of graduating students decreasing in the following AY. Moreover, in the continuous monitoring of indicators it was evident that better value would have been obtained by examining more recent data because of the results of timely corrective actions. For this reason, we included indicators calculated on the last three AY as **Annex F**.

Indicators that show a negative balance for the years included in this SER are:

- I2 – n° of FTE veterinarians involved in veterinary training / n° of students graduating annually;
- I11 – n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually;
- I12 – n° of companion animal patients seen extra-murally / n° of students graduating annually;
- I13 – n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually;
- I18 – n° of ruminant and pig necropsies / n° of students graduating annually;
- I19 – n° of equine necropsies / n° of students graduating annually.

Indicator I2 relates to the number of veterinarians involved in veterinary training. The VEE had some retirements in AY 2018-2019 that led the number of FTEs to go from 38 to 35.2. By looking at data related to the last three full AYs this value is again above the minimal requested value.

Indicator I11 relates to the number of non-conventional animals seen intra-murally; by looking at data related to the last three full AYs this value is again above the minimal requested value despite COVID19 pandemic.

Indicators I12 and I13 are related to the number of companion animals, ruminant and pigs seen extra-murally, they remain below the minimal requested value but well counterbalanced by indicators I8 and I9 related to patients seen intra-murally. However, to increase the exposure of students to extra-mural companion animal patients, an increase of EPT ECTS was made.

Indicator I18 and I19 are related to ruminant/pig and equine necropsies respectively. In the projection related to the last three AYs Indicator I19 is above the minimal requested value while I18 is still under the minimum.

For the sake of completeness, indicators I16 and I17 turn below the minimal requested value if considering the more recent data. I16 is particularly affected by COVID-19 pandemic since it was not possible to visit poultry and farmed rabbit units both in 2020 and in 2021. I17 decrease is mostly due to 2020 when a general decrease of activities of the VTH was observed during pandemic and support staff assistance was suboptimal due to smart-working.

Suggestions for improvement on Indicators

The VEE must continue to efficiently monitor indicators as formerly done by the EAEEV Committee. In 2021 this task was given to the D-JFSC. Comments included in the annual D-JFSC reports must generate decisions at the DVM Council level to ensure resources needed to increase the indicator values of the DVM Course.

Raw data on the years 2017/2018 – 2018/2019

	2018-2019	2017-2018	Mean
n° of FTE academic staff involved in veterinary training	46.4	49.5	47.95
n° of undergraduate students	367	392	379.50
n° of FTE veterinarians involved in veterinary training	35.2	38	36.60
n° of students graduating annually	68	80	74
n° of FTE support staff involved in veterinary training	46.5	45.5	46
n° of hours of practical (non-clinical) training	766	823	794.5
n° of hours of clinical training	746	746	746
n° of hours of FSQ & VPH training	456	448	452
n° of hours of extra-mural practical training in FSQ & VPH	112	112	112
n° of companion animal patients seen intra-murally	3495	3402	3448.5
n° of ruminant and pig patients seen intra-murally	351	502	426.5
n° of equine patients seen intra-murally	706	634	670
n° of rabbit, rodent, bird and exotic patients seen intra-murally	69	31	50
n° of companion animal patients seen extra-murally	4	0	2
n° of individual ruminants and pig patients seen extra-murally	49	42	45.5
n° of equine patients seen extra-murally	65	145	105
n° of visits to ruminant and pig herds	65	41	53
n° of visits of poultry and farmed rabbit units	3	3	3
n° of companion animal necropsies	104	161	132.5
n° of ruminant and pig necropsies	74	29	51.5
n° of equine necropsies	3	2	2.5
n° of rabbit, rodent, bird and exotic pet necropsies	112	75	93.5
n° of FTE specialised veterinarians involved in veterinary training	14.5	15.2	14.9
n° of PhD graduating annually	4	6	5

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Annexes not included in the printed version are available at <https://eaeve.vet.unipi.it/2022-visitation/>

Annex A. Current academic staff, qualifications, teaching responsibilities, and departmental affiliations

Name	Qualification	Teaching subject	Affiliation	FTE
ABRAMO Francesca	DVM	General pathology and physiopathology	DVS	1.0
ARMANI Andrea	DVM, PhD	Food inspection	DVS	1.0
BARAGLI Paolo	DVM	Physiology and endocrinology	DVS	1.0
BARSOTTI Giovanni	DVM, PhD	Surgical pathology, surgical semeiotics and diagnostic imaging / Veterinary surgery, surgical procedures and anaesthesiology	DVS	1.0
BERTELLONI Fabrizio	DVM, PhD	Microbiology and parasitology	DVS	0.8
BIBBIANI Carlo	ENG, PhD	No teaching responsibilities on the DVM Course	DVS	0
BONELLI Francesca	DVM, PhD	Semeiotics, clinical pathology and internal medicine / Internal medicine of companion and large animals / Internal medicine, and veterinary legislation	DVS	1.0
BRIGANTI Angela	DVM, PhD	Veterinary surgery, surgical procedures and anaesthesiology	DVS	1.0
CAMILLO Francesco	DVM, ECAR	Andrology and reproduction technologies / Obstetrics and reproduction	DVS	1.0
CANTILE Carlo	DVM	Veterinary pathology	DVS	1.0
CARLINI Giovanna	DVM	Internal medicine and veterinary legislation	External	0.3
CASINI Lucia	DVM, PhD	Animal nutrition and feed technology	DVS	0.2
CECCHI Francesca	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0
CIAMPOLINI Roberta	MSc Animal Production, PhD	General animal production and breeding	DVS	0.5
CITI Simonetta	DVM, PhD	Veterinary surgery, surgical procedures and anaesthesiology / Surgical pathology, surgical semeiotics and diagnostic imaging	DVS	1.0
COLI Alessandra	DVM, PhD	Veterinary anatomy I / Veterinary anatomy II	DVS	1.0
CURADI Maria Claudia	MSc Animal Production, PhD	Animal production	DVS	0.4
D'ASCENZI Carlo	DVM	No teaching responsibilities on the DVM Course	DVS	0
DEL TORTO Alessia	DVM	Internal medicine of companion and large animals	External	1.0
DI IACOVO Francesco Paolo	MSc Animal Production	Economics and agronomy	DVS	1.0
EBANI Valentina Virginia	DVM, PhD	Avian pathology, parasitic diseases and VPH	DVS	0.5

Name	Qualification	Teaching subject	Affiliation	FTE
FELICOLI Antonio	MSc Biology	No teaching responsibilities on the DVM Course	DVS	0
FORZAN Mario	MSc Biology, PhD	No teaching responsibilities on the DVM Course	DVS	0
FRATINI Filippo	DVM, PhD	Infectious diseases and epidemiology / Microbiology and parasitology	DVS	1.0
FRONTE Baldassare	MSc Animal Production	No teaching responsibilities on the DVM Course	DVS	0
GAZZANO Angelo	DVM, PhD, ECAWBM	Physiology and endocrinology / Physiology, ethology and animal welfare	DVS	1.0
GIANNESI Elisabetta	DVM	Veterinary anatomy II	DVS	1.0
GIORGI Mario	ChemPharmD	No teaching responsibilities on the DVM Course	DVS	0
GIULIOTTI Lorella	MSc Animal Production	No teaching responsibilities on the DVM Course	DVS	0
GUIDI Alessandra	DVM, PhD	Hygiene, food industry and technology	DVS	1.0
INTORRE Luigi	DVM, ECVPT	Pharmacology and toxicology	DVS	1.0
LIPONI Gian Battista	DVM	Animal nutrition and feed technology	External	1.0
LIPPI Ilaria	DVM, PhD	Internal medicine and veterinary legislation	DVS	0.7
MACCHIONI Fabio	MSc Biology	No teaching responsibilities on the DVM Course	DVS	0
MANCIANTI Francesca	DVM	Microbiology and parasitology	DVS	1.0
MANCINI Simone	MSc Food Science, PhD	Animal production	DVS	0.8
MANNELLA Riccardo	MSc Physics, PhD	Medical physics and biomedical statistics	External	1.0
MARCHETTI Veronica	DVM, PhD	Semeiotics, clinical pathology and internal medicine / Internal medicine of companion and large animals / Internal medicine and veterinary legislation	DVS	1.0
MARIOTTI Marco	DAgrSc, PhD	Economics and agronomy	DVS	0.3
MARITI Chiara	DVM, PhD, ECAWBM	Physiology and endocrinology	DVS	0.7
MARTINI Mina	MSc Animal Production	Animal morpho functional evaluation	DVS	0.2
MARZONI FECIA DI COSSATO Margherita	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0
MAZZEI Maurizio	DVM, PhD	Infectious diseases and epidemiology / Microbiology and parasitology / Avian pathology, parasitic diseases and VPH	DVS	1.0

Name	Qualification	Teaching subject	Affiliation	FTE
MELANIE Pierre	DVM	Surgical pathology, surgical semeiotics and diagnostic imaging	DVS	1.0
MEUCCI Valentina	ChemPharmD, PhD	Pharmacology and toxicology	DVS	0.5
MILLANTA Francesca	DVM	No teaching responsibilities on the DVM Course	DVS	0
MINIERI Sara	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0
MIRAGLIOTTA Vincenzo	DVM, PhD	Veterinary histology and embryology	DVS	0.7
MORUZZO Roberta	MSc Animal Production	No teaching responsibilities on the DVM Course	DVS	1.0
NUVOLONI Roberta	DVM, PhD	Hygiene, food industry and technology	DVS	0.5
PACI Gisella	DVM	Animal production	DVS	0.3
PAGANELLI Aurora	DVM	Internal medicine of companion and large animals / Internal medicine, and veterinary legislation	External	1.0
PANZANI Duccio	DVM, PhD	Andrology and reproduction technologies / Obstetrics and reproduction	DVS	0.6
PAPINI Roberto Amerigo	DVM, EVPC	No teaching responsibilities on the DVM Course	DVS	0
PEDONESE Francesca	DVM, PhD	No teaching responsibilities on the DVM Course	DVS	0
PERRUCCI Stefania	DVM, PhD, EVPC	Avian pathology, parasitic diseases and VPH	DVS	0.7
PETRINI Daniele	DVM	Veterinary surgery, surgical procedures and anaesthesiology	External	1.0
PODESTA' Adriano	MD	Biochemistry and molecular biology	DVS	1.0
POLI Alessandro	DVM, ECVP	General pathology and physiopathology / Veterinary pathology	DVS	1.0
PRETTI Carlo	MSc Animal Production, PhD	Zoology and botanic	DVS	0.6
PREZIUSO Giovanna	MSc Animal Production	Animal production	DVS	1.0
RICCIOLI Francesco	MSc Agr, PhD	No teaching responsibilities on the DVM Course	DVS	0
ROTA Alessandra	DVM, PhD, ECAR	Andrology and reproduction technologies	DVS	1.0
RUSSO Claudia	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0
RUFFINI CASTIGLIONE Monica	MSc Biology, PhD	Zoology and botanic	External	1.0
SAIA Sergio	DAgrSc, PhD	No teaching responsibilities on the DVM Course	DVS	0
SALARI Federica	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0

Name	Qualification	Teaching subject	Affiliation	FTE
SGORBINI Micaela	DVM, PhD	Semeiotics, clinical pathology and internal medicine / Internal medicine of companion and large animals / Internal medicine and veterinary legislation	DVS	1.0
TINACCI Lara	DVM, PhD	Hygiene, food industry and technology / Food inspection	DVS	1.0
TOGNETTI Rosalba	DVM, PhD	Internal medicine and veterinary legislation / Semeiotics, clinical pathology and internal medicine	DVS	1.0
TURCHI Barbara	MSc Animal Production, PhD	No teaching responsibilities on the DVM Course	DVS	0
VANNOZZI Iacopo	DVM, PhD	Obstetrics and reproduction	DVS	1.0
VEZZOSI Tommaso	DVM, PhD	Internal medicine of companion and large animals	External	1.0

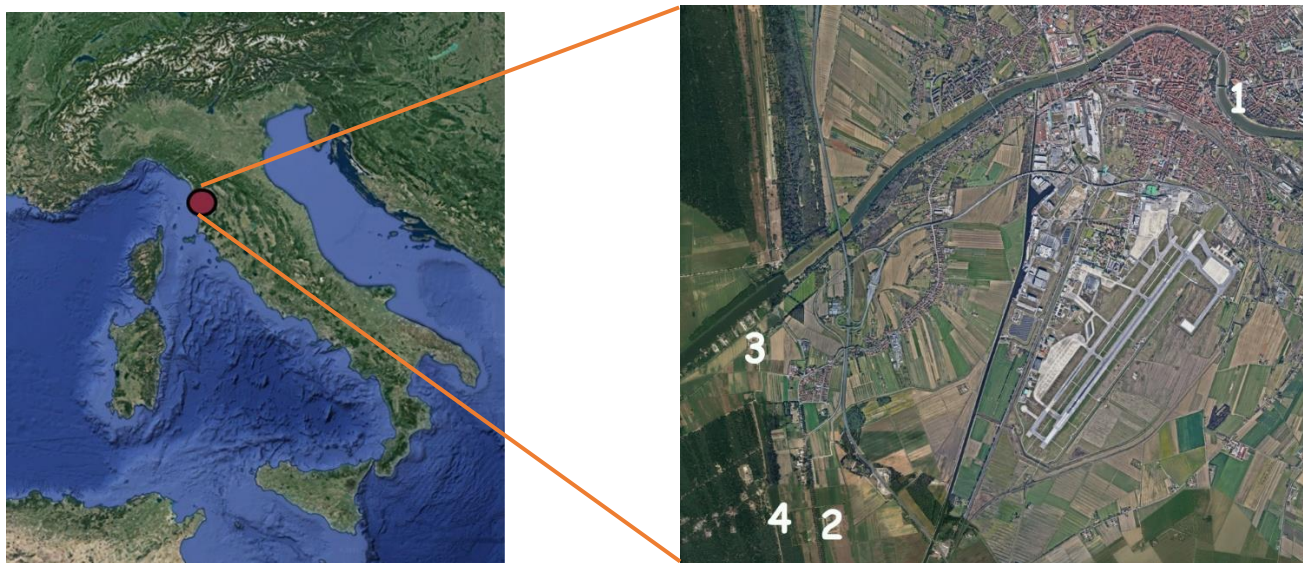
Annex B. Units of study of the core veterinary programme

Year	Semester	Name	Code	ECTS	Lect/Pract	Day One Competences/Underpinning knowledge and understanding alignment (SOP 2019 EAEVE)
F i r s t	1	Medical physics and biomedical statistics	014BB	6	50/20	-
	1	Veterinary histology and embryology	114GG	6	60/20	2.3
	1-2	General animal production and breeding	125GG	6	63/15	1.21, 2.4
	1-2	Zoology and botanic	058EE	6	60/20	2.3
	1-2	Veterinary anatomy I	104GG	6	54/30	2.3
	1-2	Foreign language	096ZW	3		-
	1-2	Informatics (ECDL)	-	5		-
	2	Biochemistry and molecular biology	057EE	12	144/0	2.3
	2	Veterinary anatomy II	105GG	8	77/32	2.3
S e c o n d	1	Physiology, ethology and animal welfare	111GG	9	96/20	1.1, 1.16, 2.3, 2.12
	1	Microbiology and parasitology	117GG	10	96/40	1.21, 1.28
	1-2	Physiology and endocrinology	110GG	11	120/20	2.3
	2	Animal nutrition and feed technology	118GG	7	68/26	1.3, 1.20, 2.4
	2	General pathology and physiopathology	121GG	8	77/30	1.33
	2	Economics and agronomy	123GG	6	66/10	1.2, 1.7
T h i r d	1	Pharmacology and toxicology	109GG	9	96/20	1.10, 1.21, 1.26, 1.27, 2.8
	1	Avian pathology, parasitic diseases and VPH	244GG	11	106/44	1.1, 1.10, 1.21, 1.24, 1.28, 1.36, 2.5, 2.6, 2.9, 2.10
	1-2	Animal production	126GG	12	120/42	1.15, 1.16, 1.20, 2.4
	2	Infectious diseases and epidemiology	243GG	11	110/38	1.1, 1.4, 1.10, 1.13, 1.21, 1.22, 1.24, 1.28, 1.36, 2.5, 2.6, 2.7, 2.9, 2.10
	2	Veterinary pathology	103GG	12	120/42	1.10, 1.15, 1.21, 1.22, 1.28, 1.24, 1.33, 1.35, 2.5, 2.6

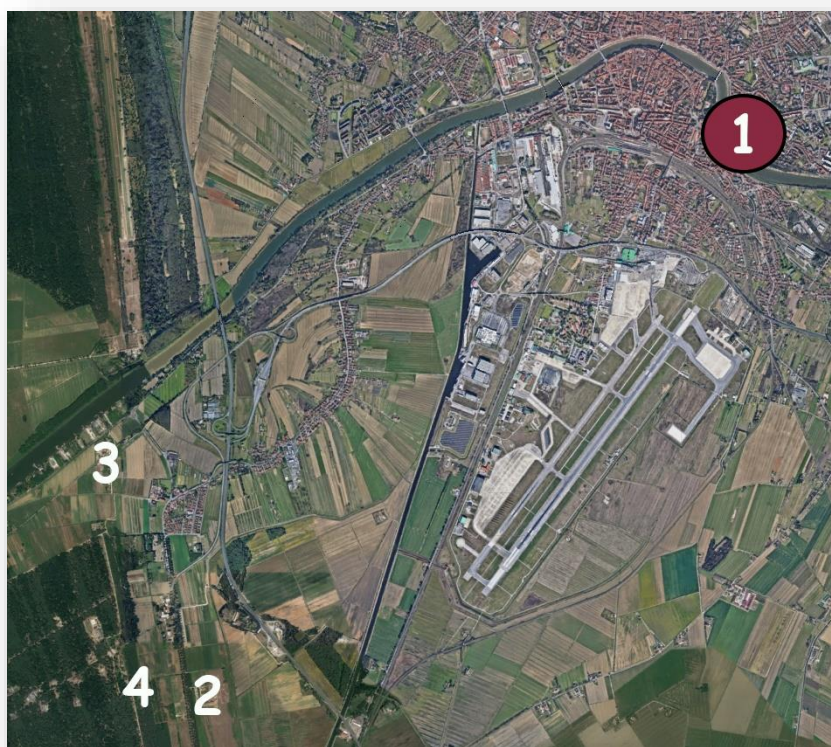
Year	Semester	Name	Code	ECTS	Lect/Pract	Day One Competences/Underpinning knowledge and understanding alignment (SOP 2019 EAEVE)
F o u r t h	1	Food inspection	113GG	10	98/46	1.1, 1.3, 1.4, 1.10, 1.16, 1.21, 1.24, 1.32, 1.33, 1.34, 1.35, 2.6, 2.7, 2.10
	1	Semeiotics, clinical pathology and internal medicine	354GG	9	87/35	1.4, 1.9, 1.15, 1.16, 1.17, 1.18, 1.21, 1.23, 2.5
	1	Andrology and reproduction technologies	242GG	7	73/18	1.1, 1.6, 1.9, 1.15, 1.16, 1.17, 1.18, 1.23, 1.26, 1.28, 1.29, 2.1, 2.3, 2.5, 2.9, 2.12
	2	Internal medicine of companion and large animals	352GG	6	54/30	1.4, 1.5, 1.9, 1.15, 1.16, 1.17, 1.18, 1.20, 2.5
	2	Surgical pathology, surgical semeiotics and diagnostic imaging	359GG	12	111/55	1.4, 1.5, 1.11, 1.15, 1.16, 1.17, 1.18, 1.22, 1.23, 1.28, 2.5
	2	Obstetrics and reproduction	245GG	8	84/20	1.1, 1.6, 1.9, 1.15, 1.16, 1.17, 1.18, 1.23, 1.26, 1.28, 1.29, 2.1, 2.3, 2.5, 2.9, 2.12
		PPT Animal production (1)	-	2	0/50	1.6, 1.16, 1.20, 2.4
		PPT Animal production (2)	-	1	0/25	1.6, 1.16, 1.20, 2.4
		PPT Parasitology and parasitic diseases	-	2	0/50	1.6, 1.10, 1.21, 1.24, 1.28, 1.36, 2.5, 2.6, 2.9, 2.10
		PPT Animal nutrition	-	2	0/50	1.3, 1.20, 2.4
		PPT Infectious diseases	-	3	0/75	1.1, 1.6, 1.10, 1.13, 1.21, 1.22, 1.24, 1.28, 1.36, 2.5, 2.6, 2.7, 2.9, 2.10
		PPT Food inspection	-	3	0/75	1.1, 1.4, 1.7, 1.16, 1.21, 1.22, 1.33, 1.34, 1.35, 2.6, 2.7
		PPT Veterinary pathology and autopsy	-	3	0/75	1.5, 1.6, 1.11, 1.22, 1.33, 2.5
F i f t h	1	Hygiene, food industry and technology	360GG	9	92/26	1.3, 1.4, 1.34, 1.35, 2.10
	1	Veterinary surgery, surgical procedures and anaesthesiology	107GG	12	108/60	1.4, 1.5, 1.6, 1.9, 1.15, 1.16, 1.17, 1.18, 1.22, 1.28, 1.29, 1.30, 1.31, 2.5, 2.11
	1	Internal medicine and veterinary legislation	353GG	9	81/45	1.1, 1.4, 1.5, 1.7, 1.9, 1.15, 1.16, 1.17, 1.18, 1.25, 1.26, 1.27, 2.5, 2.7, 2.8, 2.12
		PPT Intensive care	-	5	0/125	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.9, 1.11, 1.12, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22, 1.23, 1.24, 1.25, 1.26, 1.28, 1.29, 1.31, 1.32, 2.5, 2.7, 2.8, 2.10, 2.11

Year	Semester	Name	Code	ECTS	Lect/Pract	Day One Competences/Underpinning knowledge and understanding alignment (SOP 2019 EAEVE)
		PPT SA clinics	-	5	0/125	1.4, 1.5, 1.6, 1.7, 1.9, 1.12, 1.15, 1.16, 1.17, 1.18, 1.22, 1.23, 1.26, 1.29, 1.30, 1.31, 1.32, 2.5
		PPT Livestock and equine clinics	-	4	0/100	1.4, 1.5, 1.6, 1.7, 1.9, 1.12, 1.15, 1.16, 1.17, 1.18, 1.22, 1.23, 1.26, 1.29, 1.30, 1.31, 1.32, 2.5
		Graduation thesis	097ZW	15		1.8, 1.13, 2.1, 2.2
		Elective subjects		9		
	2	Advanced assessment in large animal internal medicine	405GG	3	15/6	-
	2	Insights in internal medicine of companion animals	181GG	3	12/12	-
	2	Emergency procedures	358GG	3	12/12	-
	2	Loco-regional anaesthesia advanced techniques	406GG	3	12/12	-
	2	Diagnostics for infectious diseases	402GG	3	12/12	-
	2	Advanced knowledge in business and management of veterinary clinics	396GG	3	12/12	-
	2	Veterinary fungal disease	403GG	3	12/12	-
	2	Chemical residues in food of animal origin	404GG	3	12/12	-
	2	Ultrastructural morphology	398GG	3	6/24	-
	2	Clinical neuropathology	400GG	3	12/12	-
	2	SA oncology	401GG	3	12/12	-
	2	Advanced reproductive technologies in domestic animals	407GG	3	12/12	-
	2	Animal morpho-functional evaluation	182GG	3	12/12	-

Annex C. Maps of the VEE and the intra-mural facilities



- 1** - Dipartimento di Scienze Veterinarie / Department of Veterinary Sciences
Viale delle Piagge 2, Pisa
- 2** - Ospedale Didattico Veterinario / Veterinary Teaching Hospital
Via Livornese lato monte, San Piero a Grado (PI)
- 3** - Centro di Ricerche Agro-Ambientali “Enrico Avanzi” / Agro-Environmental Research Center
“Enrico Avanzi”
Via Vecchia di Marina 6, San Piero a Grado (PI)
- 4** - Podere “Le Querciole” / Farm “Le Querciole”
Via Livornese 782, San Piero a Grado (PI)



Department of Veterinary Sciences
Viale delle Piagge, 2 – Pisa

Lat 43.708526, Long 10.411965





Veterinary Teaching Hospital

Via Livornese, lato monte – San Piero a Grado (PI)

Lat 43.663438, Long 10.35209

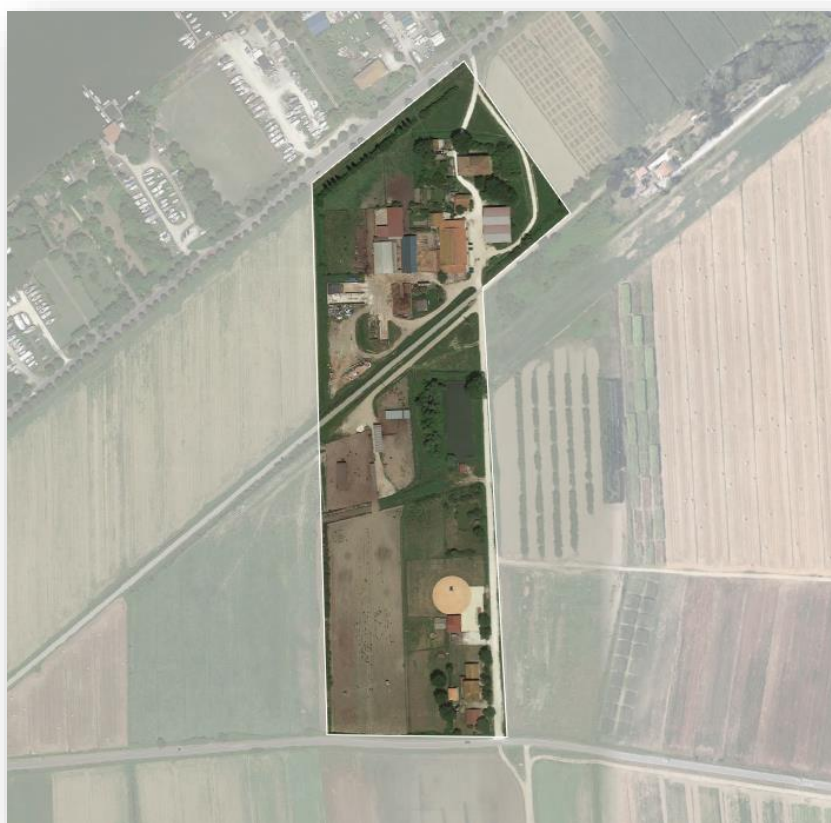


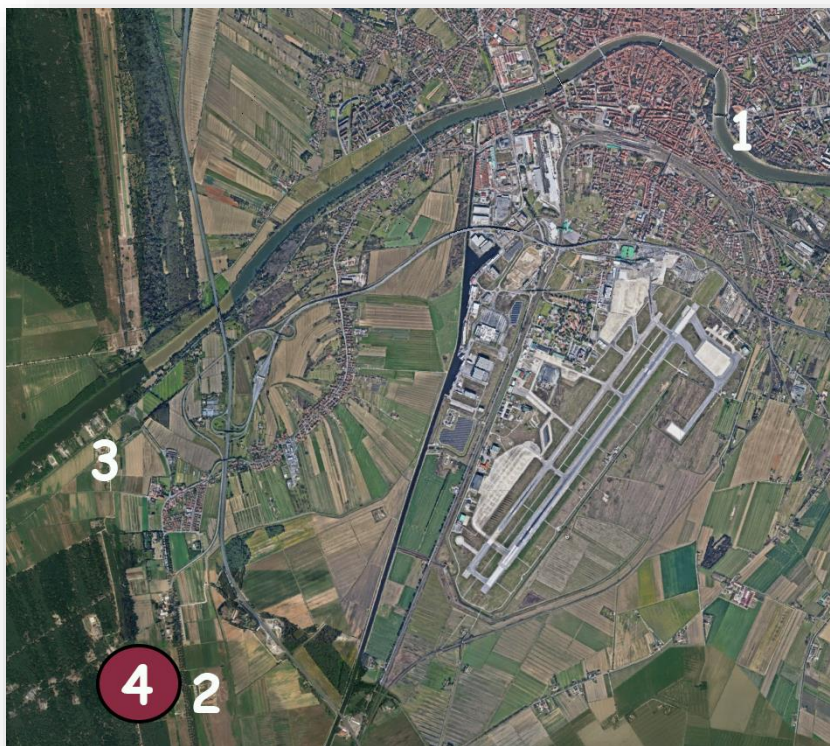


Centro di Ricerche Agro-Ambientali “Enrico Avanzi”

Via Vecchia di Marina, 6 – San Piero a Grado (PI)

Lat 43.680146, Long 10.346197





Podere “Le Querciole”

Via Livornese 782, San Piero a Grado (PI)

Lat 43.665202, Long 10.344628



Università di Pisa



RILEVAZIONE SPAZI 2020

Nota del M. Rettore del 30/06/2020

Direzione Affari Legali e Generali

Dirigente Avv. Sandra Bernardini

Unità Gestione Tecnica del Patrimonio Immobiliare

Coordinatrice Arch. Silvia Antoni

Responsabile Ing. Saverio Zingarelli

DIPARTIMENTO di SCIENZE VETERINARIE

Revisione Settembre 2020

A. Basilischi - S. Benedetti - M.S. Lotti - D. Quilici - F. Tintorini - S. Zingarelli

B22 - CLINICHE VETERINARIE
DIPARTIMENTO DI SCIENZE VETERINARIE
Via delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	Terra	0000	Vano Scale		9,27	DU32
2	Terra	0001	Aula E		95,65	DU1
3	Terra	0002	Servizi Igienici		24,62	DU34
4	Terra	0003	disimpegno		9,12	DU31
5	Terra	0004	Aula CC		40,50	DU1
6	Terra	0005	Aula Informatica		51,64	DU1
7	Terra	0006	deposito		15,78	DU28
8	Terra	0007	archivio		16,77	DU29
9	Terra	0008	studio	T/A	9,38	DU8
10	Terra	0009	Servizi Igienici		6,10	DU34
11	Terra	0010	disimpegno		9,16	DU31
12	Terra	0011	Aula CM2		41,22	DU1
13	Terra	0012	vano scale		8,52	DU32
14	Terra	0013	Aula CM1		66,02	DU1
15	Terra	0014	Laboratorio		9,52	DU11
16	Terra	0015	Laboratorio		13,32	DU11
17	Terra	0016	Laboratorio		37,76	DU11
18	Terra	0017	Laboratorio		8,08	DU11
19	Terra	0018	Laboratorio		7,86	DU11
20	Terra	0019	Laboratorio		15,91	DU11
21	Terra	0020	Laboratorio		12,12	DU11
22	Terra	0021	archivio		10,81	DU29
23	Terra	0022	disimpegno		9,85	DU31
24	Terra	0023	corridoio		52,26	DU31
25	Terra	0024	ufficio	T/A	25,43	DU24
26	Terra	0025	ufficio		15,63	DU24
27	Terra	0026	disimpegno		5,17	DU31
28	Terra	0027	studio		17,88	DU8
29	Terra	0028	ripostiglio		3,88	DU30
30	Terra	0029	disimpegno		7,40	DU31
31	Terra	0030	Aula R		54,83	DU1
32	Terra	0031	disimpegno		35,96	DU31
33	Terra	0032	studio	RU	24,35	DU8
34	Terra	0033	laboratorio		28,09	DU11
35	Terra	0034	corridoio		47,29	DU31

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Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
36	Terra	0035	Studio	RU	17,00	DU8
37	Terra	0036	corridoio		25,04	DU31
38	Terra	0037	studio	PA	18,43	DU8
39	Terra	0038	laboratorio Facilities		10,02	DU11
40	Terra	0039	laboratorio Biotecnologie genetiche		13,27	DU11
41	Terra	0040	laboratorio Biotecnologie genetiche		8,20	DU11
42	Terra	0041	laboratorio Biotecnologie genetiche		25,19	DU11
43	Terra	0042	laboratorio		7,98	DU11
44	Terra	0043	ripostiglio		4,39	DU30
45	Terra	0044	ripostiglio		2,16	DU30
46	Terra	0045	ripostiglio		4,25	DU30
47	Terra	0046	Vano Scale		7,47	DU32



B22 - CLINICHE VETERINARIE
DIPARTIMENTO DI SCIENZE VETERINARIE
Via delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	Primo	1000	Vano Scala			DU32
2	Primo	1001	Laboratorio Chimico		46,19	DU11
3	Primo	1002	studio	PA	11,20	DU8
4	Primo	1003	studio	PA	13,77	DU8
5	Primo	1004	ufficio	T/A	8,72	DU24
6	Primo	1005	Corridoio		99,94	DU31
7	Primo	1006	ufficio	T/A	13,26	DU24
8	Primo	1007	sala riunioni		34,46	DU7
9	Primo	1008	direzione		30,64	DU8
10	Primo	1009	ufficio	T/A	13,77	DU24
11	Primo	1010	atrio		35,54	DU31
12	Primo	1011	studio		33,81	DU8
13	Primo	1012	studio		13,37	DU8
14	Primo	1013	studio	RU/appoggio per quando verranno dalle Querciole	8,64	DU8
15	Primo	1014	disimpegno		96,40	DU31
16	Primo	1015	studio	diverranno uffici	26,99	DU8
17	Primo	1016	Laboratorio microbiologia alimenti 2		40,56	DU2
18	Primo	1017	Laboratorio microbiologia alimenti 1		26,39	DU2
19	Primo	1018	Laboratorio microbiologia alimenti 1		26,39	DU2
20	Primo	1019	studio	RU/ric td	16,77	DU8
21	Primo	1020	studio	RU	18,00	DU8
22	Primo	1021	ripostiglio		7,56	DU30
23	Primo	1022	ripostiglio/bagni		10,01	DU34
24	Primo	1023	studio	PO	16,88	DU8
25	Primo	1024	ufficio	T/A + CO.CO.CO	24,52	DU24
26	Primo	1025	disimpegno		19,30	DU31
27	Primo	1026	bagni		4,02	DU34
28	Primo	1027	Ufficio	T/A	26,80	DU24
29	Primo	1028	aula CC2	96 posti	85,50	DU1
30	Primo	1029	ufficio	RU	25,42	DU24
31	Primo	1030	bagni		4,06	DU34

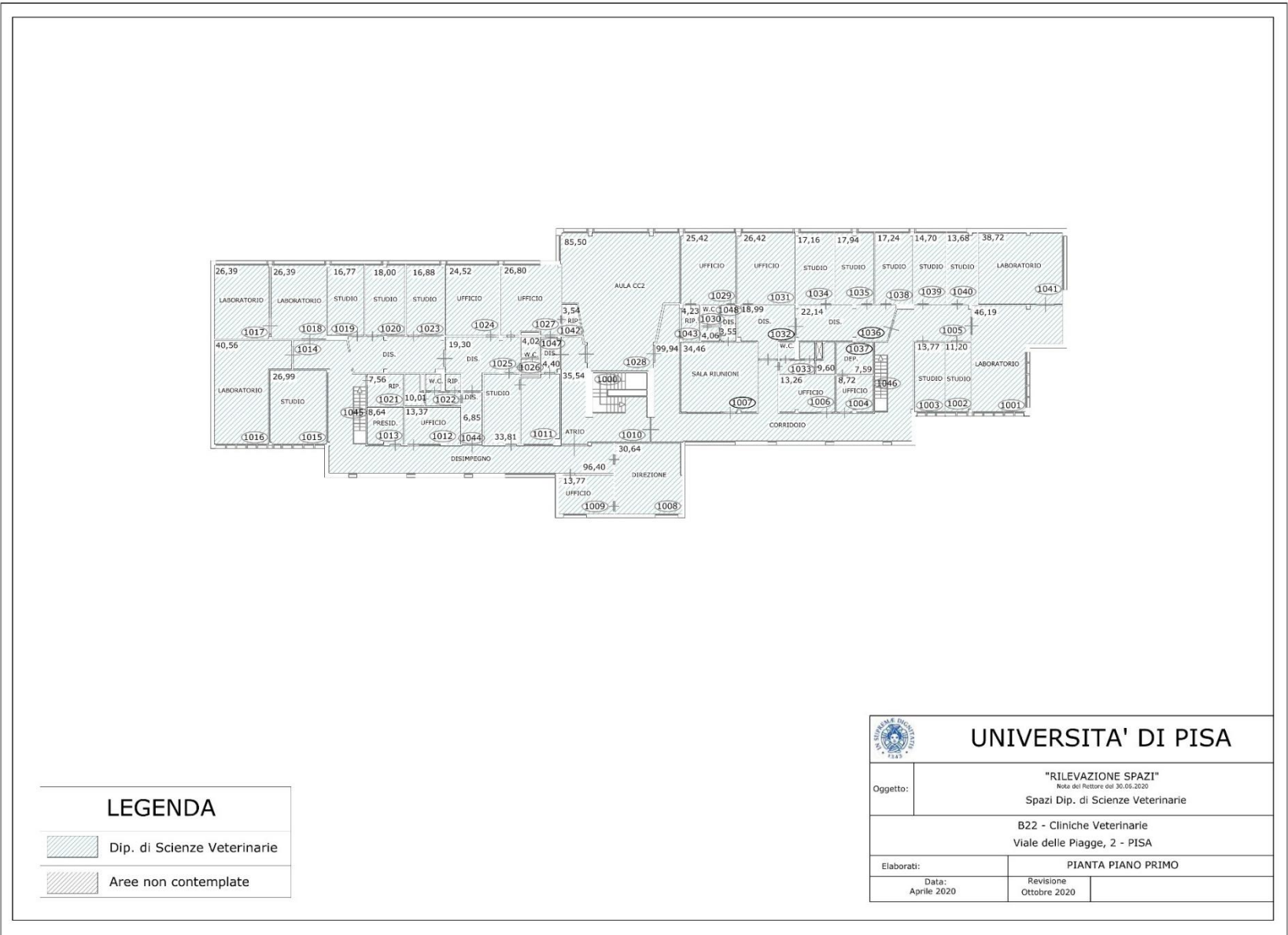
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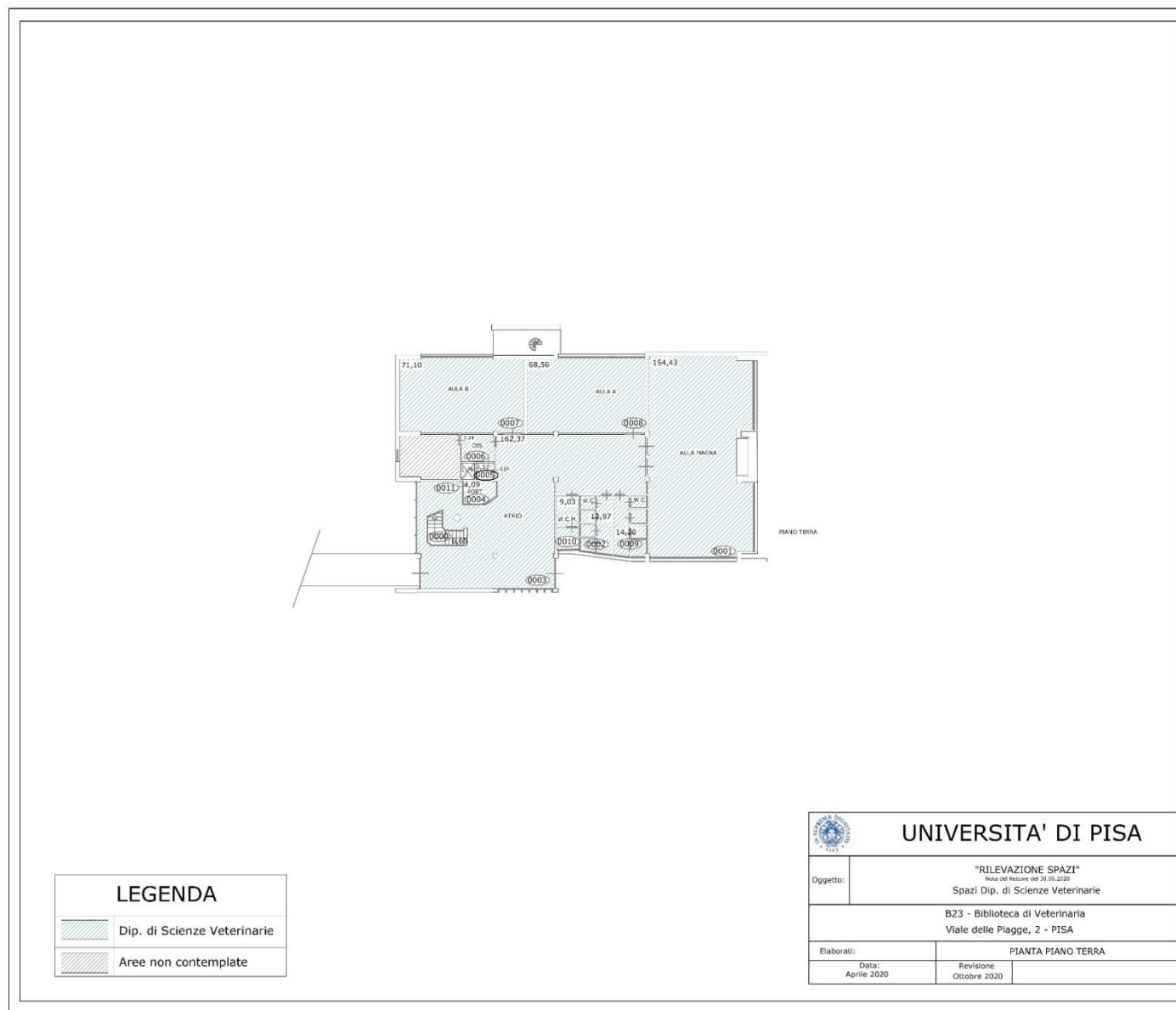
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Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
32	Primo	1031	ufficio	T/A	26,42	DU24
33	Primo	1032	disimpegno		18,99	DU31
34	Primo	1033	bagni/rip.		9,60	DU34
35	Primo	1034	studio	RU	17,16	DU8
36	Primo	1035	studio	RU	17,94	DU8
37	Primo	1036	disimpegno		22,14	DU31
38	Primo	1037	deposito		7,59	DU28
39	Primo	1038	studio	RU	17,24	DU8
40	Primo	1039	studio		14,70	DU8
41	Primo	1040	studio		13,68	DU8
42	Primo	1041	Laboratorio		38,72	DU11
43	Primo	1042	ripostiglio		3,54	DU30
44	Primo	1043	ripostiglio		4,23	DU30
45	Primo	1044	disimpegno		6,85	DU31
46	Primo	1045	Vano Scala			DU32
47	Primo	1046	Vano Scala			DU32
48	Primo	1047	disimpegno		4,40	DU31



B23 - Biblioteca di Veterinaria
DIPARTIMENTO DI SCIENZE VETERINARIE
Viale delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Vano Scala		6,65	DU32
2	terra	0001	Aula Magna		154,43	DU44
3	terra	0002	Servizi Igienici		12,97	DU34
4	terra	0003	Atrio e vano scale		162,37	DU31
5	terra	0004	Portineria		4,09	DU26
6	terra	0005	Ripostiglio		2,31	DU30
7	terra	0006	Disimpegno		7,24	DU31
8	terra	0007	Aula B		71,10	DU1
9	terra	0008	Aula A		68,56	DU1
10	terra	0009	Servizi Igienici		14,20	DU34
11	terra	0010	Servizi Igienici		9,03	DU34
12	terra	0011	Vano Ascensore		1,76	DU33



B24 - DIPARTIMENTO DI SCIENZE VETERINARIE
SEDE
Viale delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	seminterrato	-0000	Locale Autoclave		23,70	DU35
2	seminterrato	-0001	ripostiglio		10,43	DU30
3	seminterrato	-0002	ripostiglio		11,53	DU30
4	seminterrato	-0003	deposito		23,52	DU28
5	seminterrato	-0004	deposito		27,81	DU28
6	seminterrato	-0005	locale pompe		34,47	DU35
7	seminterrato	-0006	disimpegno		5,56	DU31

B24 - DIPARTIMENTO DI SCIENZE VETERINARIE
SEDE
Viale delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Vano Scala			DU32
2	terra	0001	laboratorio		24,33	DU2
3	terra	0002	laboratorio		13,86	DU2
4	terra	0003	laboratorio		35,80	DU2
5	terra	0004	disimpegno		12,92	DU31
6	terra	0005	studio	PO	14,16	DU8
7	terra	0006	laboratorio		26,08	DU2
8	terra	0007	studio	dottorandi	16,76	DU8
9	terra	0008	aula computer		19,66	DU5
10	terra	0009	studio	RIC TD	14,85	DU8
11	terra	0010	studio	RU/RIC TD	18,04	DU8
12	terra	0011	studio	PA	16,43	DU8
13	terra	0012	ripostiglio		3,63	DU30
14	terra	0013	disimpegno		8,23	DU31
15	terra	0014	studio	PA	15,09	DU8
16	terra	0015	servizi igienici		7,73	DU34
17	terra	0016	studio	PO	24,48	DU8
18	terra	0017	corridoio		61,72	DU31
19	terra	0018	biblioteca-lettura		44,63	DU9
20	terra	0019	portineria		6,05	DU26
21	terra	0020	studio	RU	19,09	DU8
22	terra	0021	studio		11,63	DU8
23	terra	0022	ripostiglio		11,06	DU30
24	terra	0023	disimpegno		17,82	DU31
25	terra	0024	ingresso		70,00	DU31
26	terra	0025	disimpegno		11,03	DU31
27	terra	0026	deposito		34,93	DU28
28	terra	0027	servizi igienici		22,82	DU34
29	terra	0028	sala anatomica		43,93	DU1
30	terra	0029	aula C		61,07	DU1
31	terra	0030	centrale elettrica		36,72	DU35
32	terra	0031	centrale termica		29,09	DU35
33	terra	0032	sala necroscopie		37,36	DU3
34	terra	0033	spogliatoio e doccia		12,52	DU34
35	terra	0034	disimpegno		11,63	DU31

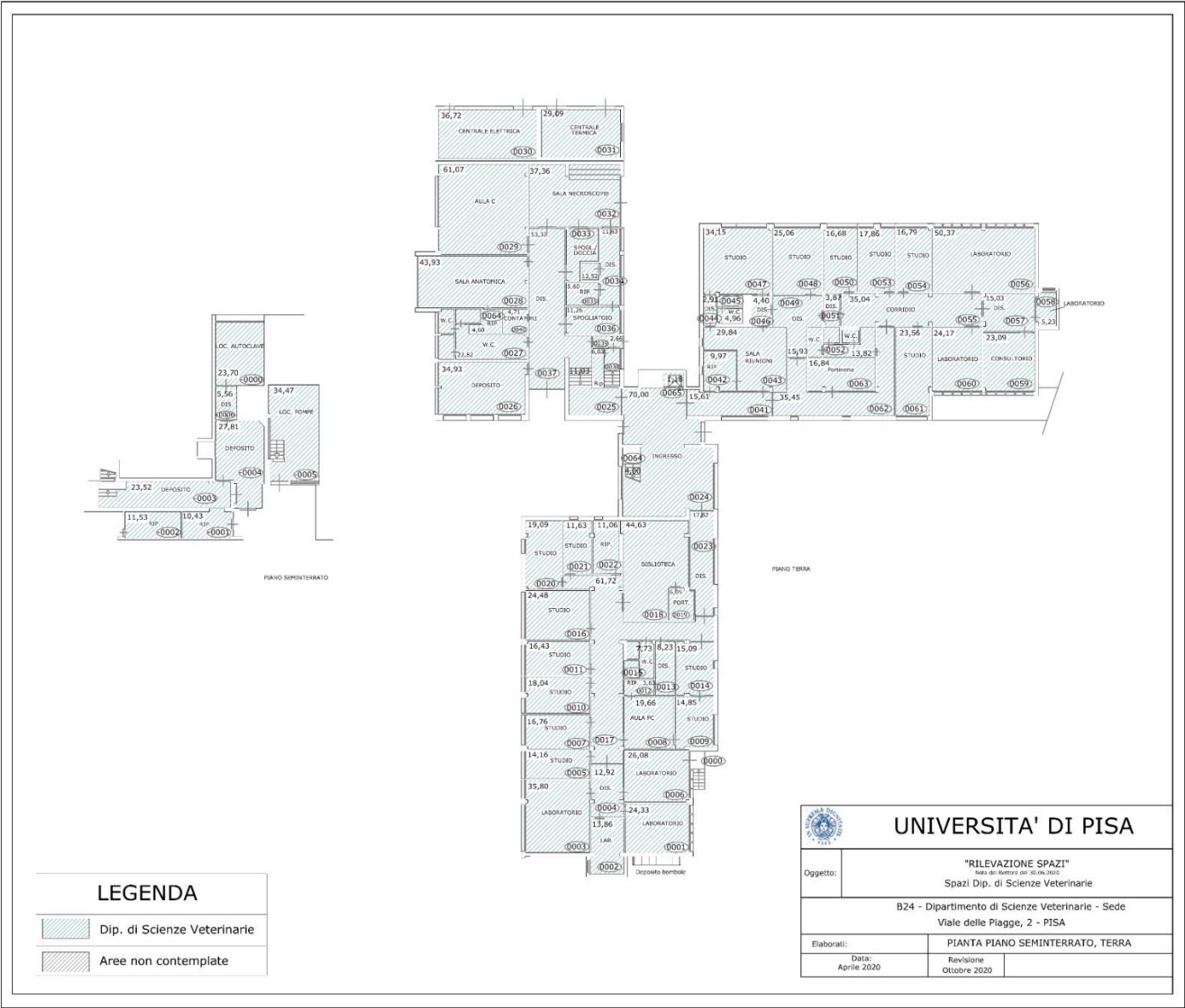
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36	terra	0035	ripostiglio		5,60	DU30
37	terra	0036	spogliatoio		11,26	DU34
38	terra	0037	disimpegno		53,32	DU31
39	terra	0038	disimpegno		2,66	DU31
40	terra	0039	ripostiglio		6,03	DU30
41	terra	0040	Locale Tecnico-contatori		4,71	DU35
42	terra	0041	disimpegno		15,61	DU31
43	terra	0042	ripostiglio		9,97	DU30
44	terra	0043	sala riunioni		29,84	DU7
45	terra	0044	disimpegno		2,91	DU31
46	terra	0045	w.c. e doccia		4,96	DU34
47	terra	0046	disimpegno		4,40	DU31
48	terra	0047	studio		34,15	DU8
49	terra	0048	studio		25,06	DU8
50	terra	0049	disimpegno		15,93	DU31
51	terra	0050	studio	PO	16,68	DU8
52	terra	0051	disimpegno		3,87	DU31
53	terra	0052	servizi igienici		13,82	DU34
54	terra	0053	studio	RU	17,86	DU8
55	terra	0054	studio	RU	16,79	DU8
56	terra	0055	corridoio		35,04	DU31
57	terra	0056	laboratorio	Fisiologia	50,37	DU2
58	terra	0057	disimpegno		15,03	DU31
59	terra	0058	laboratorio		5,23	DU2
60	terra	0059	consulorio medicina comportamentale		23,09	DU3
61	terra	0060	laboratorio		24,17	DU2
62	terra	0061	studio	RU	23,56	DU8
63	terra	0062	disimpegno		35,45	DU31
64	terra	0063	portineria		16,84	DU26
65	terra	0064	ripostiglio		4,60	DU30
66	terra	0065	Vano Ascensore		4,00	DU33
67	terra	0066	Vano Scala			DU32



B24 - DIPARTIMENTO DI SCIENZE VETERINARIE
SEDE
Viale delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	primo	1000	vano scale		4,48	DU32
2	primo	1001	laboratorio		9,41	DU2
3	primo	1002	laboratorio		3,11	DU2
4	primo	1003	laboratorio		13,56	DU2
5	primo	1004	laboratorio		25,62	DU2
6	primo	1005	laboratorio		11,31	DU2
7	primo	1006	laboratorio		24,36	DU2
8	primo	1007	disimpegno		24,09	DU31
9	primo	1008	laboratorio		25,78	DU2
10	primo	1009	laboratorio		16,32	DU2
11	primo	1010	sala riunioni		35,37	DU7
12	primo	1011	studio	PA	18,05	DU8
13	primo	1012	ufficio		17,05	DU24
14	primo	1013	servizi igienici		11,54	DU34
15	primo	1014	sala lettura		24,13	DU10
16	primo	1015	studio	RU	15,90	DU8
17	primo	1016	corridoio		61,50	DU31
18	primo	1017	ripostiglio		3,30	DU30
19	primo	1018	laboratorio		3,58	DU2
20	primo	1019	disimpegno		11,31	DU31
21	primo	1020	studio		14,41	DU8
22	primo	1021	archivio		19,48	DU29
23	primo	1022	studio	PA	13,13	DU8
24	primo	1023	studio		10,22	DU8
25	primo	1024	servizi igienici		8,52	DU34
26	primo	1025	studio	PO/T/A	18,21	DU8
27	primo	1026	ufficio		9,16	DU24
28	primo	1027	ufficio		13,44	DU24
29	primo	1028	disimpegno		19,84	DU31
30	primo	1029	disimpegno		27,17	DU31
31	primo	1030	disimpegno		22,22	DU31
32	primo	1031	biblioteca-lettura		41,67	DU9
33	primo	1032	servizi igienici		8,02	DU34
34	primo	1033	studio	RU	25,22	DU8
35	primo	1034	ufficio		16,73	DU24

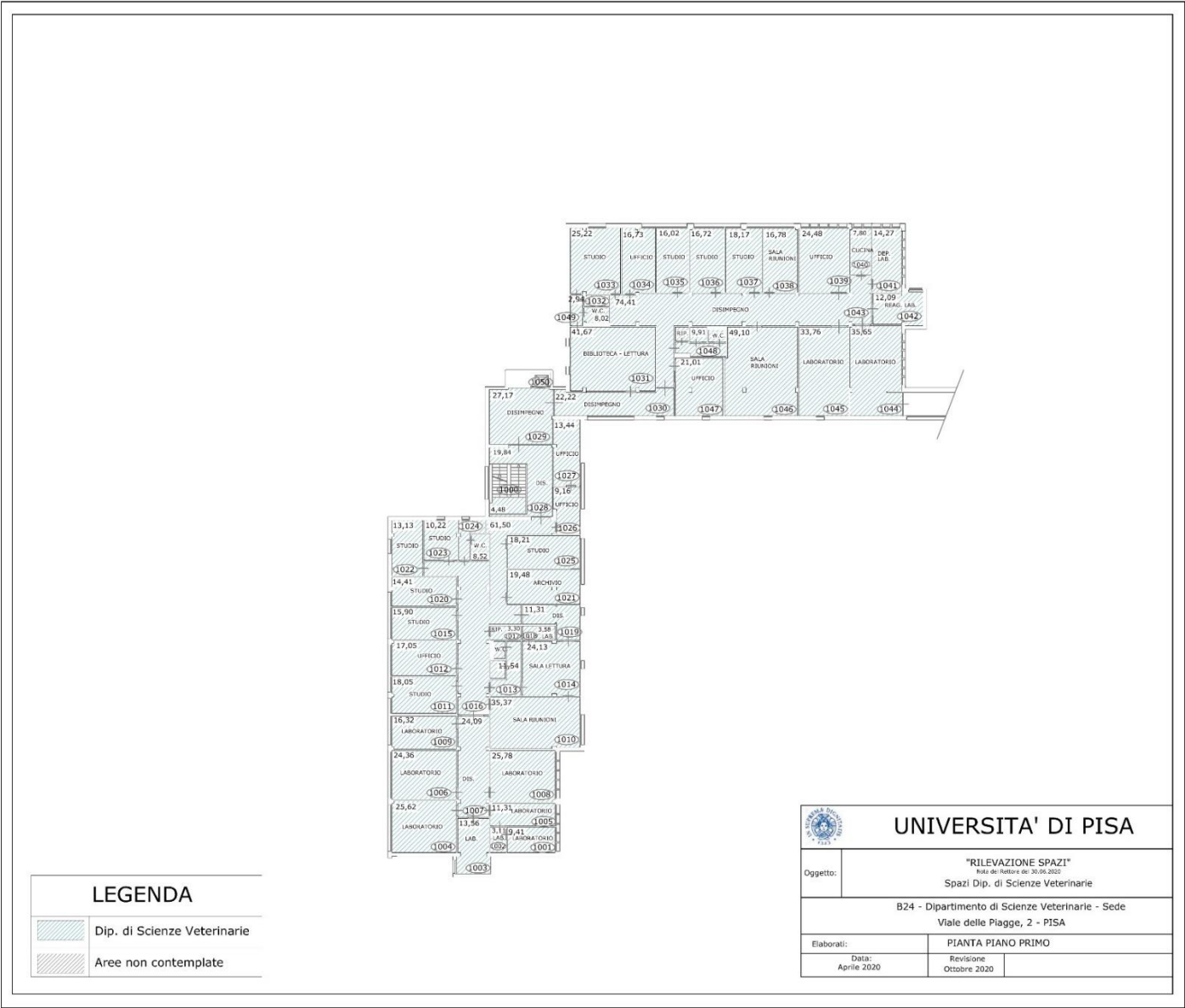
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36	primo	1035	studio	RU	16,02	DU8
37	primo	1036	studio	RU	16,72	DU8
38	primo	1037	studio	PA	18,17	DU8
39	primo	1038	Sala riunioni		16,78	DU7
40	primo	1039	ufficio	T/A	24,48	DU24
41	primo	1040	cucina		7,80	DU39
42	primo	1041	deposito		14,27	DU28
43	primo	1042	laboratorio		12,09	DU2
44	primo	1043	disimpegno		74,41	DU31
45	primo	1044	laboratorio		35,65	DU2
46	primo	1045	laboratorio		33,76	DU2
47	primo	1046	Sala riunioni		49,10	DU7
48	primo	1047	ufficio		21,01	DU24
49	primo	1048	servizi igienici		9,91	DU34
50	primo	1049	disimpegno		2,94	DU31
51	primo	1050	Vano Ascensore			DU33



B24 - DIPARTIMENTO DI SCIENZE VETERINARIE
SEDE
Viale delle Piagge n. 2/a - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	secondo	2000	servizi igienici		6,60	DU34
2	secondo	2001	laboratorio batteriologia	PO	25,33	DU3
3	secondo	2002	laboratorio	PO	6,37	DU2
4	secondo	2003	laboratorio	PO	25,43	DU2
5	secondo	2004	laboratorio molecolare	PA	25,73	DU3
6	secondo	2005	corridoio		29,71	DU31
7	secondo	2006	Celle-congelatori		26,73	DU12
8	secondo	2007	laboratorio virologia	PA	25,75	DU3
9	secondo	2008	lavaggio vetreria e sterilizzazione		14,24	DU2
10	secondo	2009	laboratorio	PO	24,26	DU2
11	secondo	2010	laboratorio patologia aviare	RU	25,70	DU11
12	secondo	2011	servizi igienici		10,36	DU34
13	secondo	2012	studio		27,38	DU8
14	secondo	2013	studio	RU	17,90	DU8
15	secondo	2014	disimpegno		57,63	DU31
16	secondo	2015	disimpegno		8,05	DU31
17	secondo	2016	sala lettura		18,42	DU10
18	secondo	2017	studio	RU	15,13	DU8
19	secondo	2018	studio	RIC TD	10,67	DU8
20	secondo	2019	servizi igienici		7,60	DU34
21	secondo	2020	studio	PA	17,15	DU8
22	secondo	2021	mensa		5,79	DU38
23	secondo	2022	pianerottolo vano scale		12,29	DU32
24	secondo	2023	laboratorio informatico		12,39	DU5
25	secondo	2024	disimpegno		21,38	DU31
26	secondo	2025	disimpegno		91,97	DU31
27	secondo	2026	biblioteca-lettura		33,02	DU9
28	secondo	2027	servizi igienici		8,04	DU34
29	secondo	2028	studio	PO	34,38	DU8
30	secondo	2029	studio	PA	24,16	DU8
31	secondo	2030	studio	RU	16,66	DU8
32	secondo	2031	studio	PA	17,81	DU8
33	secondo	2032	studio	PA	16,66	DU8

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34	secondo	2033	laboratorio	PA	10,24	DU2
35	secondo	2034	laboratorio neuropatologia	PA	11,72	DU3
36	secondo	2035	disimpegno		6,63	DU31
37	secondo	2036	laboratorio neuropatologia	PA	23,20	DU3
38	secondo	2037	laboratorio		5,28	DU2
39	secondo	2038	laboratorio patologia sperimentale	PO	32,69	DU3
40	secondo	2039	studio	T/A	15,28	DU8
41	secondo	2040	studio	T/A	14,81	DU8
42	secondo	2041	laboratorio patologia generale	PO	38,66	DU3
43	secondo	2042	laboratorio microscopia elettronica	PA	9,04	DU3
44	secondo	2043	magazzino		11,08	DU28
45	secondo	2044	servizi igienici		10,11	DU34
46	secondo	2045	ripostiglio		4,03	DU30
47	secondo	2046	disimpegno		4,49	DU31
48	secondo	2047	ripostiglio		1,70	DU30
49	secondo	2048	terrazza		75,27	DU56
50	secondo	2049	Vano Ascensore			DU33



B25 - EX CASA CUSTODE
DIPARTIMENTO DI SCIENZE VETERINARIE
Via G. Agnelli n. 3 - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Vano Scala		5,37	DU32
2	terra	0001	Aula D	18 posti	28,03	DU1
3	terra	0002	Ufficio	T/A	17,06	DU24
4	terra	0003	Ufficio		35,79	DU24
5	terra	0004	Ufficio		18,81	DU24
6	terra	0005	Ufficio		8,01	DU24
7	terra	0006	Ufficio		17,97	DU24
8	terra	0007	Laboratorio Didattico Miscroscopia	20 posti	42,06	DU4
9	terra	0008	Portineria		13,80	DU26
10	terra	0009	Disimpegno		11,24	DU31
11	terra	0010	Ripostiglio		3,56	DU30
12	terra	0011	Servizi igienici		4,35	DU34
13	terra	0012	Locale Contatore		4,18	DU35
14	terra	0013	Cabina elettrica		5,11	DU35
15	terra	0014	Servizi igienici		2,80	DU34

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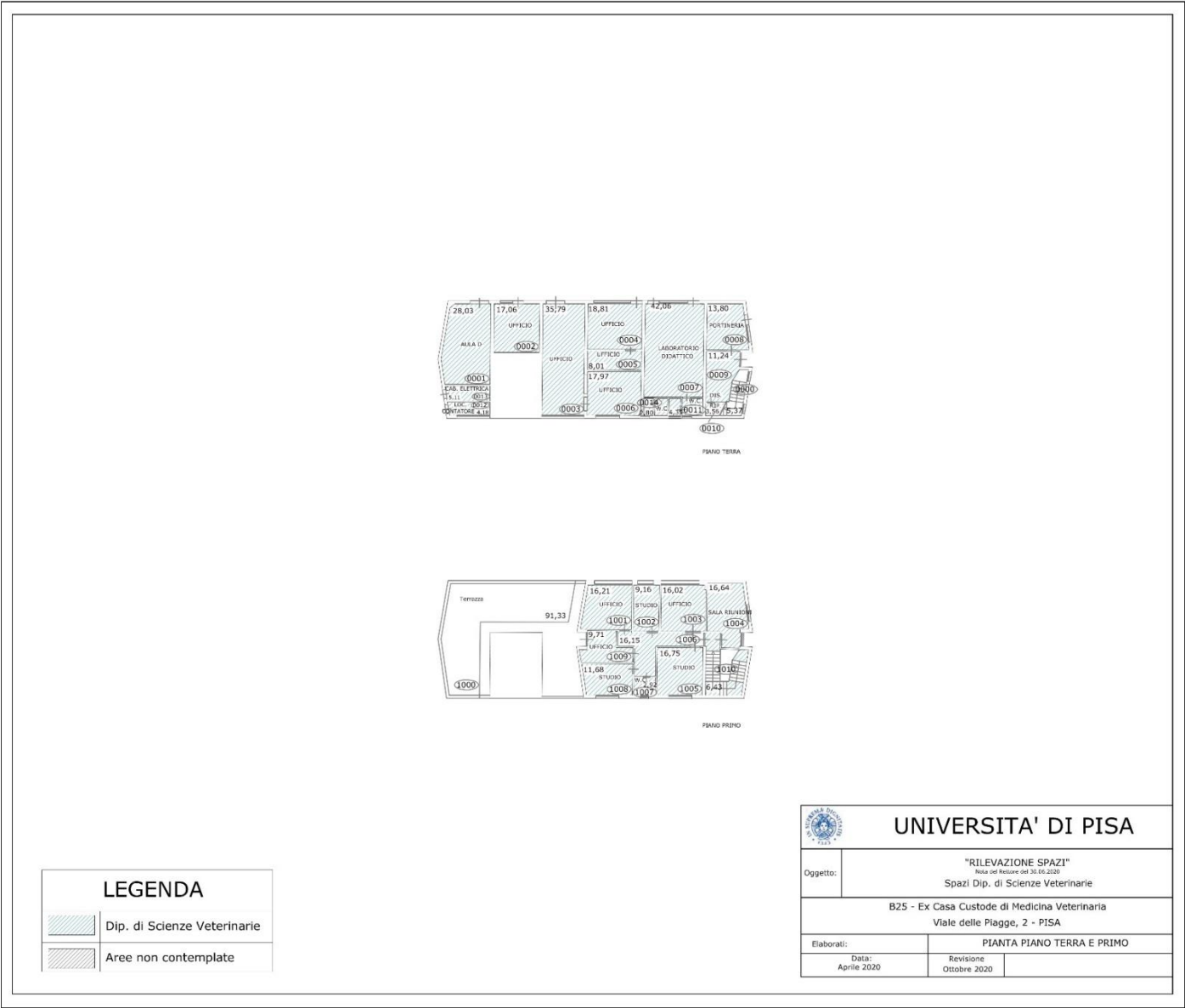
B25 - EX CASA CUSTODE
DIPARTIMENTO DI SCIENZE VETERINARIE
Via G. Agnelli n. 3 - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	primo	1000	terrazza		91,33	DU56
2	primo	1001	Ufficio	T/A + 1 posto	16,21	DU24
3	primo	1002	Studio	RU	9,16	DU8
4	primo	1003	Ufficio	T/A	16,02	DU24
5	primo	1004	Sala Riunioni		16,64	DU7
6	primo	1005	Studio	PO	16,75	DU8
7	primo	1006	Disimpegno		16,15	DU31
8	primo	1007	Servizi Igienici		2,92	DU34
9	primo	1008	Studio	RU - co.co.co	11,68	DU8
10	primo	1009	Ufficio		9,71	DU24
11	primo	1010	vano scale		6,43	DU32

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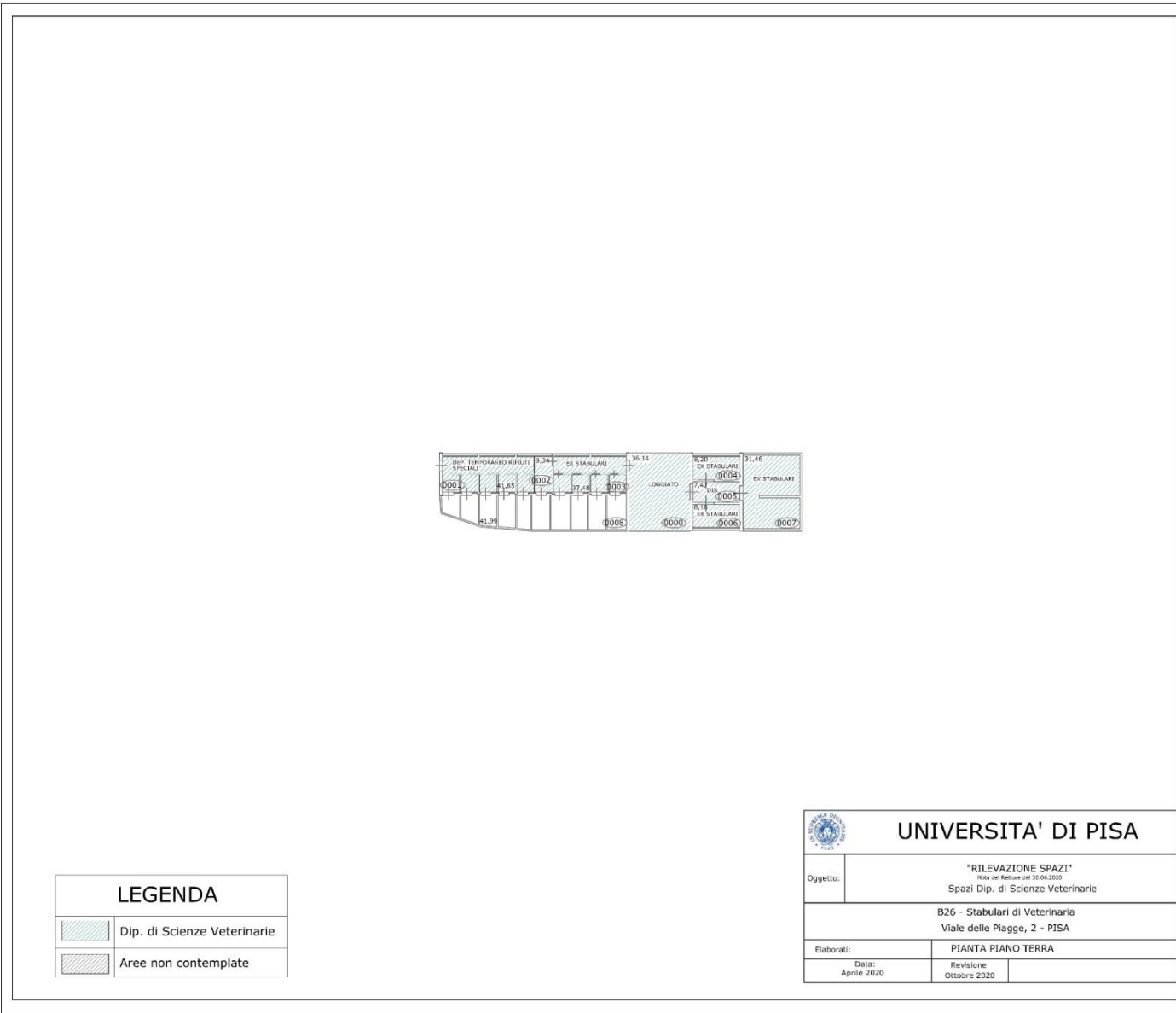
B26 - Stabulari di Veterinaria
DIPARTIMENTO DI SCIENZE VETERINARIE
Viale delle Piagge n. 2 - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Loggiato		36,14	DU54
2	terra	0001	deposito rifiuti tossici		41,65	DU28
3	terra	0002	ex stabulari		9,34	DU18
4	terra	0003	ex stabulari		37,48	DU18
5	terra	0004	ex stabulari		8,20	DU18
6	terra	0005	disimpegno		7,47	DU31
7	terra	0006	ex stabulari		8,16	DU18
8	terra	0007	ex stabulari		31,46	DU18
9	terra	0008	Recinti esterni		41,99	DU58

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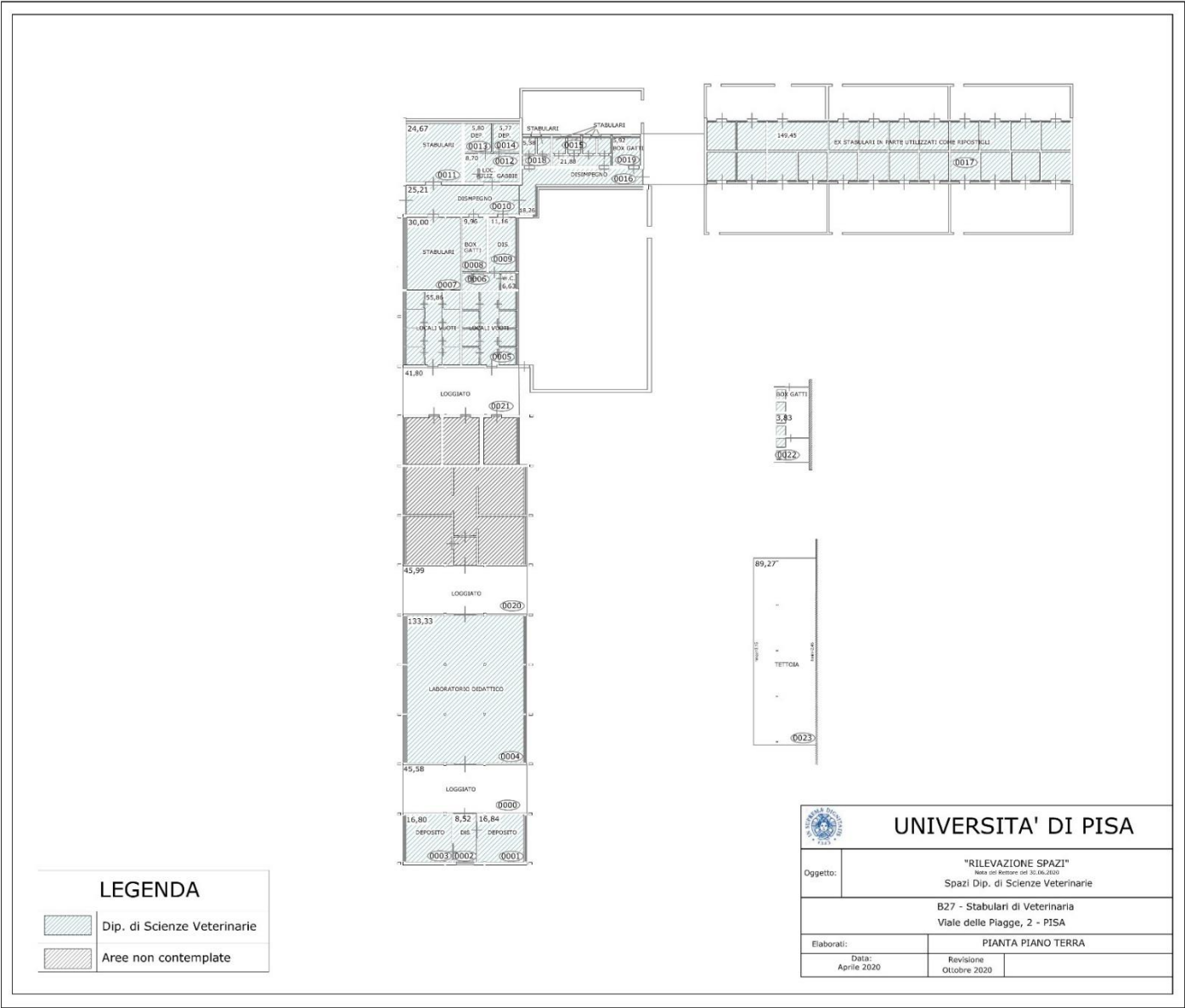
"Rilevazione Spazi"
 Nota del Rettore del 30.06.2020

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B27 - Stabulari di Veterinaria
DIPARTIMENTO DI SCIENZE VETERINARIE
Viale delle Piagge n. 2 - Pisa

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Loggiato		45,58	DU54
2	terra	0001	Deposito		16,84	DU28
3	terra	0002	Disimpegno		8,52	DU31
4	terra	0003	Deposito		16,80	DU28
5	terra	0004	Laboratorio didattico		133,33	DU4
6	terra	0005	Locali vuoti		55,86	DU40
7	terra	0006	Servizi igienici		6,63	DU34
8	terra	0007	Stabulari		30,00	DU18
9	terra	0008	Box gatti		9,96	DU17
10	terra	0009	Disimpegno		11,16	DU31
11	terra	0010	Disimpegno		25,21	DU31
12	terra	0011	Stabulari		24,67	DU18
13	terra	0012	Locale pulizia gabbie		8,70	DU30
14	terra	0013	Deposito		5,80	DU28
15	terra	0014	Deposito		5,77	DU28
16	terra	0015	Stabulari		21,88	DU18
17	terra	0016	Disimpegno		18,26	DU31
18	terra	0017	Ex stabulari		149,45	DU17
19	terra	0018	Stabulari		5,38	DU18
20	terra	0019	Box gatti		5,92	DU17
21	terra	0020	Loggiato		45,99	DU54
22	terra	0021	Loggiato		41,80	DU54
23	terra	0022	Box gatti		3,83	DU17
24	terra	0023	Tettoia		89,27	DU54



G21-1 - PODERE "LE QUERCIOLE" - Edificio 1
DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, Loc. CRESAM, 1 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	locali inutilizzati		253,88	DU52

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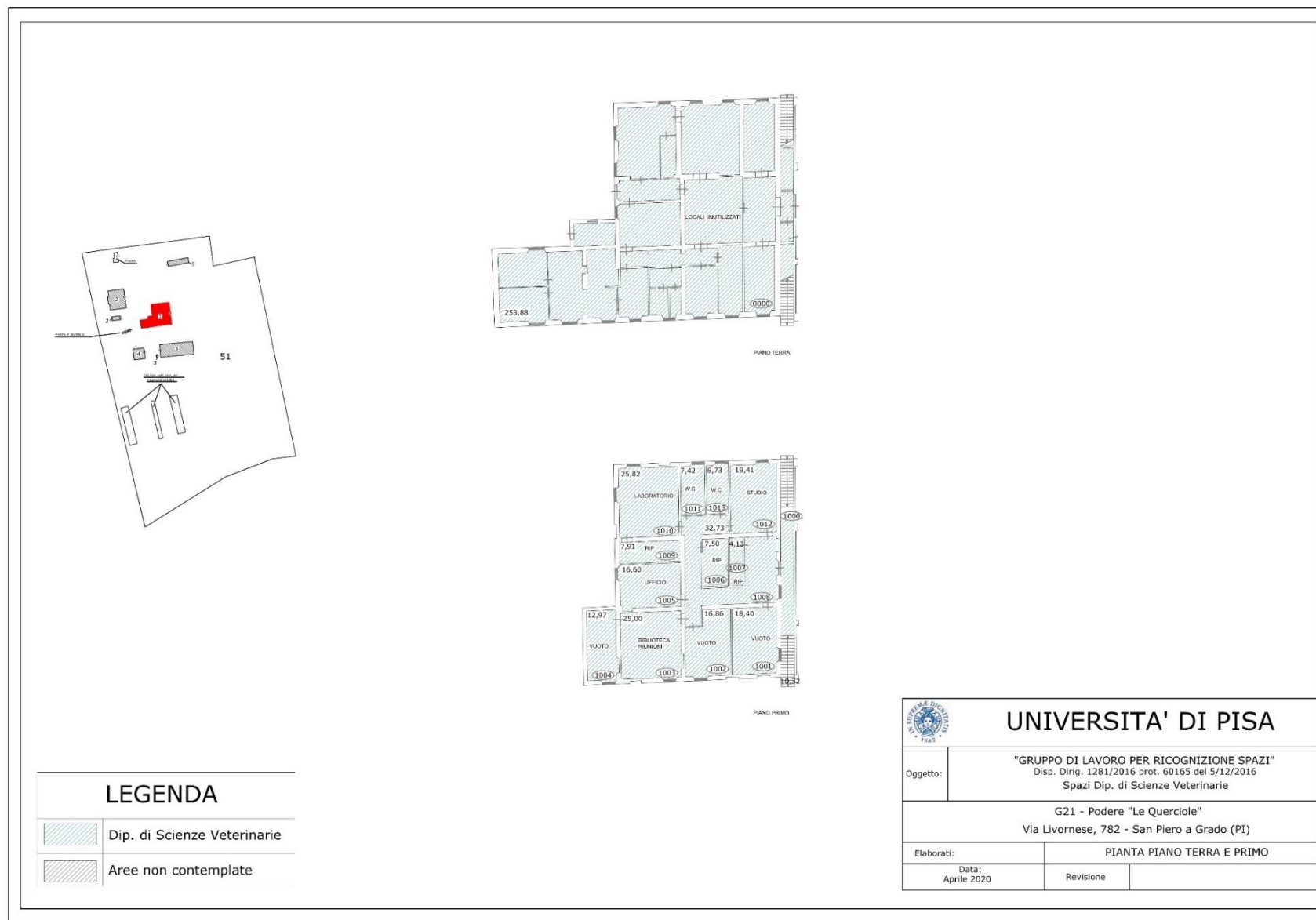
G21-1 - PODERE "LE QUERCIOLE" - Edificio 1
DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, Loc. CRESAM, 1 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	primo	1000	vano scala	PA	10,32	DU32
2	primo	1001	locale vuoto	PA	18,40	DU52
3	primo	1002	locale vuoto	RU	16,86	DU52
4	primo	1003	biblioteca/riunioni		25,00	DU7
5	primo	1004	locale vuoto		12,97	DU52
6	primo	1005	ufficio	T/A	16,60	DU24
7	primo	1006	ripostiglio		7,50	DU30
8	primo	1007	ripostiglio		4,13	DU30
9	primo	1008	ingresso		32,73	DU31
10	primo	1009	ripostiglio		7,91	DU30
11	primo	1010	laboratorio	RU	25,82	DU11
12	primo	1011	servizi igienici		7,42	DU34
13	primo	1012	studio	RU	19,41	DU13
14	primo	1013	servizi igienici		6,73	DU34

16/11/20

"Rilevazione Spazi"
 Nota del Rettore del 30.06.2020

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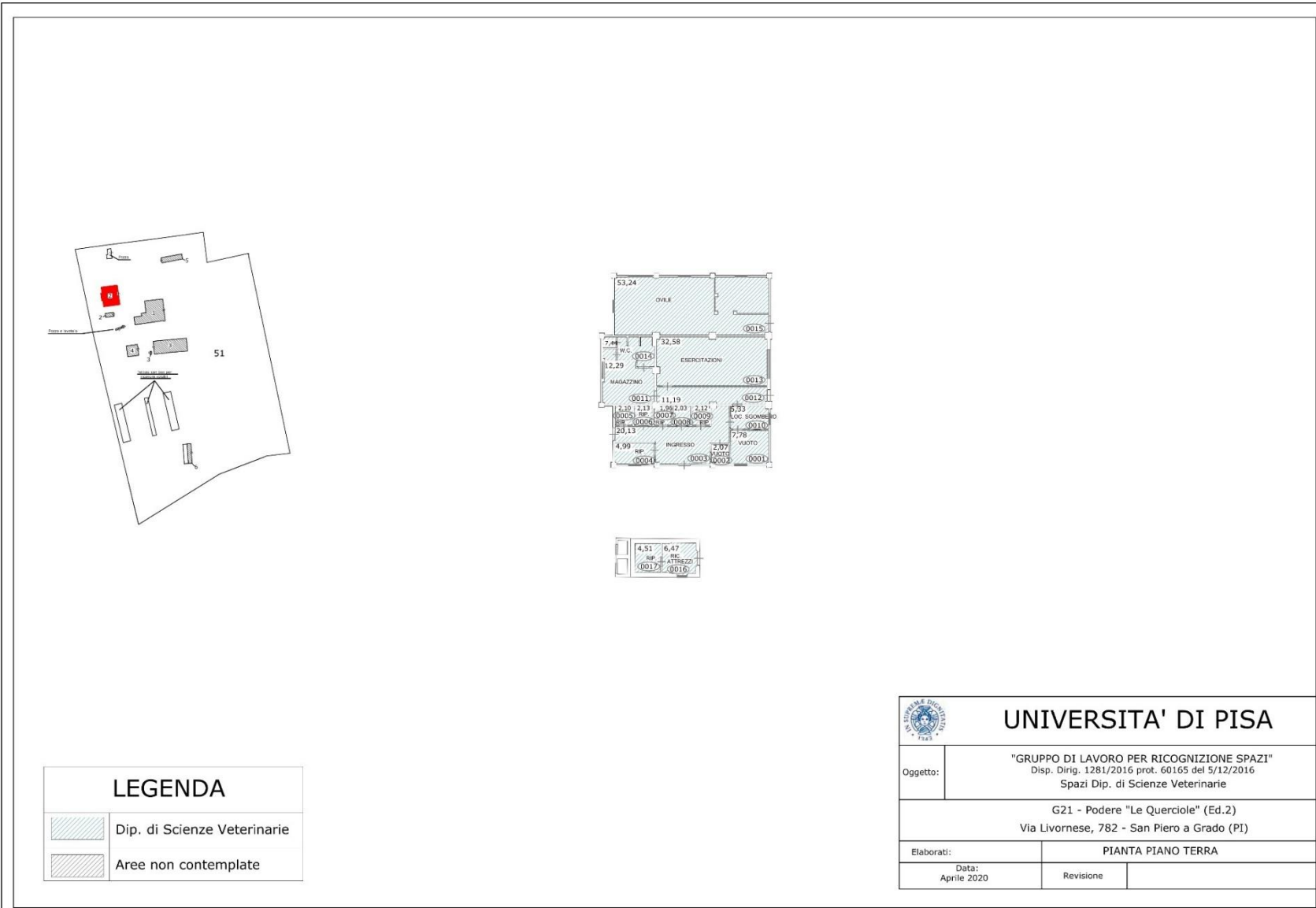
G21-1 - PODERE "LE QUERCIOLE" - Edificio 2
DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, Loc. CRESAM, 1 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0001	locale vuoto		7,78	DU52
2	terra	0002	locale vuoto		2,07	DU52
3	terra	0003	ingresso		20,13	DU31
4	terra	0004	ripostiglio		4,99	DU30
5	terra	0005	ripostiglio		2,10	DU30
6	terra	0006	ripostiglio		2,13	DU30
7	terra	0007	ripostiglio		1,96	DU30
8	terra	0008	ripostiglio		2,03	DU30
9	terra	0009	ripostiglio		2,12	DU30
10	terra	0010	locale di sgombero		5,33	DU28
11	terra	0011	magazzino		12,29	DU28
12	terra	0012	corridoio		11,19	DU31
13	terra	0013	esercitazioni		32,58	DU3
14	terra	0014	servizi igienici		7,44	DU34
15	terra	0015	ovile		53,24	DU18
16	terra	0016	ricovero attrezzi		6,47	DU28
17	terra	0017	ripostiglio		4,51	DU30

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"Rilevazione Spazi"
 Nota del Rettore del 30.06.2020

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G21-1 - PODERE "LE QUERCIOLE" - Edificio 3
DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, Loc. CRESAM, 1 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	ripostiglio		1,94	DU30
2	terra	0001	laboratorio		33,24	DU11
3	terra	0002	laboratorio		12,88	DU11
4	terra	0003	deposito		10,98	DU28
5	terra	0004	deposito		51,14	DU28
6	terra	0005	locale inagibile		8,44	DU51
7	terra	0006	locale inagibile		7,10	DU51
8	terra	0007	locale inagibile		7,20	DU51
9	terra	0008	locale inagibile		7,89	DU51
10	terra	0009	servizi igienici		4,11	DU34
11	terra	0010	disimpegno		12,13	DU31
12	terra	0011	laboratorio		12,80	DU11
13	terra	0012	laboratorio		16,33	DU11
14	terra	0013	laboratorio		16,42	DU11
15	terra	0014	corridoio		22,10	DU31

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"Rilevazione Spazi"
 Nota del Rettore del 30.06.2020

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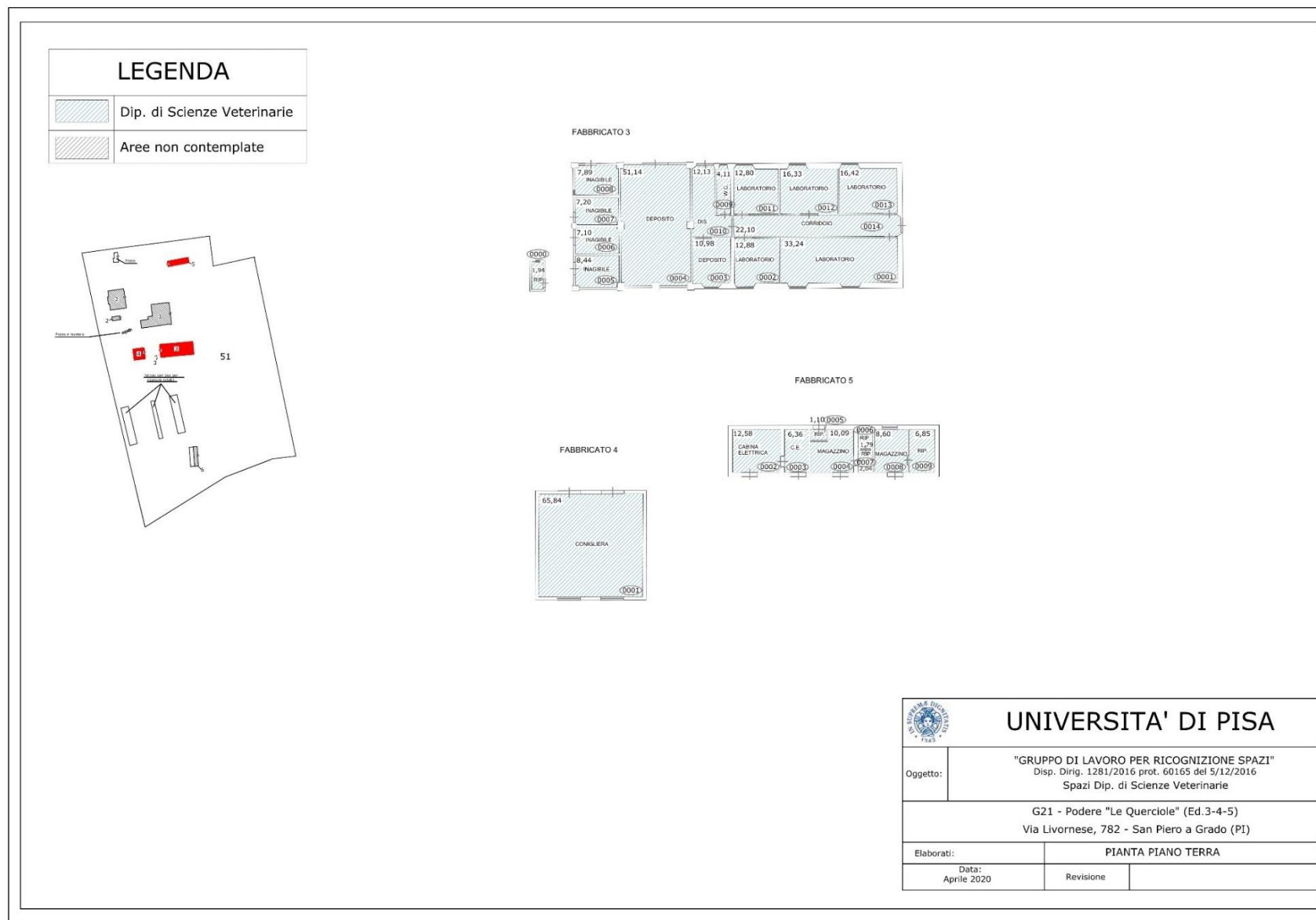
G21-1 - PODERE "LE QUERCIOLE" - Edificio 4 e 5
DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, Loc. CRESAM, 1 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0001	conigliera		65,84	DU18
2	terra	0002	cabina elettrica		12,58	DU35
3	terra	0003	cabina elettrica		6,36	DU35
4	terra	0004	magazzino		10,09	DU28
5	terra	0005	ripostiglio		1,10	DU30
6	terra	0006	ripostiglio		1,79	DU30
7	terra	0007	ripostiglio		2,04	DU30
8	terra	0008	magazzino		8,60	DU28
9	terra	0009	ripostiglio		6,85	DU30

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G28-1 - VETERINARIA SAN PIERO 1° LOTTO
SEDE CLINICHE - DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, 1289 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	Porticato		28,80	DU54
2	terra	0001	sala travaglio		50,40	DU61
3	terra	0002	sala embrio-transfer		15,23	DU61
4	terra	0003	laboratorio		14,80	DU3
5	terra	0004	servizi igienici		3,81	DU34
6	terra	0005	Spogliatoio personale tecnico		14,28	DU34
7	terra	0006	ambulatorio chirurgia		17,68	DU3
8	terra	0007	ecografia		14,84	DU3
9	terra	0008	ambulatorio ostetricia		17,32	DU3
10	terra	0009	spogliatoio studenti		14,89	DU34
11	terra	0010	ambulatorio oculistica		12,82	DU3
12	terra	0011	aula		44,17	DU1
13	terra	0012	ambulatorio cardiologia		21,40	DU3
14	terra	0013	sala attesa gatti		19,19	DU31
15	terra	0014	sala attesa cani		21,31	DU31
16	terra	0015	ambulatorio		13,82	DU2
17	terra	0016	ambulatorio 2		16,51	DU2
18	terra	0017	ambulatorio 3		16,53	DU2
19	terra	0018	ambulatorio 4		16,13	DU2
20	terra	0019	sala medici guardia		16,28	DU2
21	terra	0020	ambulatorio gatti		16,52	DU3
22	terra	0021	ambulatorio cani		18,92	DU3
23	terra	0022	ambulatorio infetti		14,17	DU3
24	terra	0023	locale servizio		6,34	DU30
25	terra	0024	Degenza cani		23,12	DU61
26	terra	0025	sala visite cavallo		53,80	DU3
27	terra	0026	sala esercitazioni		51,15	DU3
28	terra	0027	laboratorio		18,44	DU2
29	terra	0028	disimpegno		11,74	DU31
30	terra	0029	ripostiglio		7,47	DU30
31	terra	0030	laboratorio		12,70	DU2
32	terra	0031	corridoio		23,16	DU31

"Rilevazione Spazi"

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33	terra	0032	laboratorio		22,90	DU3
34	terra	0033	servizi igienici		5,97	DU34
35	terra	0034	spogliatoio		9,41	DU34
36	terra	0035	laboratorio farmacologia tossicologia		25,64	DU2
37	terra	0036	disimpegno		13,90	DU31
38	terra	0037	termostati-Loc. Tecnico		2,79	DU35
39	terra	0038	ripostiglio		5,97	DU30
40	terra	0039	laboratorio		25,00	DU2
41	terra	0040	locale frigo		8,65	DU6
42	terra	0041	magazzino-farmacia		9,47	DU28
43	terra	0042	disimpegno		38,94	DU31
44	terra	0043	ripostiglio		3,51	DU30
45	terra	0044	laboratorio biochimica		37,82	DU3
46	terra	0045	quadro elettrico		4,17	DU35
47	terra	0046	servizi igienici		4,10	DU34
48	terra	0047	magazzino		12,88	DU28
49	terra	0048	magazzino		12,88	DU28
50	terra	0049	disimpegno		54,43	DU31
51	terra	0050	laboratorio	T/A	16,13	DU2
52	terra	0051	laboratorio		44,88	DU2
53	terra	0052	accettazione		100,77	DU31
54	terra	0053	aula		43,79	DU1
55	terra	0054	spogliatoio studenti		14,62	DU34
56	terra	0055	disimpegno		7,25	DU31
57	terra	0056	sala attesa chirurgia		29,39	DU31
58	terra	0057	disimpegno		6,63	DU31
59	terra	0058	radiologia		16,68	DU3
60	terra	0059	disimpegno		9,40	DU31
61	terra	0060	tac radiologia		28,26	DU3
62	terra	0061	disimpegno		18,81	DU31
63	terra	0062	sala risveglio		11,82	DU61
64	terra	0063	operatore radiologia		8,36	DU3
65	terra	0064	servizi igienici		4,76	DU34
66	terra	0065	rx comando Tac		7,54	DU61
67	terra	0066	servizi igienici		2,51	DU34
68	terra	0067	corridoio e vano scale		38,21	DU31
69	terra	0068	ripostiglio		3,22	DU30
70	terra	0069	disimpegno		24,72	DU31
71	terra	0070	preparazione anestesia		20,19	DU61
72	terra	0071	sala operatoria 1		16,34	DU61
73	terra	0072	sala operatoria 2		16,43	DU61
74	terra	0073	ripostiglio		1,04	DU30
75	terra	0074	preparazione anestesia		13,57	DU61

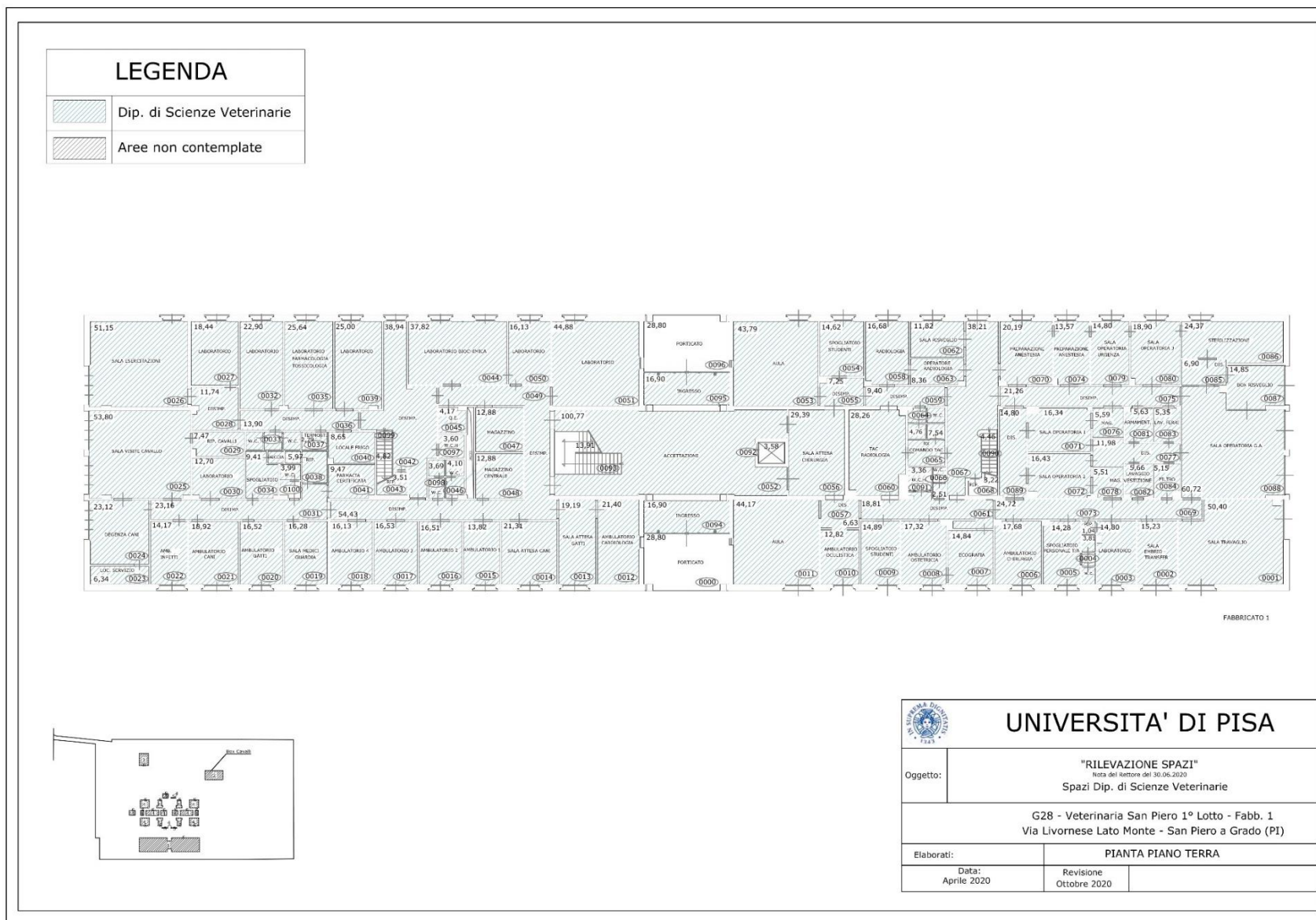
"Rilevazione Spazi"

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Nota del Rettore del 30.06.2020

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76	terra	0075	disimpegno		21,26	DU31
77	terra	0076	magazzino		5,59	DU28
78	terra	0077	disimpegno		11,98	DU31
79	terra	0078	magazzino		5,51	DU28
80	terra	0079	sala operatoria urgenza		14,80	DU61
81	terra	0080	sala operatoria 3		18,90	DU61
82	terra	0081	preparazione		5,63	DU61
83	terra	0082	lavaggio-vestizione		5,66	DU61
84	terra	0083	lavaggio ferri		5,35	DU61
85	terra	0084	filtro		5,15	DU35
86	terra	0085	disimpegno		6,90	DU31
87	terra	0086	sterilizzazione	T/A	24,37	DU3
88	terra	0087	box risveglio		14,85	DU61
89	terra	0088	sala operatoria grandi animali		60,72	DU61
90	terra	0089	disimpegno		14,80	DU31
91	terra	0090	vano scala		4,46	DU32
92	terra	0091	servizi igienici		3,36	DU34
93	terra	0092	vano ascensore		3,58	DU33
94	terra	0093	vano scala		13,91	DU32
95	terra	0094	Ingresso		16,90	DU31
96	terra	0095	Ingresso		16,90	DU31
97	terra	0096	Porticato		28,80	DU54
98	terra	0097	servizi igienici		3,60	DU34
99	terra	0098	servizi igienici		3,69	DU34
100	terra	0099	vano scala		4,82	DU32
101	terra	0100	servizi igienici		3,99	DU34



G28-1 - VETERINARIA SAN PIERO 1° LOTTO
SEDE CLINICHE - DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, 1289 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	primo	1000	terrazza		24,94	DU56
2	primo	1001	sala lettura		119,02	DU10
3	primo	1002	ufficio	T/A	17,37	DU24
4	primo	1003	ufficio	T/A	12,47	DU24
5	primo	1004	studio		17,32	DU8
6	primo	1005	studio	PA	17,22	DU8
7	primo	1006	studio	PA	17,34	DU8
8	primo	1007	studio	PO	17,37	DU8
9	primo	1008	studio	RU	17,37	DU8
10	primo	1009	deposito		13,13	DU29
11	primo	1010	sala riunioni/studio		47,04	DU7
12	primo	1011	studio	PO	22,63	DU8
13	primo	1012	studio		17,19	DU8
14	primo	1013	studio	PA	16,59	DU8
15	primo	1014	studio		17,19	DU8
16	primo	1015	studio	PA	17,19	DU8
17	primo	1016	studio	RU td	17,19	DU8
18	primo	1017	studio	PA	17,19	DU8
19	primo	1018	studio	PO	17,19	DU8
20	primo	1019	ufficio		12,33	DU24
21	primo	1020	studio	RU	16,82	DU8
22	primo	1021	ufficio	T/A	16,29	DU24
23	primo	1022	studio direttore	PO	14,56	DU8
24	primo	1023	segreteria	T/A	83,91	DU24
25	primo	1024	ufficio	prossima assegnazione	25,39	DU24
26	primo	1025	studio	PO	13,18	DU8
27	primo	1026	studio	PA	12,54	DU8
28	primo	1027	disimpegno		47,54	DU31
29	primo	1028	sala riunioni		89,02	DU7
30	primo	1029	disimpegno		50,07	DU31
31	primo	1030	studio	PA	13,47	DU8
32	primo	1031	vano scale		4,16	DU32

"Rilevazione Spazi"

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Nota del Rettore del 30.06.2020

2

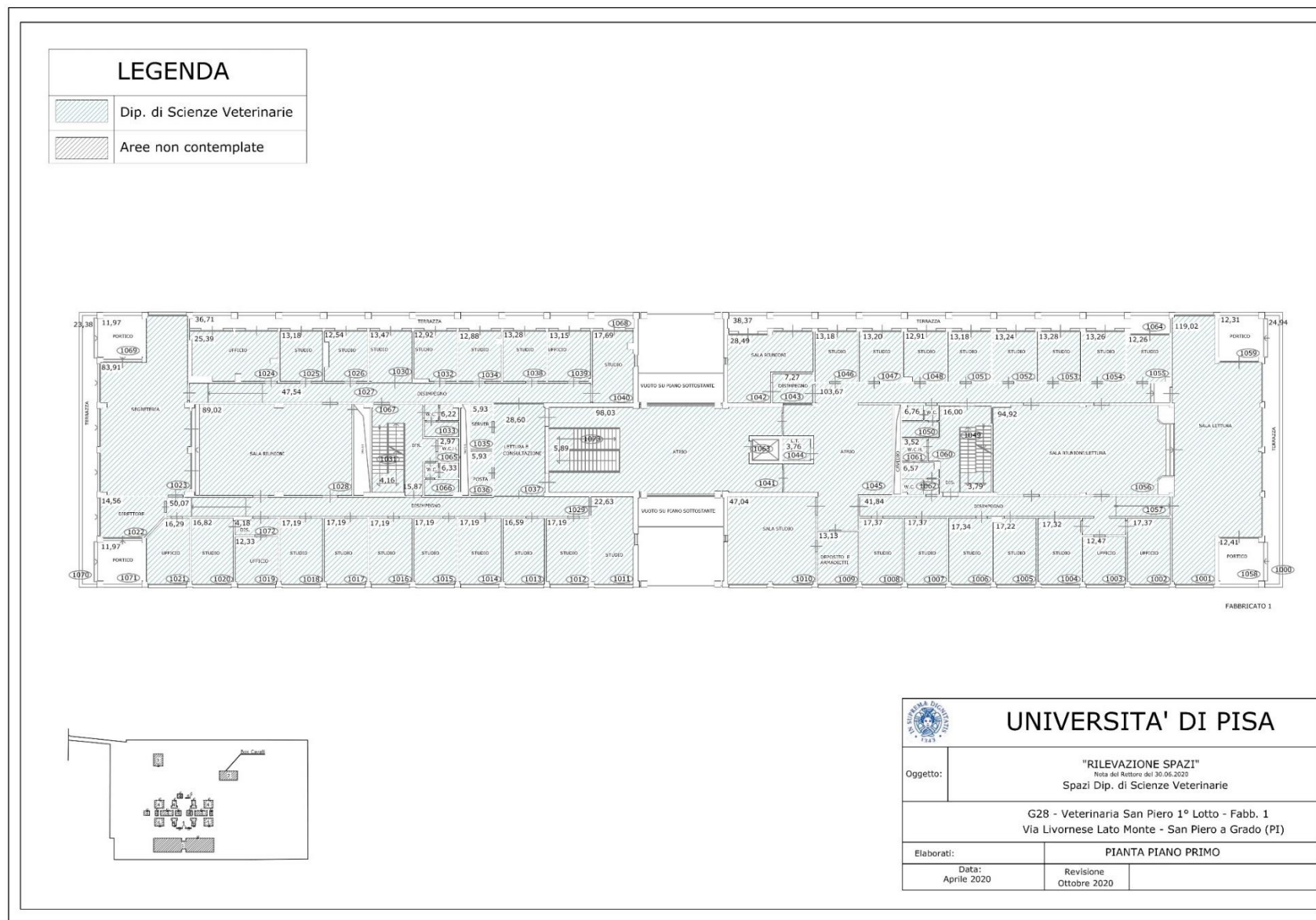
33	primo	1032	studio	borsisti	12,92	DU8
34	primo	1033	servizi igienici		6,22	DU34
35	primo	1034	studio	RU	12,88	DU8
36	primo	1035	server		5,93	DU35
37	primo	1036	posta		5,93	DU24
38	primo	1037	sala lettura		28,60	DU10
39	primo	1038	studio		13,28	DU8
40	primo	1039	ufficio		13,15	DU24
41	primo	1040	studio	PO	17,69	DU8
42	primo	1041	atrio		98,03	DU31
43	primo	1042	sala riunioni		28,49	DU7
44	primo	1043	disimpegno		7,27	DU31
45	primo	1044	locale tecnico		3,76	DU35
46	primo	1045	atrio		103,67	DU31
47	primo	1046	studio	RU	13,18	DU8
48	primo	1047	studio	PO	13,20	DU8
49	primo	1048	studio	RU	12,91	DU8
50	primo	1049	vano scale		3,79	DU32
51	primo	1050	servizi igienici		6,76	DU34
52	primo	1051	studio		13,18	DU8
53	primo	1052	studio	PA	13,24	DU8
54	primo	1053	studio	RU	13,28	DU8
55	primo	1054	studio		13,26	DU8
56	primo	1055	studio	T/A	12,26	DU8
57	primo	1056	sala lettura/riunioni		94,92	DU10
58	primo	1057	disimpegno		41,84	DU31
59	primo	1058	porticato		12,41	DU54
60	primo	1059	porticato		12,31	DU54
61	primo	1060	disimpegno		16,00	DU31
62	primo	1061	servizi igienici		3,52	DU34
63	primo	1062	servizi igienici		6,57	DU34
64	primo	1063	vano ascensore			DU33
65	primo	1064	terrazza		38,37	DU56
66	primo	1065	servizi igienici		2,97	DU34
67	primo	1066	servizi igienici		6,33	DU34
68	primo	1067	disimpegno		15,87	DU31
69	primo	1068	terrazza		36,71	DU56
70	primo	1069	porticato		11,97	DU54
71	primo	1070	terrazza		23,38	DU56
72	primo	1071	porticato		11,97	DU54
73	primo	1072	disimpegno		4,18	DU31
74	primo	1073	vano scale		5,89	DU32

"Rilevazione Spazi"

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2



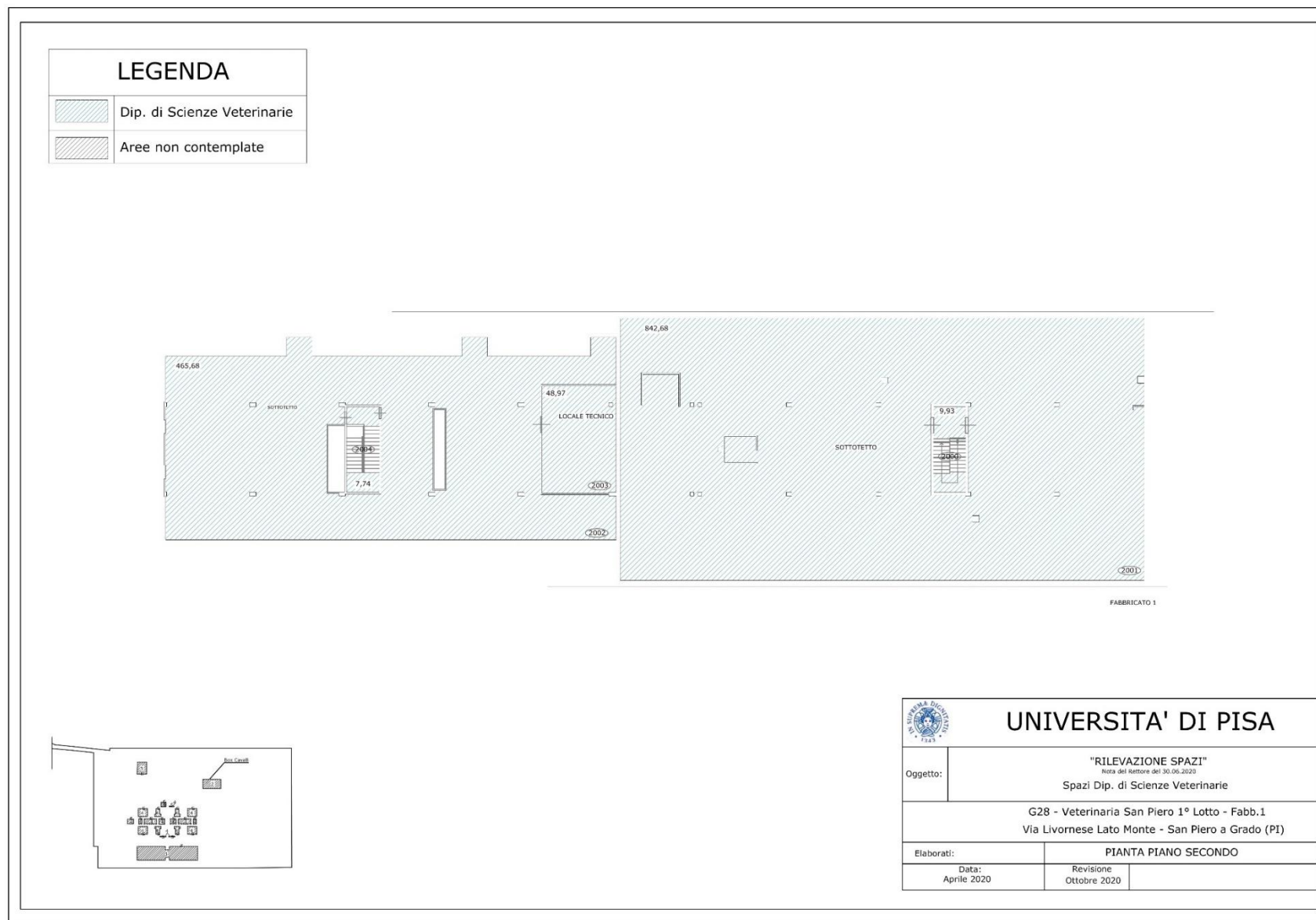
G28-1 - VETERINARIA SAN PIERO 1° LOTTO
SEDE CLINICHE - DIPARTIMENTO DI SCIENZE VETERINARIE
Via Livornese, 1289 - San Piero a Grado (PI)

Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	secondo	2000	vano scale		9,93	DU32
2	secondo	2001	sottotetto		842,68	DU55
3	secondo	2002	sottotetto		465,68	DU55
4	secondo	2003	locale tecnico		48,97	DU35
5	secondo	2004	vano scale		7,74	DU32

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"Rilevazione Spazi"
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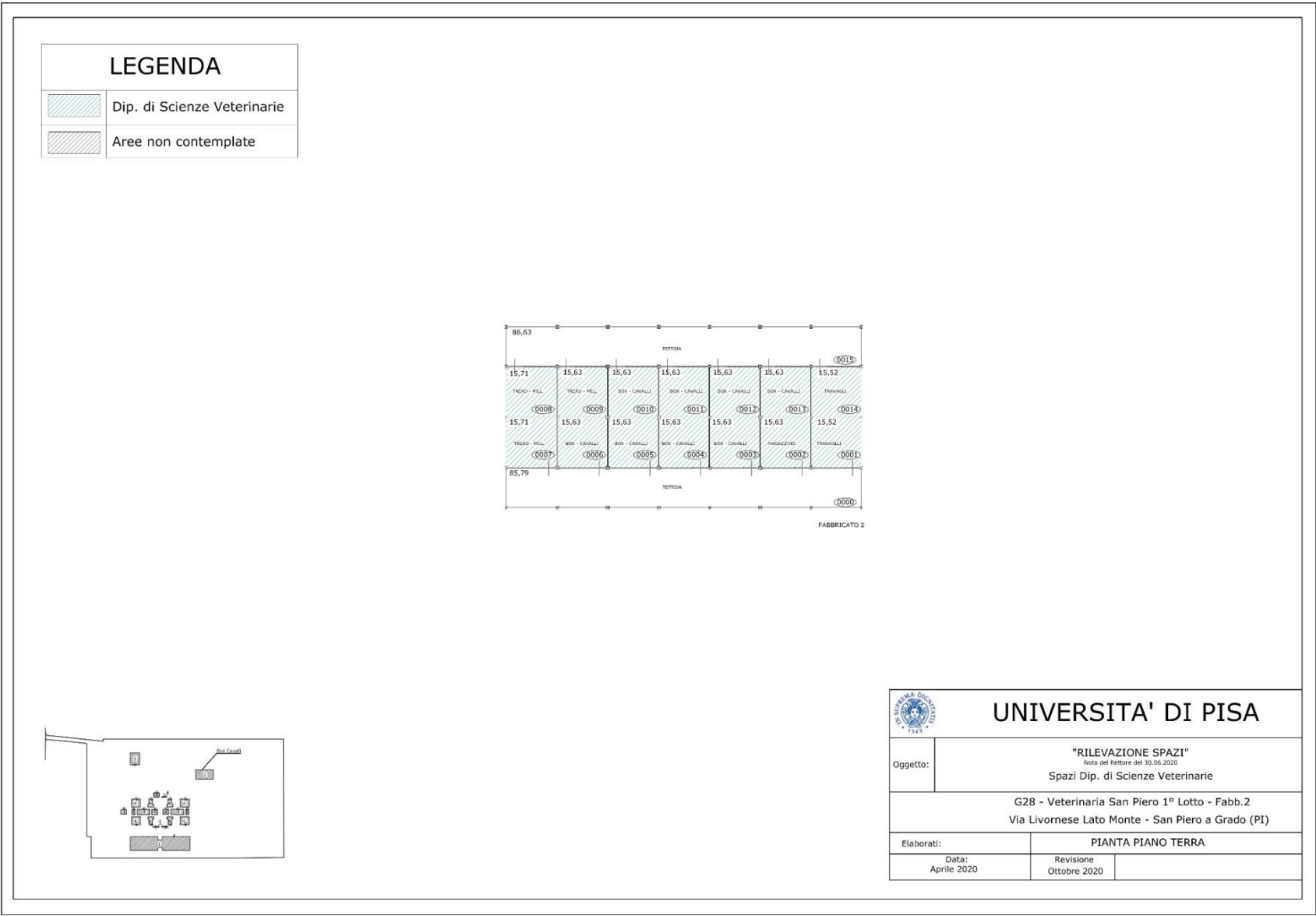
G28-1 - VETERINARIA SAN PIERO 1° LOTTO FABBRICATO N° 2 - DIPARTIMENTO DI SCIENZE VETERINARIE Via Livornese, 1289 - San Piero a Grado (PI)						
Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	tettoia		85,79	DU54
2	terra	0001	sala travagli		15,52	DU61
3	terra	0002	magazzino		15,63	DU28
4	terra	0003	box cavalli		15,63	DU23
5	terra	0004	box cavalli		15,63	DU23
6	terra	0005	box cavalli		15,63	DU23
7	terra	0006	box cavalli		15,63	DU23
8	terra	0007	Tread-Mill		15,71	DU23
9	terra	0008	Tread-Mill		15,71	DU23
10	terra	0009	Tread-Mill		15,63	DU23
11	terra	0010	box cavalli		15,63	DU23
12	terra	0011	box cavalli		15,63	DU23
13	terra	0012	box cavalli		15,63	DU23
14	terra	0013	box cavalli		15,63	DU23
15	terra	0014	sala travagli		15,52	DU61
16	terra	0015	tettoia		86,63	DU54

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"Rilevazione Spazi"

Nota del Rettore del 30.06.2020

1



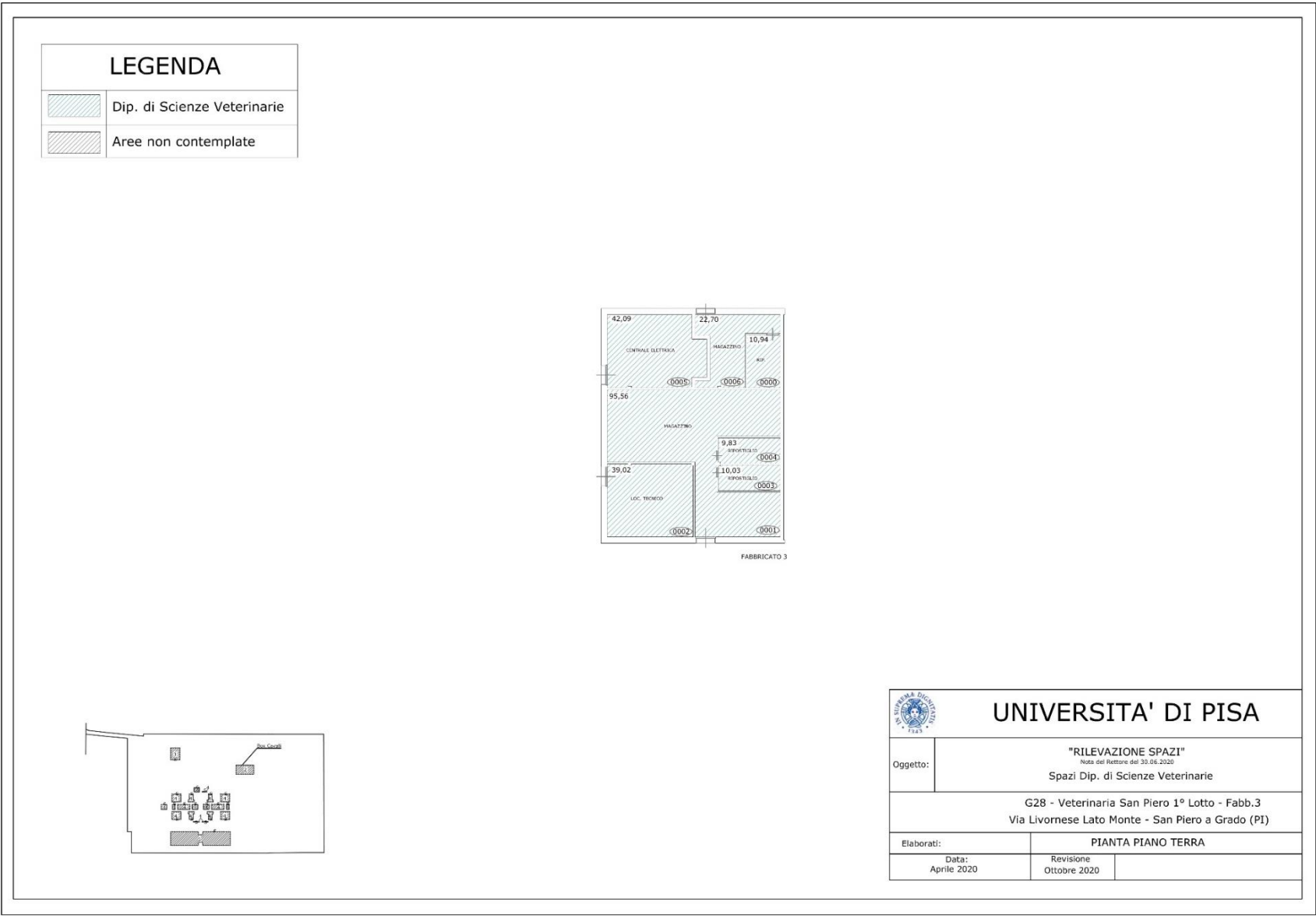
G28-1 - VETERINARIA SAN PIERO 1° LOTTO FABBRICATO N° 3 - DIPARTIMENTO DI SCIENZE VETERINARIE Via Livornese, 1289 - San Piero a Grado (PI)						
Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	ripostiglio		10,94	DU30
2	terra	0001	magazzino		95,56	DU28
3	terra	0002	locale tecnico		39,02	DU35
4	terra	0003	ripostiglio		10,03	DU30
5	terra	0004	ripostiglio		9,83	DU30
6	terra	0005	cabina elettrica		42,09	DU35
7	terra	0006	magazzino		22,70	DU28

01/12/20

"Rilevazione Spazi"

Nota del Rettore del 30.06.2020

1



G28-1 - VETERINARIA SAN PIERO 1° LOTTO FABBRICATO N° 4 (E VARI) - DIPARTIMENTO DI SCIENZE VETERINARIE Via Livornese, 1289 - San Piero a Grado (PI)							
Numero progressivo	Piano	Codice Vano	Destinazione d'Uso	Occupanti	Note	Superficie (mq.)	Codice Utilizzo
1	terra	0000	lavanderia			20,77	DU28
2	terra	0001	box cavalli			143,55	DU23
3	terra	0002	magazzino mangimi			12,94	DU28
4	terra	0003	officina			12,94	DU15
5	terra	0004	travaglio-prel. Seme			143,55	DU61
6	terra	0005	locale prelievo seme			36,78	DU3
7	terra	0006	laboratorio seme cavalli			16,77	DU3
8	terra	0007	deposito materiale pulito			7,44	DU28
9	terra	0008	magazzino			4,29	DU28
10	terra	0009	laboratorio			7,13	DU2
11	terra	0010	disimpegno			11,42	DU31
12	terra	0011	disimpegno			9,81	DU31
13	terra	0012	lavaggio e sterilizzazione			8,51	DU3
14	terra	0013	deposito azoto			7,98	DU28
15	terra	0014	spogliatoio			7,64	DU34
16	terra	0015	servizi igienici			3,77	DU34
17	terra	0016	ambulatorio			6,99	DU2
18	terra	0017	box cani			60,38	DU23
19	terra	0018	box cani			60,80	DU23
20	terra	0019	locale caldaia			55,32	DU35
21	terra	0020	sala pranzo			8,95	DU39
22	terra	0021	spogliatoio			9,59	DU34
23	terra	0022	disimpegno			9,84	DU31
24	terra	0023	cucina			6,54	DU39
25	terra	0024	ripostiglio			2,26	DU30
26	terra	0025	spogliatoio			9,65	DU34
27	terra	0026	servizi igienici			3,35	DU34
28	terra	0027	ripostiglio			61,09	DU30
29	terra	0028	box cani			60,27	DU23
30	terra	0029	centrale antincendio			30,08	DU35
31	terra	0030	locale tecnico			12,00	DU35
32	terra	0031	locale frigo			12,60	DU6

"Rilevazione Spazi"

01/12/20

Nota del Rettore del 30.06.2020

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33	terra	0032	magazzino			7,23	DU28
34	terra	0033	chemioterapia			9,16	DU3
35	terra	0034	laboratorio			9,04	DU2
36	terra	0035	servizi igienici			3,40	DU34
37	terra	0036	dialisi			21,48	DU3
38	terra	0037	disimpegno			15,13	DU31
39	terra	0038	magazzino			9,04	DU28
40	terra	0039	laboratorio			9,22	DU3
41	terra	0040	magazzino			9,20	DU28
42	terra	0041	disimpegno			11,83	DU31
43	terra	0042	servizi igienici			2,35	DU34
44	terra	0043	magazzino			8,09	DU28
45	terra	0044	box cavalli/stabulario			144,77	DU23
46	terra	0045	cella frigo			26,44	DU6
47	terra	0046	box cavalli			144,77	DU23
48	terra	0047	box gatti			20,40	DU23
49	terra	0048	servizi igienici			3,41	DU34
50	terra	0049	portico			65,44	DU54



Annex D. Written assessment procedures for QA

UNIVERSITÀ DI PISA

DIPARTIMENTO DI SCIENZE VETERINARIE



Quality policy

The Department of Veterinary Sciences (DVS), through its quality policy, communicates its objectives and general guidelines pertaining to the three missions that the University of Pisa Statute provides: teaching, research, third mission.

The DVS realizes its activities in accordance with the European Directives 36/2005 CE and UE 55/2013, the national legislation (DM n. 270/2004, Legge 20 dicembre 2010 n.240, Dlgs. 27 gennaio 2012 n.19, DM 23 dicembre 2013 n.1059, DM 30 gennaio 2013 n.47, DM 12 dicembre 2016 n.987), indications contained in the AVA/ANVUR system (<https://www.anvur.it/attivita/ava/>), the Standard Operating Procedures provided by the European System of Evaluation of Veterinary Training (ESEVT SOP 2019 <https://www.eave.org/easevt/sop.html>), and procedures complying with UNI EN ISO 9001:2015 for specific activities.

The DSV has the general objective of increasing the level of satisfaction of students, families, the institutional and production system and all the interested parties, with respect to the quality of training (in line with the European standards and guidelines set by the European Association for Quality Assurance in Higher Education) and the services provided to the territory.

The DSV establishes and monitors the development of a strategic plan (in accordance to the strategic plan of the University of Pisa) where it sets medium and long-term objectives consistent with its mission; the DVS is committed to achieving them in compliance with the general rules established by the University of Pisa and the national legislation. The DVS recognizes that the achievement of the standards established by the quality management systems (AVA, ESEVT, ISO) are an unquestionable contribute to the achievement of internal objectives, (by monitoring processes and activities), and external ones towards stakeholders/students who require high quality training/services.

To this aim, the DVS deems necessary:

- To disseminate the quality policy in order to ensure its understanding by internal staff and third parties interested in the DVS activities and services; to allow the full dissemination of its Quality Policy, the DVS is committed to regularly publish updated information and to communicate them to all interested parties;
- To raise the awareness of its staff on the requirements of the AVA/ESEVT/ISO 9001:2015 standards and involve them in the planning and development of the quality management system, so that it contributes to its effectiveness.

The DVS management, thanks to the accreditation paths carried out for AVA (2019), ESEVT (2022) as well as the ISO 9001:2015 laboratory certification, formulated the following general objectives and indicated relevant step to their accomplishment through the available tools:

1. to offer high quality education by innovative teaching, continue revision of syllabi and definition of a coherent curriculum;
2. to support research activities in the different fields of Veterinary Sciences, including One Health, the human-animal relationship, sustainability of animal production and multifunctionality in agriculture;
3. to ameliorate the quality of offered services according to codified and formalized procedures.

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Annex E. List of scientific publications 2018 (153), 2019 (179) and 2020 (240)

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18. Camillo, F., et al., *The Current Situation and Trend of Donkey Industry in Europe*. *Journal of Equine Veterinary Science*, 2018. 65: p. 44-49.
19. Caporali, C., et al., *Pathology in practice*. *Journal of the American Veterinary Medical Association*, 2018. 252(1): p. 57-60.
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Annex F. ESEVT Indicators on the years 2018/2019 – 2019/2020 – 2020/2021

		VEE values	Median values ⁽¹⁾	Minimal values ⁽²⁾	Balance ⁽³⁾
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.13	0.16	0.13	0.003
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.67	0.87	0.59	0.084
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.87	0.94	0.57	0.308
I4	n° of hours of practical (non-clinical) training	754	905.67	595	159
I5	n° of hours of clinical training	746	932.92	670	76
I6	n° of hours of FSQ & VPH training	472	287	174.40	297.600
I7	n° of hours of extra-mural practical training in FSQ & VPH	110	68	28.80	81.200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	60.33	70.48	42.01	18.326
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	10.99	2.69	0.46	10.530
I10	n° of equine patients seen intra-murally / n° of students graduating annually	12.50	5.05	1.30	11.202
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	1.56	3.35	1.55	0.018
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0.06	6.80	0.22	-0.166
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	0.66	15.95	6.29	-5.637
I14	n° of equine patients seen extra-murally / n° of students graduating annually	1.28	2.11	0.60	0.683
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	1.05	1.33	0.55	0.503
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.02	0.12	0.04	-0.026
I17	n° of companion animal necropsies / n° of students graduating annually	1.32	2.07	1.40	-0.084
I18	n° of ruminant and pig necropsies / n° of students graduating annually	0.61	2.32	0.97	-0.0363
I19	n° of equine necropsies / n° of students graduating annually	0.13	0.30	0.09	0.04
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	1.28	2.05	0.69	0.592
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.31	0.20	0.06	0.248
I22*	n° of PhD graduating annually / n° of students graduating annually	0.10	0.15	0.09	0.013

(1) Median values defined by data from VEE with Accreditation/Approval status in May 2019; (2) Recommended minimal values calculated as the 20th percentile of data from VEE with Accreditation/Approval status in May 2019; (3) A negative balance indicates that the Indicator is below the recommended minimal value; * Indicators used only for statistical purpose

Raw data on the years 2018/2019 – 2019/2020 – 2020/2021

	2020-2021	2019-2020	2018-2019	Mean
n° of FTE academic staff involved in veterinary training	46	46.1	46.4	46.17
n° of undergraduate students	360	350	367	359
n° of FTE veterinarians involved in veterinary training	36.8	34.5	35.2	35.50
n° of students graduating annually	47	43	68	52.67
n° of FTE support staff involved in veterinary training	44.8	46.8	46.5	46.03
n° of hours of practical (non-clinical) training	755	741	766	754
n° of hours of clinical training	746	746	746	746
n° of hours of FSQ & VPH training	485	465	466	472
n° of hours of extra-mural practical training in FSQ & VPH	106	112	112	110
n° of companion animal patients seen intra-murally	3142	2896	3495	3177.67
n° of ruminant and pig patients seen intra-murally	690	696	351	579
n° of equine patients seen intra-murally	484	785	706	658.33
n° of rabbit, rodent, bird and exotic patients seen intra-murally	90	88	69	82.3
n° of companion animal patients seen extra-murally	5	0	4	3
n° of individual ruminants and pig patients seen extra-murally	36	19	49	34.7
n° of equine patients seen extra-murally	77	60	65	67.3
n° of visits to ruminant and pig herds	36	65	65	55.3
n° of visits of poultry and farmed rabbit units	0	0	3	1
n° of companion animal necropsies	72	32	104	69.3
n° of ruminant and pig necropsies	18	4	74	32
n° of equine necropsies	8	10	3	7
n° of rabbit, rodent, bird and exotic pet necropsies	68	23	112	67.7
n° of FTE specialised veterinarians involved in veterinary training	18.6	16.1	14.5	16.4
n° of PhD graduating annually	5	7	7	5.3