



SELF EVALUATION REPORT

EAEVE Visitation

Bologna

4-8 March

2024



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DEPARTMENT OF VETERINARY MEDICAL SCIENCES

Foreword

This Self-Evaluation Report has been prepared in accordance with the ESEVT SOP 2023 approved in Leipzig on 8 June 2023. It was sent for review and comments to the members of the VEE and finally approved by the Department Board on 15 December 2023. The SER results from the collaborative efforts from all the Department members, including students, academic staff, and support staff. I warmly thank all the contributors for their willingness to provide factual data and specific insights into education, research, services, and on the functioning of our educational system and organisation. The Department is privileged to have such dedicated and passionate staff, actively engaged in teaching, research, patient care, community engagement, and administration.

Since the last EAEVE visitation in 2014, substantial changes occurred in both the physical structure and organisation of the VEE, with continuous developments evident through various ongoing renovation works in the Department. This SER endeavours to describe the Department's evolution in recent years and its envisioned trajectory.

We trust that the EAEVE Visitation Team will find it to be a valuable and accurate resource in preparation for the on-site visitation scheduled in March 2024. We are looking forward to the visitation and to welcoming the Team members, who we thank in advance for their dedication, time, and efforts in contributing to the continuous improvement of our Department.

Prof. Giuliano Bettini, Head of the Department



Contents

Introduction	1
Area 1. Objectives, Organisation and Quality Assurance Policy	5
Area 2. Finances.....	19
Area 3. Curriculum	24
Area 4. Facilities and equipment.....	39
Area 5. Animal resources and teaching material of animal origin.....	54
Area 6. Learning resources	66
Area 7. Student admission, progression and welfare	72
Area 8. Student assessment.....	84
Area 9. Teaching and support staff	91
Area 10. Research programmes, continuing and postgraduate education	98
ESEVT Indicators	104
Glossary	106
List of Appendices	107

Introduction

The former “Faculty of Veterinary Medicine of Bologna” traces its origins back to 1784, when the first lecture on veterinary medicine was held in the city of Bologna. Initially operating under the medical school, it gained autonomy in 1876 with the establishment of the School of Veterinary Medicine. Over time, the school evolved into a faculty and expanded in the historic “university citadel” until the late 1980s, when it was decided that it should be moved to the countryside to facilitate the expansion of the clinical and farm facilities. Consequently, between 1991 and 1993, a pivotal transition occurred with the relocation of the VEE from Bologna’s historical centre to a new campus in Ozzano dell’Emilia. This strategic move laid the foundation for the further development of VEE’s infrastructure.

In 1996, the VEE underwent its first successful evaluation by EAEVE. In 2003, a new building for the VTH was created, followed by another successful EAEVE evaluation in 2005. In 2014 the VEE was visited again, obtaining EAEVE accreditation (first establishment accredited in Italy and Southern Europe).

The VEE has always fostered strong relationships with the territories. This connection has been strengthened in particular thanks to the expansion of clinical activities, teaching opportunities for both undergraduate and graduate students, and strong collaborations with scientific and professional institutions, industries in the food sector, and local health authorities.

The VEE applies an integrated approach to processes according to multiple quality assurance systems (EAEVE, ANVUR, ISO 9001). This implies meticulously planning the allocation of resources accordingly to shared criteria, in order to achieve three main goals: offering innovative and highly qualified teaching (e.g. participation in educational projects, residency programmes for EBVS disciplines, Veterinary Teaching Portal, Clinical Skills Lab, Virtual Slaughterhouse software) conducting high-level competitive research in the fields of basic sciences, blue growth, clinical sciences, and food production and safety., and establishing and maintaining solid connections on the territory with private stakeholders and national institutions (e.g. Ministries, Emilia Romagna Region, Veterinary Orders, Local Health Authorities, Zooprophyllactic Institutes, Italian Military Academy). This is pursued with substantial investments in highly specialised staff (e.g. certification at EBVS colleges, coordinators of European projects) and state-of-the-art facilities and equipment.

Main developments in organisation

Department structure – A few months after the last ESEVT Visitation, in November 2014, DIMEVET approved the document “Proposal for the reorganisation of the Department of Veterinary Medical Sciences”. The document aimed to redefine DIMEVET’s internal organisational structure and enhance coordination among the department’s teaching, scientific, and third mission (outreach and community engagement) activities, in response to the results of a comprehensive thorough positioning analysis. It introduced and described the concept of Scientific-Educational Services (SESs), structured around one or more interconnected cultural domains. This departure from the traditional disciplinary alignment facilitated a more functional integration with the intended activities. In particular, this shift significantly impacted the rationalisation of clinical activities, transitioning towards SES organisation based on species and the acknowledgment of the Veterinary Teaching Hospital (VTH) as a complex structure encompassing multiple SESs. Furthermore, the procedures for appointment, tasks, and responsibilities of the SES Manager were outlined.

Simultaneously, Transversal Support Services (TSSs) were introduced, wherein technical-administrative support staff operates. This aspect revolutionised DIMEVET’s organisational structure, particularly for laboratory/clinical technicians, who have been organised into areas led by managers, streamlining their activities within SESs based on the Department’s evolving needs.

Extension of ISO 9001 certification – The reorganisation process was naturally aligned with DIMEVET’s ISO 9001 quality management system. Furthermore, a three-year project was launched to extend the certification to SESs lacking it (primarily those related to clinical activities). This goal was successfully achieved in July 2018, with the full approval from the external certifying body.

Definition of a three-year strategic plan – Starting from 2015, an intense effort began, engaging various departmental bodies. Initially, the focus was on defining DIMEVET’s vision and mission, followed by a comprehensive positioning analysis using the SWOT approach. This led to the formulation of the first “DIMEVET Strategic Plan” in March 2017, identifying strategic objectives spanning research, education, and third mission processes. This initiative has been revisited over time, and the current document represents the third edition.

Integration of the Teaching Services within the departmental organisation – As outlined in the SER for the 2014 visitation, the implementation of the National University Reform (2010) led to the replacement of the traditional “Faculties” with new academic structures called “Schools”. Each School resulted from the merger of various former “Faculties”. Therefore, our educational activities became integrated into the “School of Agriculture and Veterinary Medicine”. However, this integrated approach to academic management did not yield significant benefits for our establishment. Therefore, in 2018, following the University Statute reform, the educational activities of DIMEVET were separated from the “School”. This resulted in the integration of the “Teaching Services” within DIMEVET’s organisation, leading to improved cohesion and more streamlined educational activities. The “Teaching Services” also obtained ISO 9001 certification in July 2021.

New Operating Regulation – Following the new University Statute (2023), the “Operating Regulation of the Department of Veterinary Medical Sciences” was updated. The document outlines the responsibilities of the Faculty-Student Joint Committee (FSJC), the roles of the Medical Director (MD) and VTH Committee, and the existing healthcare facilities. It also defines the representation of doctoral students, research fellows, and specialisation students in the Department Board.

Main improvements and opportunities

ANVUR accreditation – In 2017, DIMEVET was selected among the University of Bologna’s Departments during the assessment conducted by the ANVUR (Italian Agency of Accreditation of Universities) commission. The highly successful audit aimed to ascertain that Departments were actively developing and implementing strategies to enhance research quality in alignment with the University’s strategic planning, while also ensuring the availability of requisite resources for these initiatives.

Dipartimenti di Eccellenza – Launched in 2017 by the Italian Ministry of Research, the “Dipartimenti di Eccellenza” initiative aimed to recognise the best Italian Departments through a research quality national assessment and internal university selection. DIMEVET attained the top spot among the top ten Italian Departments for Agricultural and Veterinary Science. The five-year project secured € 8,100,000 to be used for personnel, infrastructure, equipment, and improvement of teaching quality.

Extraordinary plan for career progression – After years of limited resources allocated to universities, the Italian Government initiated a policy in 2018 aimed at strengthening university staff through a series of extraordinary plans designed for staff progression and new staff recruitment. These extraordinary resources were periodically allocated by the Ministry of Universities and Research (MUR) to universities based on merit, using algorithms focused on teaching and research indicators. The University of Bologna, thanks to its outstanding performance, received substantial resources, which were distributed to departments following the same merit-based criteria. Thanks to these initiatives, from 2018 to 2022 DIMEVET hired 7 untenured and 10 tenure-track assistant professors and allowed the progression of 10 assistant professors to the role of associate professor. Moreover, both the MUR and the University of Bologna encouraged the hiring of professors from abroad or external sources, and through these mechanisms DIMEVET employed an additional 5 professors.

These recruitments were supplemented by those obtained through ordinary resources, resulting in over 70 progressions and new hires between 2018 and 2022.

Italian “Recovery and Resilience Plan” in the frame of “Next generation Eu” – As part of the plan's mission in Education and Research, DIMEVET actively engages in partnerships focusing on “Neuroscience and Neuropharmacology” and “Emerging Infectious Diseases”. Additionally, it is also involved in spokes of the “Agricultural Technologies (CN2) – Agritech” at the National Research Centre, focusing on sustainable animal productions. These collaborative efforts will yield significant funding aimed at improving facilities, acquiring equipment, and hire staff.

Completion of structural works – Since the last visitation, the VEE has undergone several notable structural interventions. These include the completion of the new surgical rooms featuring video streaming connection to the classrooms, the establishment of the new DIMEVET entrance, and the creation of additional teaching spaces. Another noteworthy intervention involved the installation of new electrical substations and a power generator, which has been connected to the healthcare facilities to ensure their operational reliability.

Main progresses in education

New profession-oriented degree programme – To comply with recent national regulations, starting from the AY 2023-24 cohort the curriculum features a practical assessment following the Core Clinical Training. This is aimed at fostering professional competences in various veterinary fields, in accordance with ESEVT Day One Competences and European regulations. Such assessment will be carried out by a specialised committee comprising three VEE professors and three external practitioners.

Clinical Skills Lab – A dedicated space equipped with purpose-built or purchased models and simulators serves to enhance practical skills development while reducing reliance on live animals, carcasses, or animal parts.

Post-graduate education – DIMEVET has expanded its post-graduate training initiatives by launching various professional master’s programmes and establishing (2019) a Specialisation School supported by the Emilia Romagna Region. Additionally, various residency programmes across multiple EBVS disciplines are offered.

Major problems encountered by the VEE

Covid-19 pandemic – The health emergency prompted a rapid shift to online education at the University of Bologna. In accordance with ISO 9001, DIMEVET swiftly implemented a Covid-19 containment procedure, focusing on access planning, attendance tracking, compliance with procedures, and individual responsibilities. Practical activities were replaced by remote alternatives, such as problem-solving tasks and simulations, facilitated through the Veterinary Teaching Portal. Furthermore, the academic staff engaged in training activities for managing emergency teaching situations. In March 2020, during the lockdown, the VTH operated with reduced staff, catering exclusively to emergencies. By May, specialised activities resumed with limited capacity. By June, the VTH fully resumed its usual activities, returning to pre-emergency scenarios.

Degree programme in Veterinary Medicine issues – The issue of “out-of-course” students (exceeding the prescribed degree completion duration) persists, not only due to the heavy workload but also to the national selection system, which delays the cohort’s completion of the cohort beyond the first semester of classes. This issue has now been partially resolved through the anticipation of the national selection process.

A substantial curriculum reform project was launched in 2019, aligning with National regulations, the revised Day One Competences proposed by EAEVE and OIE, and the evolving demands of the veterinary profession. However, as of the present date, the project remains unfinished due to delays caused by the pandemic and pending the finalisation of the revision of national regulations for

university courses, along with the proposal to extend the duration of the degree programme to six years.

Delay in the completion of structural works – In recent years, numerous construction sites have been started to address existing issues and implement new projects, such as the emergency room and intensive care premises, the new necropsy room, and the energy efficiency of the VTH facilities. The works, initially scheduled for completion in 2023, are still experiencing delays beyond DIMEVET's control, preventing them from being finished by the scheduled visitation week. Unfortunately, this delay is also affecting the implementation of additional and crucial projects, particularly the construction of new changing rooms for staff and students, a new lecture hall in the VTH area, new waiting rooms, and the renovation of the pharmacy.

VTH management and sustainability – DIMEVET stands as a complex structure, markedly different from the majority of Unibo's Departments, demanding substantial resources and efficient management for its seamless operation. Despite generating considerable revenue, the VTH, in particular, requires significant funding and adequate staff to ensure its sustainable and efficient functioning. This often represents a complicated challenge, implying demanding efforts and extraordinary solutions to be addressed within DIMEVET, also with the support of resources originating from the broader Unibo framework.

This Self-Evaluation Report has been prepared in accordance with the ESEVT SOP 2023 approved in Leipzig on 8 June 2023.

Area 1. Objectives, Organisation and Quality Assurance Policy

Standard 1.1. VEE's mission statement and objectives

The Vision and Mission of the Department of Veterinary Medical Sciences (DIMEVET) of the University of Bologna (Unibo) are stated in the [DIMEVET Strategic Plan 2022-24](#), (DIMEVET-SP) which is aligned with the [Unibo Strategic Plan 2022-27](#) (Unibo-SP), and are published in the [DIMEVET web site](#).

The Vision statement of DIMEVET is:

- To be a place for the promotion of knowledge and skills in the field of veterinary sciences, promptly addressing social changes, health challenges, and the evolution of the profession.

The Mission statements of DIMEVET are:

- DIMEVET, a community of professors, students, and non-teaching staff, supports and promotes training, research, and community services in the veterinary field, with particular attention to national and international certifications and recognitions.
- In carrying out its fundamental education, research, and third mission tasks, DIMEVET operates daily on the basis of the One Health principle, addressing complex and delicate issues related to animal health and care, veterinary public health, food safety, quality and sustainability of animal productions, animal biology and welfare, translational medicine, animal biotechnologies, human-animal-environment relationship, evolution of society's perception of animals, and veterinary bioethics.
- DIMEVET acts by promoting the enhancement of individuals, the recognition of responsible behaviour and merit, systematic teamwork, and interdisciplinary collaboration.
- DIMEVET conscientiously allocates and utilises its human, instrumental, and financial resources, including through multi-year planning.
- DIMEVET recognises the particular importance of the contributions made by individuals or groups engaged in attracting resources and enhancing the Department's reputation.

Here are the key strategies implemented by DIMEVET to ensure that the curriculum adequately prepares future professionals to work across all sectors of the veterinary profession:

- Accreditation and Quality Standards: the VEE and the degree programme in veterinary medicine (DP) are committed to adhering to the established guidelines and standards that veterinary schools must meet in accordance with the provisions of national and international regulations. Regular evaluations and reaccreditation processes help maintain the quality of education.
- Updating of educational facilities: the VEE is committed to optimising the available resources for the continuous maintenance and modernisation of facilities available to the DP.
- Curriculum design and review: the curriculum, designed after extensive consultations with different stakeholders, covers a comprehensive array of topics essential for any aspiring veterinarian. It is regularly reviewed and updated to stay current with the field's advancements.
- Day One Competences assessment: throughout the curriculum, students are assessed on the achievement of core competencies, aligning with the requirements for a general veterinary practitioner.
- Professionalism and communication: special attention is given to the development of professionalism and communication skills.
- Assessment of learning outcomes: the academic staff assess whether their graduates meet specific learning outcomes related to veterinary practice. This may involve surveys of employers and stakeholders, as well as feedback from alumni.

The DP curriculum is designed in accordance with the national regulations established by the Ministry of University and Research ([LM-42 Class of Master's Degrees in Veterinary Medicine](#)). The programme aims and core curriculum organisation are extensively described in the [degree programme website](#) and in the Area 3 chapter of the present document. A new curriculum was implemented in

AY 2023-24, in line with [Inter-Ministerial Decree No 652/2022](#) that made the Veterinary Medicine degree directly enabling for the profession, allowing graduates to practice without the need to pass the State Examination. Following consultation and agreement among Ministry of University and Research (MUR), National Federation of Italian Veterinary Orders (FNOVI - Federazione Nazionale Ordini Veterinari Italiani) and Board of the Heads of the Italian VEEs, this was made possible through the introduction, during the 5th year, of a practical examination in place of the post-graduate State Examination. A commission composed of academic staff and non-academic professionals will be designated for the assessment of the skills acquired during the Core Clinical Training (CCT). The examination will be based on a syllabus designed with thorough regard for the ESEVT Day One Competences and shared at national level among VEEs and professional orders.

As previously mentioned, the curriculum is not static, but evolves in response to feedback from students, staff, alumni, employers, and external stakeholders, as well as in tune with changes in the veterinary profession. The quality assurance system, applied annually to the DP, facilitates the implementation of improvement and adaptation actions. Indeed, this process involves the periodical monitoring of performance indicators, student evaluations, and the employment rate of graduates.

Standard 1.2. Organisation of the VEE

The VEE of the University of Bologna, namely the Department of Veterinary Medical Sciences (DIMEVET), belongs to the Alma Mater Studiorum - University of Bologna (Unibo). Unibo is a public University which depends on the Italian Ministry of University and Research (MUR). Since its founding in 1088, Alma Mater Studiorum has been student-centred, hosting prominent figures from the science and arts communities. With five campuses (Bologna, Cesena, Forlì, Ravenna, and Rimini) and a branch in Buenos Aires (Argentina), today it offers a diversified programme catalogue carefully tailored to the needs of present-day society: the 31 Departments offered over 200 degree programmes to over 82,000 students. In addition, about 3,600 graduates are enrolled in PhDs and other 3rd-cycle programmes.

Unibo's [governance organisation](#) is defined in the [Statute](#) and in relevant regulations on educational, scientific, organisational, administrative, financial and accounting activities. Unibo is led by the Rector, supported by 6 Vice-Rectors (Deputy Rector, and Vice Rectors for Teaching, Human Resources, International Relations, Research, and Digital Transformation). The main University bodies are the [University Senate](#), consisting of 35 members (Rector, 10 Heads of Department, 15 professors and researchers, 3 representatives from the professional staff, 6 student representatives) involved in the general administration of the University, and the [Board of Governors \(BG\)](#), composed of 11 members (Rector, 5 internal members, 3 external members, 2 student representatives) in charge of strategic planning as well as the financial and staff programming of the University. The [Director General](#) is responsible for the general management and organisation of the University services, resources, and technical-administrative staff, in line with the directions issued by the BG.

Table 1.2.1. Details of the VEE

Name of the VEE	Dipartimento di Scienze Mediche Veterinarie (DIMEVET)
Institution	Alma Mater Studiorum - Università di Bologna
Address of the VEE	Via Tolara di Sopra, 50 40064 Ozzano dell'Emilia (Bologna)
Telephone	+39 051 2097506 (Administration office) +39 051 2097032 (Head office) +39 051 2097011 (Reception)
E-mail	dipscmedvet.amministrazione@unibo.it dimevet.dipartimento@pec.unibo.it
Website	www.scienzemedicheveterinarie.unibo.it
Vee's Head	Giuliano Bettini, DVM, Full professor
Official authority overseeing the VEE	Rector of the University of Bologna: Prof. Giovanni Molari Director General of the University of Bologna: Dr. Sabrina Luccarini

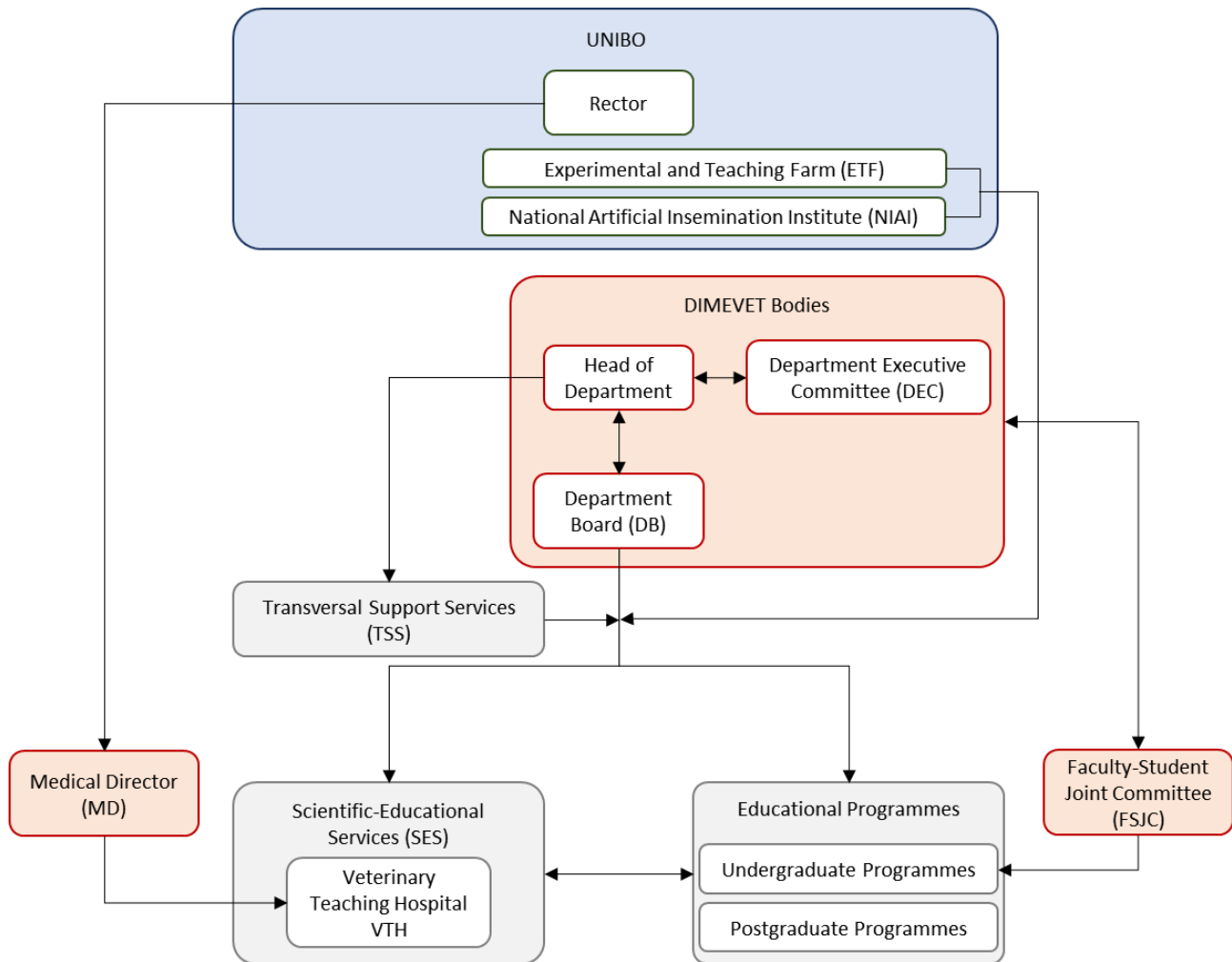


Figure 1.2.1. Organisational diagram of DIMEVET

Departments are Unibo's organisational units, carrying out scientific research and teaching activities. The organisational structure and functioning of a Department are established in a document approved by the University's governing bodies.

The [Operating Regulation of the Department of Veterinary Medical Sciences](#) (last updated on 16 May 2023) was drafted based on a template established in accordance with the University's statute and regulations. The document is structured in the following main sections:

- General Part: name, locations, functions, scientific/educational scope
- Part I: Bodies and competencies (see Table 1.2.2)
- Part II: Structural organisation (see Table 1.2.3)
- Part III: Financial management

Table 1.2.2. DIMEVET's official bodies involved in the decision-making process

Body	Composition	Key functions
Head (Reg. Art. 6,7)	Typically, a full professor is elected by the Department Board	<p>Guidance and Coordination: guides and coordinates scientific and educational activities within the Department</p> <p>Resource Allocation: identifies needs and recommend resource allocation</p> <p>Staff Supervision: directs and coordinates the technical-administrative staff</p> <p>Teaching Responsibilities: supervises the distribution of teaching responsibilities among the teaching staff</p>
Department Board (DB) (Reg. Art. 8,9,10,11,12)	All teachers (professors and researchers), representatives of the T-A staff (10% of the teachers), representatives from first, second, and third cycle degree students (15% of the teachers). The Head serves as the Department Board's chair, while the Administrative Manager acts as the secretary.	<p>Regulations and Strategies: plays a role in approving the Department's Regulations and strategic plans.</p> <p>Budget Proposal: The Board is responsible for proposing the Department's budget to the University.</p> <p>Resource Utilisation: It also has the authority to approve the executive acts required for the implementation of general resource utilisation criteria.</p> <p>Staff Planning: The Board is in charge of planning the necessary personnel, both technical-administrative and teaching staff.</p> <p>Annual Self-Assessment: It prepares an annual self-assessment report to assess the Department's performance and activities. The Department Board has the option to delegate certain functions to the Department Executive Committee, enhancing flexibility and efficiency in decision-making.</p>
Department Executive Committee (DEC) (Reg. Art. 13)	Head, Deputy Head, Administrative Manager, 3 full professor, 3 associate professors, and 3 assistant professors, 2 support staff representatives, 2 students, 1 post-doc, and 3 nominated faculty members	Supports the Head in their duties, makes proposals to the Department Board, and holds decision-making authority on specific matters delegated by the Department Board.

Table 1.2.3. DIMEVET's other organisational bodies

Body	Composition	Key functions
Faculty-Student Joint Committee (FSJC) (Reg. Art. 16bis,16ter)	7 teachers (including the Head of Department or a delegate) and 7 students	<p>Monitoring the VEE educational offerings, teaching quality, and services provided to students using relevant indicators.</p> <p>Providing opinion on activation or suppression of educational activities.</p> <p>Preparing an annual report on teaching activities, based on the annual self-evaluation report of each degree programme.</p>
Medical Director (MD) (Reg. Art. 13ter)	Appointed by the University Rector after consulting the Department Board	<p>Supervision of organisational and hygiene-sanitary aspects of healthcare services.</p> <p>Ensuring the proper and regular delivery of healthcare activities within the facilities.</p> <p>Acting as a guardian for both users and healthcare providers, in accordance with regulations, professional ethics, and the requirements outlined in the healthcare authorisation.</p>
VTH Committee (Reg. Art. 14quater)	Head, Medical Director, VTH SES Managers, Administrative Manager	Coordination of VTH activities, allocation of available resources, planning equipment and human resources, budget approval
Reference Person for the Cesenatico Local Operative Unit (Reg. Art. 15)	Elected by the Department Board	Supervision of the resources allocated and the research and teaching activities conducted at the Local Operative Unit.

In addition, following the ISO 9001 certification of DIMEVET, an “[Organisational Document](#)” was prepared to define the organisation, structure, responsibilities, and interfaces of the functions relevant to the Quality Management System.

According to the Operating Regulation, the Department can be structured in various organisational forms, based on cultural identity, practical-logistical needs, or requirements for educational organisation and coordination. The organisational units of the Department have responsibilities for fulfilling institutional activities without deliberative power or external relevance, but they can receive resources allocated for their operation from the Department Board.

There are two different types of organisational units at DIMEVET: Scientific-Educational Services (SES) and Transversal Support Services (TSS).

- [Scientific-Educational Services \(SES\)](#) (see Table 1.2.4):

For its scientific and educational activities DIMEVET is organised in units called Scientific-Educational Services, to which the teaching staff belongs. The Veterinary Teaching Hospital (VTH) is a multi-structure composed of six different SES. It is coordinated by the VTH Committee, consisting of the Department Head (or a delegate), the Medical Director, the managers of the participating SES, and the Administration Manager. The VTH Committee presents to the Department Board the criteria for financial resources allocation, the use of spaces, and development strategies.

Each SES is led by a manager elected among the affiliated staff members and can include different Units (see [Appendix 8](#) for a comprehensive list of Services and Units). The areas of competence of each SES are determined by the Department Board and are listed in the [ISO 9001 certificate](#). The organisation and tasks are defined by the Organisational Document and specific Management Procedures within the framework of the Quality Management System.

- [Transversal Support Services \(TSS\)](#) (see Table 1.2.5):

For all cross-functional and support activities, DIMEVET is organised in Transversal Support Services, where the technical-administrative staff members operate. These TSS are organised into chains, under the responsibility of technical-administrative staff designated by the University’s Director General and appointed on the recommendation of the DIMEVET Head for the management of specific support activities.

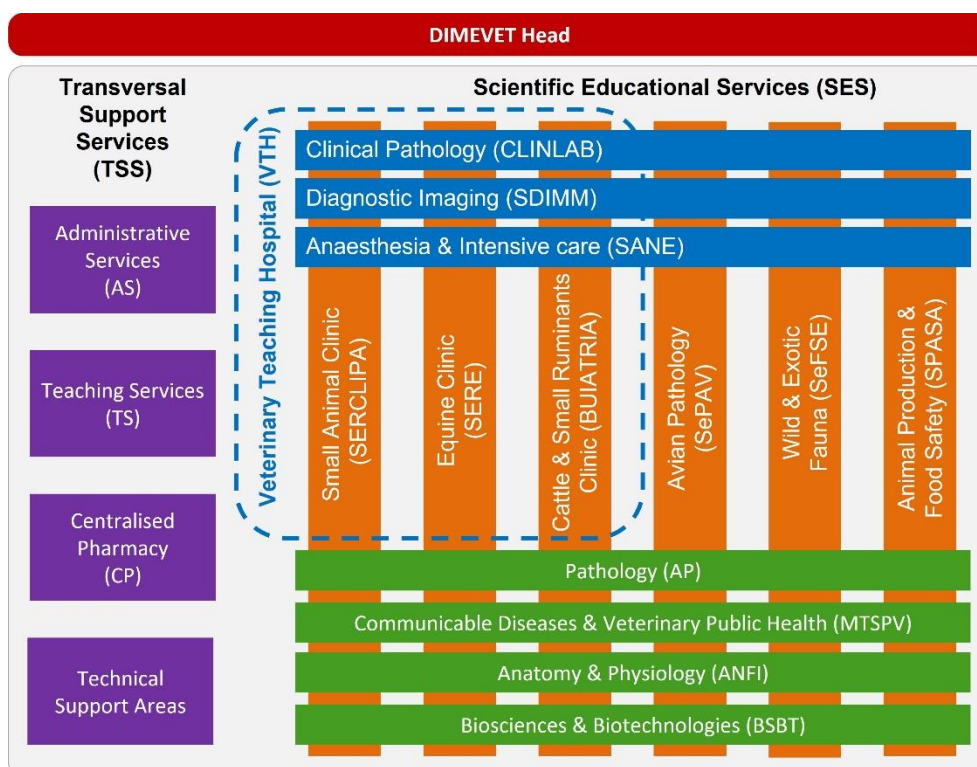


Figure 1.2.2. Diagram of DIMEVET SES and TSS

Table 1.2.4. List of SES names and areas of competence (* indicates SES constituting the VTH)

SES	Areas of competence
Anatomy and Physiology (ANFI)	Anatomy, physiology and translational research.
Biosciences and Biotechnologies (BSBT)	Chemistry, biochemistry, cellular and molecular biology, pharmacology, toxicology and translational research.
Pathology (AP)	Pathologic basis of veterinary diseases; pathogenesis, gross and microscopic features of the more relevant diseases and disorders of organs and systems in domestic animals
Communicable Diseases and Veterinary Public Health (MTSPV)	Communicable diseases and veterinary public health for the protection and promotion of human and animal health; study of transmissible agents and insights relating to aetiology, epidemiology, pathogenesis, diagnosis, therapy, prophylaxis and control of diseases, in particular zoonoses.
Animal Production and Food Safety (SPASA)	Genetics and genetic improvement, animal nutrition and feeding, farm technologies and hygiene, animal welfare and quality of products of animal origin, safety in the food supply chains of animal origin, agricultural economics.
Avian Pathology (SePAV)	Pathologies of domestic avian species, developing their etiological, epidemiological, pathogenic, diagnostic, prophylactic and therapeutic aspects, approached with both traditional and new generation methods.
Wild and Exotic Fauna (SeFSE)	Ecology of pathogens with particular regard to climate and environmental changes; wildlife health and demographic management; diagnostics applied to wild and exotic species; exotic pets and wildlife medicine, surgery and therapy.
Small Animal Clinical Service (SERCLIPA) *	Surgery, internal medicine, emergency medicine and reproduction of small animals.
Equine Clinical Service (SERE) *	Internal medicine, surgery, emergency medicine and reproduction of Equidae.
Cattle and Small Ruminants Clinical Service (BUIATRIA) *	Bovine and sheep-goat medicine.
Anaesthesia and Resuscitation (SANE) *	Anaesthesia and resuscitation.
Diagnostic Imaging (SDIMM) *	Diagnostic and interventional-therapeutic use of methods using ionising radiation (radiology and computed tomography), ultrasounds, magnetic fields (magnetic resonance), radioactive substrates (nuclear medicine).
Clinical Pathology (CLINLAB) *	Creation, development and interpretation of laboratory tests for the diagnosis, prognosis, treatment and monitoring of animal diseases; it also deals with animal models of disease and preclinical safety studies.

Table 1.2.5. List of TSS names and description of their activities

TSS	Support activities
Administrative Services (AS)	Support the administrative aspects of the Department (financial planning, budgeting, reporting, purchasing, administrative support to research).
Teaching Services (TS)	Support the management of all the degree programmes and post graduate programmes (PhD, specialisation schools, masters, professional courses etc.).
Centralised Pharmacy (CP)	Manages stocks, funds and purchase procedures for drugs, medical and non-medical devices used by the VTH and the VEE.
TSS	Technical support activities
Information and general services	Support staff to reception, classroom management and information
Chemical-Biological Area (CBA)	Technical support staff for the research and educational activities of chemistry, biology, biochemistry, pharmacology, toxicology, anatomy, physiology, food quality, zoology
Applied Diagnostics Area (ADA)	Technical support staff for the research and educational activities of bacteriology, virology, parasitology, and pathology
Animal Management Unit (AMU)	Management and care of horses and other animals housed in the Department for teaching and research
Aquaculture and Fish Pathology Unit (AFPUP)	Technical support staff for the research and educational activities in Cesenatico Local Operative Unit
Professional Clinical activities Unit (PCU)	Support staff for the clinical care of pets in the VTH, including imaging and clinical pathology

In addition to official bodies, a series of [committees](#) and [officers](#) have been appointed at DIMEVET for the management of specific areas. More information can be found on the [DIMEVET website](#).

Table 1.2.6. List of committees and officers overseeing the main processes at DIMEVET

Area	Appointment/Composition	Key functions
Research	Research Officer, 4 faculty members (1 for each research area of DIMEVET), 2 support staff, 1 PhD student, 1 research fellow	Evaluation and monitoring of research activities, criteria for resource allocation, and the promotion of research support initiatives; maintains relationships with the Vice-Rector for Research and the University Quality Assurance Committee.
Teaching	Teaching Officer, Teaching Services, Directors of the educational programmes	Scheduling and organisation of all DIMEVET teaching activities; interface between DIMEVET and Unibo's Education Division.
Third Mission	Third Mission Officer, 3 faculty members	Coordination of the transfer of knowledge from DIMEVET to the socio-economic context; organisation of activities and events related to career orientation.
Internationalisation	Internationalisation Officer, 1 faculty member for each degree programme, PhD programme Coordinator, CCT Officer, 1 support staff	Orientation for choosing and planning experiences abroad and coordination of international relationships regarding various exchange programmes and activities abroad for students.
Biosecurity Committee	Biosecurity Officer, 7 faculty members, 2 support staff	Preparation and supervision of the biosecurity procedures at DIMEVET, training of staff and students, implementation of surveillance plans.
EAEVE Accreditation	EAEVE Officer, 4 faculty members, Teaching Services manager, 2 students	Coordination of actions aimed at maintaining EAEVE accreditation, annual monitoring of departmental indicators. Interface between DIMEVET and EAEVE.
Quality Management System	Quality Management System Officer (1 faculty member), Quality Management System Technician (1 support staff)	Management of the Quality Management System of the Department, ISO 9001 certified, with the support of the Inspection Group and the Calibration Group, and in coordination with the Head of DIMEVET.

Table 1.2.7. Name and degrees of the person responsible for the veterinary curriculum and for the professional, ethical, and academic affairs of the VTH

Veterinary curriculum	Degree Programme in Veterinary Medicine Director: Maria Laura Bacci, DVM, Full professor
Academic affairs of the VTH	DIMEVET Head: Giuliano Bettini, DVM, Full professor
Professional and ethical affairs of the VTH	VTH Medical Director: Marco Pietra, DVM, Full professor

DIMEVET has always demonstrated a strong commitment to establishing and maintaining collaborative partnerships with various institutions, both domestic and international, including other VEEs. In terms of research, this has led DIMEVET staff to engage in numerous research projects alongside colleagues from other VEEs, as demonstrated by the list of scientific in peer-reviewed journals during the last three academic years listed in [Appendix 5](#).

From an educational perspective, DIMEVET's internationalisation efforts allowed to establish a steadily growing number of agreements with foreign VEEs, providing DP students with opportunities to pursue study periods abroad. Through the Erasmus+ programme, DIMEVET currently holds bilateral study mobility agreements with 31 VEEs (29 European and 2 from third countries), while for traineeships the applicants are free to choose the host institution (not limited to universities). This results in approximately 20 outgoing and 25 incoming students for study or traineeship mobility annually.

Standard 1.3. Strategic plan and SWOT analysis

Since its establishment, DIMEVET has applied the SWOT methodology to conduct a context analysis.

By voluntary choice, in planning its improvement objectives DIMEVET develops a Strategic Plan and has implemented a Quality Management System, certified in accordance with ISO 9001 standards. This document complies with the provisions of Article 9 of the Operating Regulation of the Department of Veterinary Medical Sciences, which established the requirement for a three-year research and teaching plan aligned with the University's Strategic Plan.

DIMEVET's strategic planning stems from the definition of its Vision and Mission, and from an annual context analysis conducted as part of the Management Review activity, following the SWOT methodology. This method helps identify both internal and external factors that may influence the achievement of objectives, including favourable and risk elements. The strategic map identifies objectives that cut across research, training, and third mission processes, breaking them down into specific underlying objectives. This choice ensures the integration and alignment of the objectives with those of the [Unibo Strategic Plan 2022-27](#).

Furthermore, the DIMEVET-SP is aligned with the [National Recovery and Resilience Plan](#) of the Next Generation EU programme and with the [UN Sustainable Development Goals](#) proposed in the 2030 Agenda.

The [DIMEVET-SP](#), which was approved by the Department Board on 16 September 2022, identifies 3 main Strategic Objectives (SO), articulated into Basic Objectives (BO).

Table 1.3.1. DIMEVET strategic map

Strategic Objectives (SO)		Basic Objectives (BO)	
SO1	Promote the development of knowledge and its educational impact	BO1.1	Strengthen and enhance research activities
		BO1.2	Promote quality, innovative and highly qualified education
SO2	Improve efficiency of the organisation and resource management	BO2.1	Improve efficiency also through certifications and accreditations of the establishment
		BO2.2	Valorise human resources
SO3	Promote synergy with the territory and society	BO3.1	Promote research and third mission activities, responding to the needs of society
		BO3.2	Promote education and guidance activities that respond to the needs of society

Specific actions, indicators, and targets are identified in the document in addition to the objectives. The indicators are partially from the Unibo Strategic Plan and partially internal indicators directly monitored by DIMEVET. All indicators are checked yearly in the Management Review activity.

In light of the data analysis, the context analysis (SWOT) is yearly prepared, taking into consideration each SO identified in the DIMEVET-SP.

Table 1.3.2. SWOT analysis conducted in 2023

SO1 - Promote the development of knowledge and its educational impact	
Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ High number of proposals submitted for national competitive projects ▪ Incoming exchange students ▪ Percentage of outgoing PhD students ▪ Student satisfaction level with teaching and infrastructure ▪ Implementation of monitoring activities 	<ul style="list-style-type: none"> ▪ Interdisciplinary research publication ▪ Outgoing exchange students ▪ Regularity of students careers ▪ Low patent achievement
Opportunities	Threats
<ul style="list-style-type: none"> ▪ International ranking of DIMEVET ▪ Increasing opportunities for national and international funding to support research on topics related to the Department (Blue growth, Green deal, One Health, Agri-food) ▪ “National Recovery and Resilience Plan” funding 	<ul style="list-style-type: none"> ▪ Increasing national and international competitiveness ▪ Sustainability of administrative support following the increase in project activities
SO2 - Improve efficiency of the organisation and resource management	
Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Integration of the Quality Management System into departmental processes ▪ ISO certification of all the SESs ▪ Resource planning according to defined criteria ▪ Departmental policies consistent with the DIMEVET Strategic Plan aligned with the University Strategic Plan ▪ Complaint management 	<ul style="list-style-type: none"> ▪ Sub-optimal internal communication ▪ Purchasing process ▪ Scientific productivity of new recruits
Opportunities	Threats
<ul style="list-style-type: none"> ▪ Growing attention towards Quality Assurance ▪ 100% turnover of support staff who have left ▪ Possibility of using personnel budget in an integrated manner ▪ Extraordinary recruitment plans ▪ EAEVE certification and accreditation ▪ ANVUR AVA3 accreditation 	<ul style="list-style-type: none"> ▪ Complexity in the application of rules related to administrative processes ▪ Shortage of technical/administrative and support staff ▪ Lack of suitable contractual forms for the recruitment of personnel in postgraduate paths for training and support for healthcare activities ▪ Difficulty in evaluating indicators and the achievement of their respective targets due to data unavailability ▪ Timing of tenders and the implementation of planned and already funded infrastructure projects
SO3 - Promote synergy with the territory and society	
Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Good working relationships with institutions and companies ▪ Offering postgraduate training programmes (continuous education, master’s programmes) ▪ Activities of the VTH, ETF, NIAI, and departmental facilities involved in commissioned and applied research ▪ Social engagement initiatives ▪ Orientation projects in collaboration with educational institutions 	<ul style="list-style-type: none"> ▪ VTH management complexity and sustainability ▪ Inadequacy of positions to support healthcare activities ▪ Customer satisfaction evaluation
Opportunities	Threats
<ul style="list-style-type: none"> ▪ Growing interest from the social context in services for animal health and well-being ▪ Increasing awareness of sustainability and “One Health” concepts ▪ Funding from the National Recovery and Resilience Plan 	<ul style="list-style-type: none"> ▪ Limited integration of the Department’s healthcare activities within the National Health Service context ▪ Sustainability of NIAI and ETF activities ▪ Complexity in managing contracts with companies (defining intellectual property, patents)

Within the annual Management Review process, the context analysis (SWOT) is used as the starting point of the “Risk-Opportunity Management” process, enabling the identification and assessment of risk factors and the determination of actions to be taken, according to the following scheme. The significance of each Risk Factor (or failure to take advantage of an opportunity) is quantified by multiplying the “Hazard probability” by the “Hazard severity”.

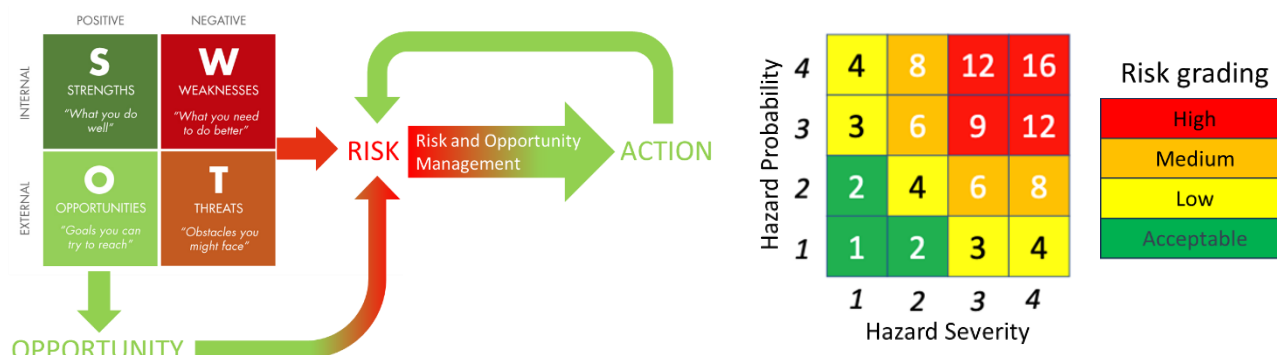


Figure 1.3.1. Diagram of the Risk-Opportunity Management process and Risk Factor calculation

Table 1.3.3. Action Plan for 2023, reporting the new actions and the progress of those previously planned

Risk factor	N°	Action	Person in charge	Timing
Inadequate management of technical and administrative chains	O-1/2023	New organisation of technical and administrative chains	Head, Administrative manager	Dec-23
Management complexity of the VTH	O-2/2023	Adoption of a new accounting management model	Head, Administrative manager	Jun-24
	O-3/2023	Evaluation of a possible reorganisation of VTH Services	Head	Jun-24
Shortage of technical and administrative staff	Rs-1/2021	Continue recruitment actions and definition of programming criteria	Head	Jun-24
Sustainability of ETF and NIAI	Rs-2/2021	Promote resource enhancement	Head, ETF and NIAI manager	Jun-24
Decrease in the outgoing mobility of students	I-1/2020	Opening of new, shorter-term exchange programmes	Internationalisation officer	Jun-24
Decrease in the QS Ranking evaluations	I-2/2021	Identify 20 names of foreign researchers among DIMEVET contacts *	Research officer	Jun-24
	I-2/2021	Identify 20 names of Italian and foreign company contacts among DIMEVET contacts *	Research and Third Mission officers	Jun-24
Not adequately seizing the opportunity of Growing societal interest in services for the health and well-being of animals	TM-1/2021	Implement at least 3 “Social Engagement” initiatives *	Head, Third Mission officer	Jun-24
Failure to renew EAEVE accreditation	D-1/2022	Preparation of SER	Head, EAEVE officer	Dec-23
	D-2/2022	Creation of the LogBook	Head, EAEVE officer	Dec-23
	D-3/2022	Preparation of the Biosafety Manual	Biosecurity Committee	Sep-23
Misalignment of indicators (University Strategic Plan, AVA3).	O-4/2023	Revision of the DIMEVET Strategic Plan	Head	Dec-23
Low inclination toward interdisciplinary research and patent registration	R-1/2023	Plan information sessions (EU projects, interdepartmental centres, and KTO)	Research officer	Jun-24

* These actions have been explicitly requested to all Departments by the University’s Quality Assurance Office

Standard 1.4. Policy for Quality Assurance

The processes of DIMEVET are subjected to different Quality Assurance (QA) systems, both mandatory and voluntary.

Mandatory QA system:

- **Unibo QA** - Within Unibo, there has been a gradual promotion of the adoption of a QA system, consistent with European Standards and Guidelines for Quality Assurance in the Higher Education Area (ESG 2015) set by ENQA. Unibo's [Quality Assurance System](#) promotes a culture of continuous quality improvement within the University and oversees the proper implementation of quality assurance procedures. It was established in accordance with [Ministerial Decree 47/2013](#) and [ANVUR AVA3 system](#) (AVA = Self-assessment, periodic assessment, accreditation).

The system is structured into:

- **Quality of Teaching:** For degree programmes, the processes of design, management, and self-assessment involve the degree programmes themselves, Departments, their Joint Committees of Faculty and Students, Academic bodies, the Quality Assurance Unit, and the Evaluation Unit.
- **Quality of Research and Third Mission:** Departments are responsible for planning their research and third mission objectives, applying strategies to achieve them and monitoring the effects of those strategies, including by carrying out periodic self-assessment. The Departments then summarise these activities on their SUA-RD forms. They are also responsible for participation in the national campaigns for the evaluation of research and third mission activities. DIMEVET successfully underwent the ANVUR (Italian Agency of Accreditation of Universities) evaluation in 2019, receiving the highest grade. Specific information on the quality of teaching, research, and third mission processes implemented at the VEE are available in the relative [DIMEVET web page](#).

Voluntary QA systems (as established in [BO2.1 of the DIMEVET-SP](#)):

- **EAEVE** - Evaluate if the professional qualifications provided by the Veterinary Education Establishments (VEEs) are compliant with the relevant European Union (EU) Directives and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).
- **ISO 9001 QMS.** The system is voluntary, and the Department uses it for its management and to meet the requirements of all the other QA systems.

Even before the merger, the Departments that formed DIMEVET in 2011 voluntarily embarked on a QA (Quality Assurance) journey. The first ISO 9001 certification dates back to the year 2000. In 2014, DIMEVET became the first Italian VEE to be accredited by EAEVE, and the following comment was given in the Report on the Stage 2 Evaluation Visitation: *“It is impressive how quality management and the ISO 9001 system are implemented”*. Since then, the quality management system of DIMEVET has improved, leading to the ISO 9001 certification not only of all Scientific-Educational Services (SES), but also of some strategic Transversal Support Services (TSS), such as Administrative Services, Teaching Services, and Centralised Pharmacy.

The Quality Management System (QMS) of DIMEVET is based on procedures that define the organisation, responsibilities, and operational methods, and undergoes internal and third-party audits on annual basis.

The cyclical assessment is performed by DIMEVET through the annual Management Review. The following diagram describes this process.

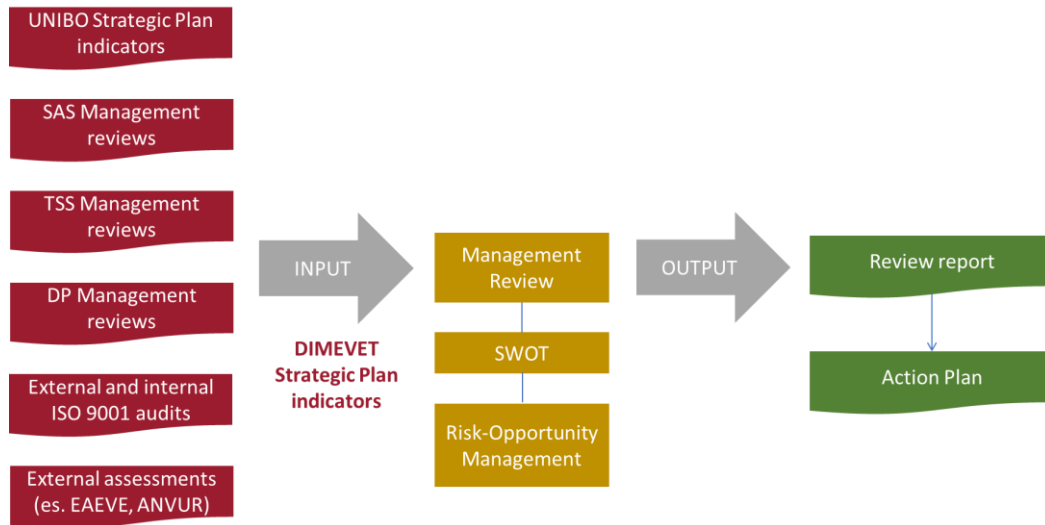


Figure 1.4.1. Management Review process

This process does not only involve the Department’s management but encompasses all departmental components. All the documentation of the quality management system, including the annual reviews, is shared with all personnel in a common online folder, and the results are communicated during the Department Board meetings.

The Plan-Do-Check-Adjust (PDCA) cycles implemented by DIMEVET in the various QA processes are shown below.

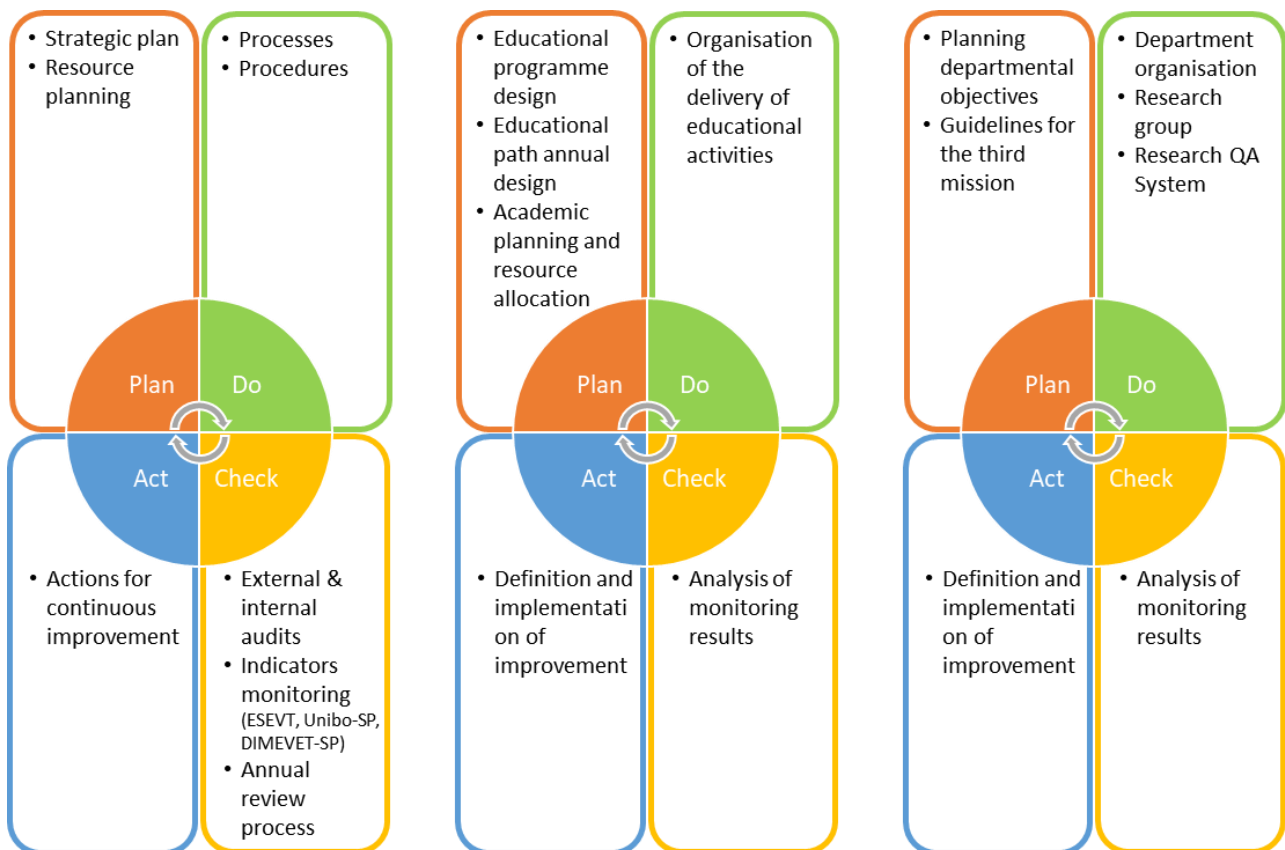


Figure 1.4.2. PDCA for ISO 9001:2015 QMS (left), UNIBO QA system - Quality of Teaching (centre), and UNIBO QA system - Quality of Research and Third Mission (right)

Standard 1.5. Interactions with stakeholders and society

DIMEVET informs stakeholders and the public through its [web portal](#) and [Facebook page](#). The main information is freely accessible through the Presentation, Research activities, Education activities, and Third mission activities pages. All the information concerning the degree programme in Veterinary Medicine can be found at the [dedicated website](#), which can be reached also from the [Universitaly](#) platform.

Unibo is a member of the [AlmaLaurea](#) interuniversity consortium, which monitors the undergraduate and postgraduate programmes offer, the professional opportunities they lead to, and their outcomes.

The ESEVT VEE's status, as well as the last ESEVT Self Evaluation Reports and Visitation Reports (Stage I and II), are available on the [dedicated page](#) of the DIMEVET website. In addition, information concerning the last Visitation is available on the [DP website](#).

Standard 1.6. Monitoring and review activities

DIMEVET Strategic Plan

Since 2017, DIMEVET has adopted the development of a three-year strategic plan based on the context analysis conducted using the SWOT methodology. As explained earlier, DIMEVET has chosen to structure its strategic map by identifying strategic objectives that cut across research, education, and third mission processes. The preparation of the document follows this workflow:

- a) Drafting: The draft of the document is prepared by the QA officer upon the direction of the Head and the officers of the main departmental processes.
- b) Pre-approval: The document is presented to the Department Executive Committee, which may suggest changes and provides an opinion.
- c) Approval: The document is shared in advance with the members of the Department Board, who deliberate and approve it during the meeting.
- d) Revision: The document includes the revision status to allow, if necessary, an update following the Annual Review process.
- e) Sharing: The Strategic Plan is available in the public DIMEVET portal.

DIMEVET Organisation

The general organisation is defined by DIMEVET's Operating Regulation. This document undergoes deliberation by the Department Board, but must also be approved by Unibo's central bodies.

The structure of the various Scientific-Educational Services and their changes are approved by the Department Board and communicated to the University Board of Governors.

Transversal Support Services are organised into chains usually under the responsibility of technical-administrative staff designated by the University's General Director, after consultation with the Department Head.

DIMEVET annual Management Review

The annual Management Review process is defined in the ISO management procedure "PG 05 - Management Review". The preparation of the document follows this workflow:

- a) Drafting: The draft of the document is prepared by the QA officer upon the direction of the Head and the officers of the main departmental processes.
- b) Verification: In light of the indicators, the Department Executive Committee assesses the degree of achievement of the objectives, finalising and validating the assessments.
- c) Approval: The document is approved by the Head.
- d) Sharing: The document is shared with all the staff and presented to the Department Board.

During the presentation of the degree programme and VEE's organisation at the beginning of their career, students are instructed on the general principles of Unibo's teaching quality assurance system, becoming aware of their active role in the process (e.g. courses evaluation, participation in institutional bodies). Moreover, they come in contact with the ISO 9001 quality management system of laboratories and VTH during CCT and other practical activities.

Standard 1.7. External review and progress

The last ESEVT Visitation was held in May 2014.

The EAEVE Committee is in charge for monitoring the ESEVT indicators and all the relevant aspects for detailed in the most recent SOPs, suggesting any actions aimed at achieving and maintaining ESEVT standards for accreditation. It is also responsible for preparing the Self Evaluation Report and the Interim Report within the specified deadlines, as well as organising the visitation.

A specific action plan has been prepared, in which the observations made by the Commission in the Final Reports are matched with the ESEVT standards for accreditation. This document, subject to periodic updates, has served as one of the main inputs for the preparation of the current SER.

To oversee the monitoring of ESEVT indicators, a dedicated ISO management procedure has been prepared (“PG 101 - Monitoring of EAEVE Indicators”), defining the responsibilities and how to manage the process.

Comments on Area 1

The decision made by DIMEVET to implement an ISO 9001 quality management system independently posed a significant challenge and demanded substantial resource allocation. Developing this system required considerable time and active engagement, starting from the Department’s governance down to every staff member. Every year numerous internal audits are organised (e.g. 19 in 2022) in addition to the external audit conducted by the certifying body. This has strengthened the commitment of the DIMEVET community towards QA-driven processes, facilitating the approach towards other QA systems (e.g. EAEVE, Unibo QA, ANVUR).

A critical aspect highlighted in the SWOT analysis is the difficulty of evaluating departmental-level indicators of the Unibo Strategic Plan that may undergo updates over time.

Purely for informational purposes, the second (and non-renewable) term of the DIMEVET Head will end on May 2nd. Elections for the new Head will take place on March 1st, and will be followed by the renewal of the different institutional roles for the next three years.

Suggestions for improvement in Area 1

Aligning our quality management system with other QA processes hasn’t always been straightforward, and undoubtedly, there is ample room for improvement within our current system. The existing internal organisation of DIMEVET, structured into SESs, has proven highly efficient in managerial and internal communication aspects. Yet, sporadic indications of fragmentation have emerged. Potential improvements could be achieved by pursuing a more functional, strategic, and sustainable internal reorganisation, focusing in particular on enhancing integration among SES associated with the VTH.

Area 2. Finances

Standard 2.1. Global financial process

Even though the present SER covers the last three AY, DIMEVET has adopted medium-term financial strategies following the last EAEVE Visitation in 2014, in line with the following suggestions for improvement outlined in the Final Report:

1. *Finances – long term plan missing.*
2. *A long-term (e.g. 3-year) business (financial) plan for e.g. foreseeable expensive infrastructure, new personnel (e.g. veterinary nurses, internships and residencies) must be developed.*
3. *Initiatives in attracting more alternative funding besides funding from the University must be pursued.*
4. *Immediate attention must be given to secure funding for the Fenice and Veterinary Teaching Portal (both are core to present and future teaching).*

Following is a succinct description of the processes associated with each point.

1. In 2015, the Department underwent an organisational restructuring and adjusted several administrative activities. Since then, the Department has annually approved both the yearly budget and the three-year budget. Approval for budgets exceeding this period is not approved, except for revenues derived primarily from research projects that require four or five years for completion.
2. Although Departments cannot independently create their own infrastructure development plans, DIMEVET had the opportunity to do so in agreement with Unibo and thanks to some exceptional opportunities, such as:
 - The “[Dipartimenti di Eccellenza](#)” initiative, launched by the Italian Ministry of Research in 2017, was designed for the best Italian Departments, following a national evaluation of their research quality, and then an internal selection by each University. DIMEVET secured the first position among the top ten Italian Departments for Agricultural and Veterinary Science, earning a total funding amount of €8,100,000. Of this sum, 55% was allocated for personnel, and the remaining 45% for infrastructure, equipment, and teaching quality improvement. The project started on 1 January 2018, and lasted 5 years (see the [Final Report](#) of the project).
 - Unibo’s call for heavy research equipment launched in 2017, which selected our project to acquire the Computed Tomography (CT) scanner for co-funding. The University allocated €250,000 for this purpose.
 - The strategic financial support provided by Unibo to DIMEVET to build the Avian Pathology Research Centre (2017), the Aquaculture Research Centre (2016), the renovation of the main entrance, the creation of new common spaces for socialisation, the changing rooms for the pigs facility (2022). The total funding allocated by the University was approximately €2,000,000.
 - The private donation for the Wildlife Veterinary Centre (€250,000).

Regarding the business plan for personnel, particularly for those operating within the Veterinary Teaching Hospital, see Standard 2.2.

3. Since 2015, the Department has successfully secured funds from competitive national and international calls, as well as research grants through agreements with private and public entities (see Table 2.1.2).
4. These aspects have been included in the framework of the “Dipartimenti di Eccellenza” project. The VEE’s financial strategy is also functional to [BO1.1, BO2.1, and BO3.1 of the DIMEVET-SP](#).

The public funding system for Universities in Italy can be summarised as follows:

- Annually, the Italian Government allocates the “Fondo di Finanziamento Ordinario” (FFO), constituting the primary fund for the University System. Normally most of these funds are available to Universities without restrictions, while a small portion is allocated for specific purposes. The FFO is integrated by other Ministerial funds for research, right to education, and other extraordinary measures. The Ministry distributes these resources to each University based

on specific algorithms or defined strategies.

- Each University relies on the ministerial FFO and student fees to cover all costs, primarily personnel costs, general expenditures (e.g. operational expenses, building maintenance and investments, basic academic and administrative costs), and departmental financing. Departments can increase their income through various means, such as research projects, agreements, services, continuing education, donations, and awards.

The University of Bologna's funding system includes covering expenses for personnel, utilities, infrastructure and building maintenance and restoration, student services, and libraries directly from the University or the Emilia Romagna Region. Once these expenses are covered, the annual budget for the Departments is derived and distributed among them based on student numbers, research performance, and size. Additionally, each Department receives annual support from the University for personnel recruitment, calculated considering various factors such as retirements, teaching indicators, and research indicators. The budget for PhD fellowships is determined by comparing several quality indicators. Unibo acknowledges the Veterinary Teaching Hospital as an exception within the system and therefore designates extraordinary dedicated financial support to DIMEVET.

The Department allocates the received budget to guarantee adequate resources for operating and maintaining laboratories, teaching facilities, and equipment. Research activities are financed through research grants, small individual researcher and/or group grants, investments in equipment, and doctoral scholarships. Resources are assigned to DIMEVET Scientific-Educational Services (SES) based on meritocratic criteria, number of people involved, and strategic purposes.

Other revenues, such as those from research projects, agreements, donations, and services, are directly managed by the responsible academic staff. A variable percentage levy is deducted from this type of revenue by the University and/or the Department.

Based on the annual operating budget allocated by Unibo, Departments draw up the provisional budget for the following year. As an example, the DIMEVET budget criteria for 2024 approved by the Departmental Board based on the resources allocated in 2023 can be found [here](#). Departments are also required to prepare a report accompanying the budget to be submitted to the Board of Directors, highlighting the consistency of the budget strategies with the objectives of the Strategic Plan. A dedicated budget is formulated for the VTH, which then becomes part of the overall DIMEVET budget. In the past three years, DIMEVET's annual budget has consistently ranked among the top five largest budgets among Unibo's thirty-one Departments. The main reasons for this commendable position can be found in a combination of good management practices, a robust infrastructure and facilities development policy, and the presence of several highly active and motivated research groups. Revenues generated from research activities and veterinary services have shown a steady and significant increase in recent years. This positive trend should be confirmed in the near future, as a result of the continuation of established strategies and the recruitment of numerous young researchers. Worthy of note are both the success in securing numerous European projects and the progressive growth in revenue at the VTH. Although fluctuations in revenues are influenced by project tender calendars and success rates, it is important to note that, over the past three years, research funds have contributed positively to modifying the annual budget.

Fluctuations in spending are also noticeable, primarily driven by the acquisition and/or renovation of equipment and facilities.

Finally, a notable observation arises from the comparison between annual income and expenditure. In the context of research revenues, the entire project amount is recorded once officially approved, regardless of the project duration. Consequently, the entire funding for the project is accounted for at once instead of being distributed annually.

The University of Bologna has ratified its strategic plan, which includes strategies aimed at supporting and developing research activities, as well as incentives for support staff. These initiatives are financed by applying a levy equivalent to 15% of the total amount derived exclusively from Research Contracts, excluding funds already aimed at acquiring equipment or covering research grants and contracts. Additionally, the Department has established a levy percentage applied to external revenue

sources such as research funds and services. For public funds, a 4% deduction is anticipated, while research agreements and veterinary services are subject to an 8% and 6.4% deduction, respectively. In the latter two revenues categories, the same exception provided by the University applies, exempting the tax if the funds are allocated towards equipment purchase or personnel costs.

Tuition fees are not transferred from Unibo to the VEE, but contribute to the FFO. Therefore, it is not possible to isolate them from global annual revenues. For informational purposes, [student fees](#) at Unibo are calculated according to the year of enrolment and on a progressive basis, being less expensive if the student has a low income. During the last AY, the maximum fee for the DP in Veterinary Medicine was €2,401.

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

Area of expenditure	2022	2021	2020	Mean
Personnel*	14,604,127	13,920,537	13,090,666	13,871,777
Operating costs and maintenance	4,377,717	5,550,867	5,138,532	5,022,372
Equipment	626,671	890,850	1,050,304	855,942
Total expenditure**	5,004,388	6,441,717	6,188,836	5,878,314

* directly covered by the University (academic staff, support staff, PhD fellowships, specialisation fellowships)

** directly covered by the VEE

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

Revenues source	2022	2021	2020	Mean
Personnel*	14,604,127	13,920,537	13,090,666	13,871,777
Public Authorities and Research Grants	3,238,546	4,976,501	3,229,215	3,814,754
Research Agreements	552,125	539,830	478,442	523,466
Veterinary Services	3,041,207	2,696,346	2,071,611	2,603,055
University financing (including PhD fell.)	1,086,578	1,088,359	1,329,375	1,090,104
Other sources**	289,992	145,609	107,006	180,869
Total revenues***	8,208,448	9,446,645	7,215,649	8,212,247

* directly covered by the University (academic staff, support staff, PhD fellowships, specialisation fellowships)

** fees for academic courses (professional master programmes); slaughterhouse management contract; risk provision adjustment

*** excluding Personnel costs

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

Year	Total expenditures	Total revenues	Balance***
2022	5,004,388	8,208,448	3,204,060
2021	6,441,717	9,446,645	3,004,928
2020	6,188,836	6,981,649	792,813

*** Total revenues minus Total expenditures

Standard 2.2. Financial management of the clinical and field services

The Department supports clinical and field services by providing personnel (academic staff and support staff), infrastructure, equipment, consumables, and maintains agreements with farms and industries, to achieve the highest quality standards in teaching. Achieving this objective requires adopting sustainable development strategies for the Department, along with maintaining a profound awareness of the evolving veterinary job market and work system.

The VTH primarily relies on its gross revenue (around €2,800,000 in 2022) to fund all clinical activities on common species. An additional integration of around €350,000 per year comes directly from the University of Bologna. Lastly, DIMEVET contributes approximately €100,000 for tutoring and expenses related to teaching materials.

Besides in DIMEVET premises, students also carry out several clinical and field activities at extramural facilities, such as farms, slaughterhouses, veterinary services. The Department covers most costs for extramural activities, mostly associated with tutoring and some consumables.

As highlighted in Table 2.1.1 and 2.1.2, the Department oversees the management of all resources, except for those relating to personnel costs. The annual budget of DIMEVET necessitates approval from the Department Board at the beginning of each year. Subsequently, typically in January, these resources are allocated, allowing all stakeholders to manage them in accordance with the mutually agreed-upon objectives with colleagues and/or students.

While covering many operational expenses alongside maintenance and consumption costs, the Department experiences considerable autonomy in revenue allocation. Clearly, specifically targeted revenues, such as research projects or research agreements, must be directed towards the objectives associated with the respective projects.

Standard 2.3. Resources allocation and investments

Taking into account the ongoing projects successfully secured by the Department, several investments are currently in progress (see also Standard 4.1), The most relevant include:

- complete renovation of the necropsy room, including the acquisition of new refrigerated and freezer cells, covered by funds from the “Dipartimenti di Eccellenza” project
- complete renovation of emergency room and intensive care premises, including the acquisition of furniture and equipment, covered by funds from the “Dipartimenti di Eccellenza” project
- creation of a new modular lecture hall through the restoration of the former cafeteria premises, covered by funds from the University of Bologna
- complete renovation of the piggery premises, covered by funds from the PNRR programme

In October 2023, the Department Board approved the three-year budget, aligning with the expenses and revenues described in the 2024 forecast budget.

The Statute of the University of Bologna, along with subsequent Regulations, explicitly delineates responsibilities and procedures in financial matters. Each Department has its own autonomy concerning income and expenses related to research projects, revenue from veterinary services, and the annual budget allocated by the University. As previously clarified, all personnel and utility costs are directly covered by the University, specifically under the responsibility of the Board of Directors. At the DIMEVET level, the responsibility for budget approval lies with the DIMEVET Board. The minutes are available to all members of the DIMEVET Board.

Comments on Area 2

In recent years, the VEE (as well as the general university system in Italy) experienced a period of substantial resource allowance. This allowed for the development of structural improvement strategies and the recruitment of a significant number of teaching and support staff. In addition, financial resources from research projects and revenues from outreach activity gave the opportunity to formulate a solid financial budget. It is worth pointing out that, in parallel, the VEE encountered fluctuating patterns in both expenses and revenues, primarily due to the unprecedented and unpredictable impact of the Covid-19 pandemic.

Throughout 2020, the entire Country faced strong social restrictions, resulting in multiple months of closure. These circumstances notably impacted the operations and daily life at the VEE, leading to adverse repercussions on VTH revenues. To compensate for the revenue shortfall during the pandemic months, Unibo allocated an extraordinary amount of approximately €140,000. At present, the VTH generates noteworthy revenue, but it still requires substantial funding from the VEE and Unibo, particularly to face high costs related to staff and consumables.

The economic sustainability of the VTH is a subject of great concern for both DIMEVET and Unibo. Since 2015, the University has allocated an additional annual contribution of €200,000 to DIMEVET for the VTH, in addition to approximately €100,000 in further additional contributions for security and personnel. Starting from 2023, these contributions were merged into a consolidated annual allocation of €347,000 to support the VTH personnel expenses. Despite the significant contributions by Unibo and the increasing healthcare services provided, the economic sustainability of the VTH is delicately balanced, requiring constant and careful monitoring of expenses and investments in relation

to revenue. The key areas of concern are linked to the spending constraints imposed to the Italian public administration, which have recently been aggravated by a considerable increase in drug and healthcare supply costs along with a surge in expenses for temporary staff. To enhance the accounting management of the VTH, a Unibo-DIMEVET task force of accounting experts was established in 2021 to identify the most suitable accounting and managerial configuration. As a result, from 2022, the VTH budget is no longer based on the prudent but rigid “cash” financial criterion, but has transitioned to an economic-patrimonial system incorporating analytical aspects and supported by a substantial guarantee fund provided by the University. For 2024, the VTH budget is based on a revenue forecast of €2,820,000 (prudently reduced by 6% from the 2023 revenue), with a significant €1,738,000 guaranteed by the University.

The major critical economic elements and potential obstacles to achieving a balanced budget currently involve the University withdrawal and personnel expenses. Unibo imposes a substantial fee, which increased from 15% to 18% in 2023, on all third-party services, representing a significant deduction of resources for the VTH. Negotiations with the University are ongoing on this matter. Personnel expenses are also, and mainly, rising due to reasonable and justifiable demands from employees for salary increases. Multiple actions are underway to increase incomes and rationalise the use of temporary personnel.

In addition, the VEE had to promptly adapt to the changes in budget management introduced by Unibo. The requirement to utilize the allocated budget within the calendar year implies the existence of more efficient processes governing income and expenses. This has led to increased attention and precision in resource allocation within the budget forecast. Since 2023, certain degrees of flexibility have been permitted within the Unified Budget, allowing for a maximum permissible shift of 20% of resources from research to teaching.

Suggestions for improvement in Area 2

To pursue a strong financial stability, compliance with Unibo’s objectives and criteria for budget distribution is crucial. The allocation of resources is contingent upon research and teaching performances, requiring the synchronisation of VEE’s organisation and objectives with those established by Unibo. Comprehensive evaluation of outcomes is imperative, allowing for necessary adjustments to be made if needed.

VTH activities and budget should be consolidated to ensure effective and sustainable operations. Balancing the growth and development of VTH activities and research with the costs linked to personnel and facility management its crucial for its long-term viability.

Furthermore, continued efforts towards simplification and streamlining of administrative processes remain crucial wherever feasible. This involves enhancing the financial management processes of the VTH as well as refining the procedures for purchasing materials and consumables.

Area 3. Curriculum

Standard 3.1. Curriculum design, resources, and management

The degree programme in Veterinary Medicine has been designed to adhere to the regulations outlined in EU Directive 2005/36/EC (amended by 2013/55/EU), ensuring that graduates possess the essential knowledge and skills needed to practice the veterinary profession. The [“Scheda Unica Annuale” \(SUA-CdS\)](#), a specific document publicly available that covers DP’s general information, learning objectives, student experiences, and learning outcomes, outlines the professional profiles envisaged for graduates. Specifically, graduates can pursue careers as Veterinarians in the following areas:

- care and welfare protection of companion animals
- the care and welfare protection of livestock animals
- livestock farming sectors
- food safety control and food security
- prevention and control of transmissible diseases and veterinary public health
- research activities

The curriculum organisation, variety of educational activities, assessment methods, along with facilities and learning resources available at the VEE, enable students to achieve the ESEVT Day One Competences, preparing them for such occupations.

In compliance with national constraints, the degree programme is organised in 5 years, each divided in 2 semesters, for a total of 300 ECTS. Each ECTS consists of 9 to 12 hours of theoretical and practical training, and 13 to 16 hours of unsupervised independent study. Teaching units are delivered either in form of single discipline courses or as integrated courses (CI), including two or more subjects. The initial two years of the curriculum predominantly cover basic sciences, although the 1st year includes 1 ECTS of introductory activities at the VTH and ETF. By the 3rd year, the focus gradually shifts towards clinical disciplines, animal production, veterinary public health, and food safety and quality. Then, students enrol in CCT rotations, which are scheduled partially during the second semester of the 4th year and, for the most part, starting from December of the 5th year. This intramural and extramural training covers different areas of the veterinary profession (internal medicine, surgery, obstetrics, pathology, animal production, transmissible diseases, wildlife fauna, food safety and quality) and accounts for a total of 37 ECTS, each consisting of 18 hours of practical activities and 7 of unsupervised activities. Finally, 8 ECTS are dedicated to elective courses, alongside 8 ECTS for EPT and 1 ECTS for the graduation thesis. The existing curriculum was designed in AY 2013-14, but some minor modifications have been introduced in recent years. These adjustments involved:

- re-scheduling of some 2nd year and 3rd year courses to rationalise the student workload
- introduction of hybrid teaching courses, allowing up to 35% of classes to be delivered in an asynchronous mode
- gradual increase and improvement of supervised self-learning and laboratory activities, facilitated by improved facilities and innovative learning resources
- substantial reorganisation of the intramural CCT
- improvement of extramural practical activities
- changes in the daily scheduling of teaching activities, switching from 4 to 5 hours of lessons in the morning at the 2nd, 3rd, and 4th years).

In addition, as already described in other parts of the document, starting from 2023-24 we have aligned our curriculum with the recent national regulations that have suppressed the State Examination for professional qualification, introducing a practical examination before the thesis defence.

However, we intend to deeply renovate the whole curriculum in the near future to solve some issues and offer future students a more effective and modern educational programme. In this regard, we are eagerly awaiting the publication by the Ministry of University and Research of the document outlining the

revision of the national requirements for the degree programmes in Veterinary Medicine, which is expected to be released soon.

The Degree Programme Board is responsible for designing and managing the curriculum, which is periodically updated to meet the evolving needs of the profession and society, in alignment with [BO1.2](#), [BO2.1](#) and [BO3.2 of the DIMEVET-SP](#). To achieve this objective, the DPB takes into consideration inputs from both internal (e.g. students, FSJC, EAEVE Committee) and external (e.g. ANVUR, practitioners, industry, alumni) stakeholders. The DPQAC plays a pivotal role by supporting the DPB in analysing issues and recommending potential solutions. In addition, the DPB is significantly supported by the Teaching Officer and Teaching Services of DIMEVET for any matters concerning the curriculum delivery.

The organization of the Veterinary Medicine curriculum is subject to national regulations, in particular [Ministerial Decree No 509/1999](#), [Ministerial Decree No 270/2004](#), [Law 240/2010](#), and [Inter-Ministerial Decree No 652/2022](#). These acts established that the curriculum must comprise 300 ECTS, distributed across a maximum of 30 courses within 5 years, with a balanced workload of 60 ECTS per year on average. Furthermore, a minimum number of credits is set for basic subjects (58 ECTS), professional subjects (130 ECTS), and Core Clinical Training (30 ECTS). Starting from 2023, the Veterinary Medicine degree obtained in all Italian VEEs allows graduates to practice without the need to pass the State Examination.

While this legal framework has served to harmonise the DPs offered by the 13 Italian VEEs, it inevitably constrains individual Universities in making substantial modifications to the curriculum. Nonetheless, each VEE retains the authority to determine allocation of ECTS to specific subject areas, the balance between theoretical and practical hours in each course, and the distribution of hours between lectures/practical sessions and individual study at the ECTS level. Additionally, VEE can autonomously decide the delivery of courses either as “monographic” (single discipline) or “integrated” (including two or more correlated teaching units), the organisation of the CCT, and the elective activities. However, substantial changes to the curriculum proposed by the DPB necessitate a complex bureaucratic procedure, involving approvals from Unibo, the [National University Council \(CUN\)](#), and the [Italian Agency of Accreditation of Universities \(ANVUR\)](#).

The DP undergoes continuous monitoring and improvement, thorough collaborative efforts by the DPD, with the help of the DPQAC and DIMEVET FSJC. This joint approach aims to correct any curriculum deficiencies such as overlaps, redundancies, omissions, and inconsistencies.

Each course within the curriculum has a dedicated web guide detailing the learning outcomes, contents, as well as teaching and assessment methods. Such information is complemented by the relevant syllabus and a list outlining the course contributions towards achieving the Day One Competences. These documents are provided by the responsible teacher of the course and are accessible through a [dedicated page](#) on the DP website. The DPQAC annually reviews the information available for each course, verifying the consistency with the relative syllabus, potential omissions, or redundancies with other courses. The results of the monitoring are shared with the DPD and DPB.

At the end of each semester, students are strongly encouraged to provide anonymous feedback on teachers and courses through the dedicated online form, providing valuable insights for curriculum monitoring and adjustments (details are provided in Standard 9.5). The student opinion outcomes constitute an essential tool to spot unintended redundancies and overlaps between courses, as well as monitor corrective actions efficacy over time. They are therefore discussed at the DPQAC and DPB level, where corrective actions are proposed and approved, if needed. In addition, the FSJC annually reviews the survey results of the various DPs, submitting additional feedback and suggestions.

Year Coordinators are an additional source of strategic inputs concerning the organisation and integration among the different courses to further refine teaching delivery within each semester.

Table 3.1.1. Curriculum hours in each academic year taken by each student

Academic years	A	B	C	D	E	F	G	H	J
Year 1	409	8	9	47	26	0		2*	501
Year 2	489	31	3	33	41	0			597
Year 3	561	14	4	56	35	27		8*	705
Year 4	440	26	6	57	19	34			582
Year 5	199	2	1	22	15	73	200	25**	537
CCT									666

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: EPT; H: others (* educational visits; ** graduation thesis); J: total

An additional 75 hours are planned between Year 1 and Year 2 for students with an English language level below B2 at the time of enrolment. An additional 8 ECTS are required for graduation (details can be found in the current Standard), which can be obtained either from previous academic careers or through elective courses offered by the VEE or other Unibo departments.

Table 3.1.2. Curriculum hours taken by each student

Subjects	A	B	C	D	E	F	G	H
Basic subjects								
Medical physics	23		1					24
Chemistry (inorganic and organic sections)	19				8			27
Animal biology, zoology and cell biology	28	4	2				2*	36
Feed plants and toxic plants	20					4		24
Biomedical statistics	14		4					18
Specific veterinary subjects								
Basic Sciences								
Anatomy, histology and embryology	164			18	38			220
Physiology	149	2	2	7	20			180
Biochemistry	106		2	24				132
General and molecular genetics	19			3				22
Pharmacology, pharmacy and pharmacotherapy	51			4				55
Pathology	68	16						84
Toxicology	29			4				33
Parasitology	78			12	2		2*	94
Microbiology	34	2	1	9				46
Immunology	9							9
Epidemiology	16			2				18
Professional ethics and communication	4							4
Animal health economics and practice management	59	4						63
Animal ethology	15							15
Animal welfare	18	2		2	2			24
Animal nutrition	78			16			6*	100
Clinical Sciences in companion animals (including equine and exotic pets)								
Obstetrics, reproduction and reproductive disorders	68			12	10	9		99
Diagnostic pathology	60	7				18		85
Medicine	90	5	1	25	8	9		138
Surgery	124	1		10	10	34		179
Anaesthesiology and analgesia	16					12		28
Clinical practical training in common companion animals						297		297
Infectious diseases	30		4	2				36
Preventive medicine	30	2	3					35
Diagnostic imaging	50	4		18		3		75
Therapy in common companion animals	24							24

Clinical Sciences in food-producing animals (including Animal Production and Herd Health Management)						
Obstetrics, reproduction and reproductive disorders	40		6	7	4	57
Diagnostic pathology	51	3			17	71
Medicine	54	1	1	6	22	84
Surgery	31		3	6	6	46
Anaesthesiology and analgesia	8					8
Clinical practical training in common food-producing animals					243	243
Infectious diseases	54	3		6		63
Preventive medicine	27	5	3			35
Diagnostic imaging	10		7			17
Therapy in common food-producing animals	10					10
Animal Production, including breeding, husbandry and economics	68	4	7	13		92
Herd health management	60					60
Veterinary Public Health (including Food Safety and Quality)						
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification	20	3				23
Control of food, feed and animal by-products	93	7	8	4		112
Zoonoses and their prevention	18	6				24
Food hygiene and environmental health	40		3			43
Basic food technology	21		4			25
Practical training in VPH and FSQ				90		90

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (educational visits); H: total

Table 3.1.3. Practical rotations under teaching staff supervision (excluding EPT)

Types	List of practical rotations (Disciplines/Species)	Duration (hours)	Year of programme
Intra-mural clinics (VTH)	Practical activity at the VTH	18	1
	Hospitalisation and patient record system	20	5
	Consultation	10	5
	Emergency service CA – off-hour shifts	36	5
	ICU/Emergency room CA	15	5
	Nephrology CA	5	5
	Endocrinology CA	5	5
	Gastroenterology and pneumology CA	5	5
	Oncology and haematology CA	5	5
	Neurology CA	5	5
	Cardiology CA	5	5
	Diagnostic imaging CA	38	4,5
	Clinical pathology CA	10	5
	Case discussions CA	4	5
	Case discussion FPA	4	5
	Animal reproduction CA	4	5
	Animal reproduction CA – on-call	12	5
	Animal reproduction Horse	4	5
	Internal medicine Horse	8	5
	Equine perinatology	16	5
	Equine perinatology – off-hour shifts	24	5
	Surgery and anaesthesiology CA	50	5
	Surgery and anaesthesiology CA – off-hour shifts	24	5
	Surgery and anaesthesiology Horse (also including off-hour shifts)	76	5

	Continuing education (journal club, book reading)	26	5
Ambulatory clinics	Farm animals clinics and herd health management	21	5
Herd Health Management	Animal production	18	5
	Herd data management	7	5
	Reproduction	2	5
	Internal medicine	1	5
	Surgery	1	5
	Visits to farm animals	30	5
	Visit to poultry farm	6	4
	VPH (including FSQ)	Veterinary Pathology	23
Avian pathology		13	4
Wild and Exotics animals Diseases		13	5
Extramural exotic pets clinics		7	5
Infectious diseases		19	5
Food hygiene and environmental health		3	4
Food inspection, control and certification		36	5
Control of food, feed and animal by-products		12	2,4
Basic food technology		4	4
Virtual slaughterhouse		12	5
Visit to slaughterhouses		35	5
Visit to feed production industry		4	5
Visit to food industries		6	5
Visit to CA shelter		5	5
Visit to fauna park	6	4	
Electives		6-34	4

Table 3.1.4. Curriculum hours taken as electives by each student

Subjects	A	B	C	D	E	F	G	H
Wild animal physiology and adaptation to the environment	48							48
Animal behaviour: morphophysiological, ethological aspects and behavioural disorders	42				6			48
Veterinary medicine in history and art	48							48
Laboratory animal science and animal models for translational medicine	48							48
Sampling for diagnostic histology and cytology	48							48
Veterinary oncology	48							48
Unconventional alternative or complementary medicines to classical medicine	48							48
Biosecurity in intensive pig husbandry	14	8		8		8	10*	48
The Veterinarian role in the management of bees and aquatic animals in controlled environment	36			6		6		48
Reproduction in camelids	48							48
Problem-based approach: emergencies in equine reproduction	48							48
Problem-based approach: emergencies in CA reproduction	48							48
Problem-based approach: endocrinology and nephrology of dog and cat	48							48
Problem-based approach: emergency medicine of dog and cat	48							48
Specialized surgical techniques and rehabilitation in CA	35					13		48

* A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (educational visits); H: total

The compulsory educational activities within the core curriculum encompass a mandatory 8 elective ECTS that students must fulfil. During their 4th year, they have the option to choose one of the 8 ECTS elective courses offered each year by the VEE, covering different topics (a list of courses available during the last three AY is available in Table 3.1.4). Alternatively, they can obtain these ECTS by enrolling in one or more courses offered across all Unibo Departments. As part of its commitment to integrating its educational offer with transversal competences, Unibo also offers students enrolled in any degree programme [courses on soft skills](#) which are aimed at strengthening skills that are considered strategic when entering the world of work. Finally, credits earned from previous studies at Unibo or other Universities can contribute to meeting the required 8 ECTS.

In addition to the mandatory elective activities, students have the option (not compulsory) to attend other courses from the Unibo catalogue, with a limit of 22 additional ECTS.

Other optional forms of knowledge transfer offered by Unibo to students include [Minors](#) (interdisciplinary programmes, separate from degree programmes, centred around topical subjects) and MOOCs (delivered through the [BOOK - UniBO Open Knowledge](#) platform). In particular, the latter include a [MOOC](#) on animal welfare, biosecurity in livestock farming, and veterinary urban hygiene, developed by academic staff members from DIMEVET.

The core preparatory activities prior to the start of the clinical rotations are integrated and coherently programmed in all the years of the curriculum. These hands-on activities are carried out in groups of students and include laboratory and desk-based work, as well as non-clinical work on animals (e.g. dissections, simulations on organs, cadavers). Some of them also involve the use of animal models and simulators at the CSL prior to practicing on living animal. They include the following:

- **1st year**

Safety and biosecurity training course: students are required to attend 3 compulsory on-line courses to obtain relevant information on safety and biosecurity issues before carrying out any practical activities in laboratories, clinics, livestock farms, and slaughterhouses (see Standard 4.9).

Veterinary anatomy: manipulation of bones and arthromyological preparations available for the different species; dissection of animal carcasses; identification and dissection of nonpathological organs; practice on 3D organ models and plastinations, microscopic observation. It is possible to attend the Anatomy Room outside official hours, subject to availability. An osteological material loan service is also active.

General zootechnics and genetic improvement: identification of livestock breeds; animal handling and identification of zoognostic regions and zoometric measurements; observation of teeth and horns for age estimation in horses, cattle, sheep, and goats; genetic aspects and tools important for animal breeding.

Chemistry: safety in the laboratory; description and use of laboratory glassware; preparation of solutions at desired concentration; preparation and use of buffer solutions; measurement of pH, blood buffering system, gas solubility in blood, and osmotic pressure.

Biochemistry: Basic principles of spectrophotometry; Lambert-Beer's law; qualitative and quantitative analysis; determination of protein concentration; enzymology, graphical determination of K_m and V_m ; processing experimental data and construction of specific plots; traditional and modern methods for sample preparation.

- **2nd year**

Physiology, endocrinology, ethology and animal welfare: blood, plasma and serum collection; blood smears execution, staining and differential count of red and white cells; erythrocytes osmotic fragility test; discussion of clinical cases on coagulations; observation and recording of behaviour in the different species; approaching animals and evaluating welfare indices for food producing animals and stress signs in companion animals (CA); recognition of livestock female genital tract and recognition of oestrous phase based on ovaries appearance with species differences; spermatozoa evaluation (viability, sperm concentration, motility); assessment of the vital signs (TPR= temperature/pulse/respiratory rate) and heart tones with the stethoscope in CA; assessment of ECG in CA; blood pressure measurement; urine analyses: pH, specific weight, glycosuria and proteinuria.

Bacterial disease: correct use of light microscope; Gram staining techniques; bacteria isolation; collection, storage, and transport of samples to be subjected to bacteriological exams; culture techniques; techniques for bacteria identification (antimicrobial susceptibility testing, MALDI-TOF and genome evaluation); Kirby-Bauer method.

Parasitic diseases: prevention and safety in the parasitology laboratory; equipment, materials, and reagents useful for parasitological analyses; identification of parasites and practice on the diagnosis, treatment, and control of parasitic diseases; main parasitological techniques to be applied to biological samples (faeces, blood, skin scrapes, etc.).

Mycotic diseases: collection, storage, and transport of samples to be subjected to mycological exams; microscopical and cultural techniques useful to identify mycetes of relevance in veterinary medicine.

Protozoan diseases: collection, storage, and transport of samples to be subjected to parasitological exams in order to detect protozoan parasites; morphological identification in fresh and stained specimens.

Helminthic diseases: collection, storage, and transport of samples to be subjected to parasitological exams in order to detect helminth parasites (flatworms and roundworms); morphological identification.

Arthropods: collection, storage, and transport of samples to be subjected to parasitological exams in order to detect arthropods of relevance in veterinary medicine; morphological identification.

Virus: methods of pathological samples collection and manipulation for several diagnostic procedures for viral isolation; identification of viral agents at electron microscopy and by genomic characterization

Food hygiene and safety: practical application of analytical methods of analysis and laboratory management; epidemiological investigations in case of outbreaks of foodborne illness; food sampling; self-control in slaughterhouses; identification of the regulations applicable to breeding farms and to milk processing; controls on the production flow of a dairy farm and a cheese factory.

General pathology and pathophysiology: collection and processing of samples for cyto-histopathological examination; observation of histological slides for all of the pathological processes covered during the course.

Topographic and radio-tomographic veterinary anatomy: recognition and dissection of the regions of the thoracic and pelvic limbs; detection and deduction of the topographical relationships of the structures contained in the limbs, with attention to muscles, vessels, and nerves; recognition and dissection of the different superficial and deep regions; detection and deduction of the topographical relationships of the structures contained in the thoracic cavity, abdomen, pelvis, head, and neck; radiographic interpretation of normal structures of the body; identification of normal abdominal structures and their ultrasound features on live demo.

- **3rd year**

Anatomic pathology: gross pathology on viscera from slaughterhouses and necropsies.

Animal nutrition and feeding: feed ingredient identification; ration formulation for livestock and formulation of diets for CA and horses using a dedicated software.

Communicable diseases and epidemiology: evaluation and interpretation of diagnostic tests; large animals and CA infectious and parasitic diseases.

Veterinary pharmacology and toxicology: toxins, poisoning, and xenobiotic residues; drug dilution exercises; PK/PD parameters; electronic prescription.

Physiopathology of animal reproduction and ART: macroscopic evaluation of the testis; isolation of the epididymis and epididymal sperm; microscopic evaluation of sperm motility, vitality, and concentration; in vivo stallion sperm collection and CASA evaluation; AI in horses and livestock with training simulator and on the animal; uterine flushing for bovine embryo collection in a training simulator; OPU in bovine and horse; evaluation of macroscopic aspect of genital organs; oestrous cycle phase determination; diagnosis hypothesis based on the evaluation of pathologic organs; instruments for biological sample collection, clinical exam, and ultrasonographic exam evaluation.

Clinical methods, clinical pathology, and legal medicine: recognize the ethical and legal responsibilities in the veterinary profession; clinical approach to the patient; examination of the principal systems in CA and cattle; main laboratory tests and biochemical techniques applied to veterinary medicine.

Animal Production I: main CA breeds recognition; assessment of Body Condition Score (BCS), Resting Energy Requirement (RER), and Maintenance Energy Requirements (MER) in CA; assessment of energy content of pet food; petfood label interpretation; assessment of nutritional needs of healthy dogs and cats; choice of the proper commercial food; formulation of personalised home-made diets; evaluation of commercial diets intended for the nutritional treatment of sick patients.

- 4th year

Inspection, control and certification of food products: inspection procedures of food of animal origin (meat, egg, molluscs, fish); evaluation of the freshness of fish and fish species; search for parasites.

Semeiotics, pathology, anaesthesiology and veterinary surgical medicine: physical examination based on surgical approach; perform aseptic procedures properly; use of basic surgical instruments and execution of the most common surgical suturing techniques; pain assessment and management; perform sedation, and general and regional anaesthesia.

Semeiotics, internal medicine, radiology and diagnostic imaging: clinical examination in CA and cattle; use of basic imaging equipment; interpretation of radiographic, tomographic, and ultrasound images, and recognition of signs of disease in various organs and system.

Communicable diseases and public health: managing health plans in ordinary or emergency situations; identify the most appropriate preventive measures to avoid the emergence of outbreaks in a herd or in a territory in epidemic condition and to control endemic condition; using tools such as zootechnical registry, epidemiological surveillance, food safety and public health; solving real-world problems of health risk; setting up a biosecurity and vaccination plan in a poultry farm; maintaining health and safety of oneself, patients, clients, colleagues, and the environment in the veterinary setting; recognizing basics symptoms, diagnosis, and risks of transmission associated with the main zoonotic diseases in birds (wild and pet) and small mammals/reptiles (wild and pet).

Animal production II: assessment of the welfare level of farm animals by means of validated systems; recognition of behavioural signs of discomfort; recognition of the relationship between animal welfare, rearing system, and the quality of animal-derived products; knowing morpho-functional aspects of the main dairy, beef, swine, and ovine breeds, farming technologies, and their relationship with products quality; formulating a pig diet; organising an enrichment plan for pigs.

- 5th year

Veterinary Surgery – small animals: performing mock surgeries on a dummy: exeresis of skin neoplasia, lymphadenectomy, sacculectomy, caudectomy, digit amputation, total ear canal ablation (TECALBO), and lateral ear canal resection (Zepp procedure).

Veterinary Surgery – horse and cattle: performing procedures on anatomical preparation: resection of the annular ligament, removal of accessory metacarpal, digital neurectomy, treatment of bovine foot lesions, orchiectomy, bovine abdominal surgery.

Veterinary Orthopaedics: performing an orthopaedic examination in dog; applying a bandage; implanting orthopaedic devices on bone models; radiographic measurements for hip dysplasia and patellar luxation.

Clinical medicine and medical therapy of companion animals: obtaining an accurate and relevant history of the patient; performing clinical examination of the principal systems and recognising signs of disease; formulating a list of differential diagnoses; developing proper treatment plans and prepare clinical records; manage a medical emergency; understanding when euthanasia is appropriate.

Large animals clinical internal medicine and therapy: obtaining an accurate and relevant history of the herd and of the single animal; assessing clinical examination of the principal systems in bovine and recognising signs of disease; formulating a list of differential diagnoses; developing proper treatment plans; identifying when euthanasia is appropriate.

Obstetrics, gynaecology and andrology in companion animals: performing a clinical obstetric-gynaecological and andrological examination; collecting data to formulate a diagnosis; proposing a therapy; writing a report; communicate with the owner.

Obstetrics, gynaecology and andrology in livestock: performing diagnosis and treatment in livestock theriogenology (both in male and female), either as individual or as herd.

Veterinary perinatology: diagnosis and treatment of the main perinatal diseases, in particular in horse and dog.

Equine surgery and therapy: performing a limping visit in horse and livestock, a visit for colic syndrome, auscultation of abdomen, rectal exploration.

Equine internal medicine and therapy: identification (Equine Passport Regulation); issuing an electronic prescription; restraining a horse; perform a physical examination in horse; perform an ECG examination; analysis of a BALF sample; blood sample collection; perform crossmatching for transfusion; distinguishing among different heart and respiratory sounds tracks either of normal or pathological patients.

Necropsy techniques and post mortem diagnosis: post-mortem examination of different animal species, including sampling techniques, PM report writing and biosecurity in the PM room.

At least 5 seminars are organized every year before the beginning of CCT rotations. Here are those from the last 3 AY:

- Practice Management Part 1. Patient or owner: who should the veterinarian treat? What is Practice Management - The importance of knowing how to communicate
- Students on the verge of a nervous breakdown. Psychological tricks to prevent stress, recognize burnout, and manage your anxiety while still being a vet
- Practice Management Part 2. The veterinary profession and corporate practice
- Veterinary practice and business - The dynamics of pricing - Working in team
- First Day of Work: Meeting with institutional representatives of the veterinary profession
- Postgraduate specialization pathways: Meeting with representatives of European Colleges
- Job Meets AniCura Online
- Curriculum vitae and self-presentation
- The veterinary profession in the by-product industry
- The veterinary profession at 360°

The 37 ECTS dedicated to specific Core Clinical Training are spread through the 1st, 4th and 5th years.

- **1st year**

Practical activity at the VTH and ETF (1 ECTS): little groups of 1st year students get in contact with professional environments in which the veterinarian operates, and are exposed to situations which increase their awareness of the professional world.

- **4th year**

CCT in Avian Diseases and Diseases of Wildlife and Exotic Animals (2 ECTS): the training in Avian Diseases consists in seminars, practical activities, and visits to poultry farms, providing the basis of health management and clinical and post-mortem diagnostic investigations in poultry. During the training in Diseases of Wildlife and Exotic Animals During students attend seminars, carry out practical exercises, and participate in educational visits to Italian zoological collections, dealing with the practical aspects of the veterinary medicine profession in these contexts.

CCT in Food Inspection, Control and Certification I (2 ECTS): students learn the different methodologies to analyse food production processes and perform microbiological and chemical risk assessments. The production processes are mapped, critical steps are identified, scenarios requiring problem solving skills are examined, food samples analysed, and results critically assessed.

Students can enrol in these 4th year rotations by selecting among multiple shifts, of 20 seats each.

- **5th year**

Most CCT activities are planned in the 5th year right after the end of the courses, at the beginning of December. Students who have passed the preparatory exams can enrol in the different rotations,

which cover the three areas that characterise the veterinary profession. Allowed number for each CCT do not include Erasmus students, for whom additional places are available.

CCT in Companion Animals and Horse Reproduction: includes rotation in Internal Medicine, Surgery and Animal Reproduction and is organised in 3-month blocks in three different periods (with the exception of the activities related to Horse Reproduction which, compatibly with the equine reproductive season, take place only Feb-July): Feb-Apr; May-Jul; Sep-Nov. During the trimester, one-day extramural activities at an external hospital specialised in exotic pets are also scheduled. Students also spend part of the rotation participating to the activities of the National Institute of Artificial Insemination (NIAI). The students enrolled in each trimester are divided in small groups (usually not more than 3) to maximise the efficacy of the training. Shifts are organized during the daytime and night time, including weekends and holidays. Students are primarily involved in the management of hospitalised patients, including monitoring, administering therapies, and supporting intensive care activities. They are trained by the academic and support staff in collecting patient's history, filling out the clinical record, performing clinical examination, collecting biological samples, summarising and discussing the results of examinations, suggesting a list of possible differential diagnoses, as well as defining further diagnostic investigation, therapies, and prognosis. During night shifts, they take part in all activities related to emergency services and hospitalised patients. Up to 36 students can enrol in each 3-month block.

CCT in Food-producing Animals: includes rotations Animal Production (9 months per year, Dec-Sep, no Aug) and Large Animals (10 months per year, Jan-Nov, no Aug). Intramural practical activities on cattle are carried out at the ETF to cover clinical, obstetrics and gynaecology, and surgical aspects, as well as animal breeding and management. Extramural practical activities to train in herd health, herd treatment, pregnancy diagnosis, podiatry, and internal medicine are planned at livestock farms in the area, under the supervision of academic staff or hired practitioners. In particular, students, individually or in couples, spend three full days actively assisting external practitioners during their scheduled visits of and on-call opportunities of the day (for more details see Standard 5.2). Up to 12 students can enrol each month in CCT in Food-producing Animals, and Animal Production rotations must always precede those in Large Animals.

CCT in Veterinary Public Health (including Food Safety and Quality): includes rotations in Transmissible Diseases, Veterinary Pathology, and Food Inspection, Control, and Certification II. Rotations in Transmissible Diseases and Veterinary Pathology are scheduled in the same month for 9 months (Dec-Oct, no Jul-Aug), with up to 14 students per month. These rotations must precede those in Food Inspection, Control and Certification II, which are organised during 10 months (Jan-Nov, no Aug). In this case, each month has a maximum capacity of 10 students.

In the 5th year, 3 ECTS are dedicated to mostly extramural activities in food inspection, control, and certification, which complement the 4th year intramural training. Thanks to agreements with Local Health Authorities (ASL) across the Emilia Romagna region, small groups of students (2 on average) participate in 7 different visits to production facilities such as cattle, pig, poultry, or farmed game slaughterhouses. Under the close supervision of official veterinarians, students observe facilities and equipment, understand animal slaughtering phases, learn the preparation techniques, and become aware of the management of by-products. Details on these activities are also provided in Standard 5.2. The extramural training is complemented by 2 sessions of intramural training using the Virtual Slaughterhouse software.

During the 4th year, an event is organised to present the elective courses offered by the VEE for that AY. Subsequently, students have the possibility to select one course through a dedicated online platform. These courses are delivered within the same timeframe (2 weeks in June), meaning that students can select only one course. Students are required to select their elective courses by mid-November through a digital platform. Their preferences are then recorded in their academic career by the Student Administration Office.

The core practical activities conducted during the pre-clinical courses (1st, 2nd, and 3rd years) are validated when the relative courses are recorded on the AlmaEsami platform.

At the beginning of the 4th year, students are provided with a personal Logbook (“Libretto di Tirocinio”, see [Appendix 9](#)), to be used to track activities conducted during all CCT rotations. In the initial general section of the booklet, the seminars attended before the 5th year CCT rotations are tracked.

For the two CCT units scheduled during the 4th year (see above), the lists of daily activities and skills to be acquired are validated and countersigned by the responsible teachers involved in the training. Upon completion of the CCT rotations and successfully passing the examinations of the related courses, activities are validated when the integrated courses are recorded on AlmaEsami.

To enrol in 5th year CCT rotations, students must complete an online application via the “Studenti on Line” (SOL) platform. This ensures that all the necessary prerequisites (in terms of examinations records) have been met before the beginning of the activities. For each clinical rotation, a set of core activities must be assessed and validated for each student by the responsible academic staff throughout the CCT. For some skills, a rating from 1 to 4 (1 = sufficient; 4 = excellent) is given. Additional competences, which depend on the variable activities and case exposure experienced by each individual student, are assessed and documented in the Logbook by the academic staff. For rotations in Food inspection, control and certification II the document includes a case log, since the experience of each student may be slightly different depending on the visited facilities. Activities carried out extramurally under supervision of contracted practitioners at local farms and at the exotic pets hospital are recorded through dedicated forms, verified and signed by the responsible teacher as described in Standard 5.4.

At the end of each CCT rotation, the responsible teacher verifies the achievement of all the mandatory competences and countersigns the relevant Logbook section. The activity is then recorded on AlmaEsami by the responsible teacher of the CCT or of the integrated course, depending on the specific rotation.

Procedures in place to track activities related to the EPT are described in Standard 3.7 as requested.

Standard 3.2. Objectives of the programme and environment conducive to learning

The DPB and DPQAC ensure that the programme meets the set objectives published in the SUA-CdS through a coordinated work involving both internal (e.g. commissions, staff, and students) and external (e.g. alumni, stakeholders) actors. The web page of each course contains the programme of the course, the educational objectives, the teaching strategy employed, the criteria for the assessment, as well as information on student reception by the responsible teacher. Each programme undergoes an annual review by the responsible teacher, and the syllabus is uploaded on the [dedicated webpage](#) along with the specific contributions of the course towards the achievement of the DOCs.

The DPQAC annually reviews the syllabi for coherence, redundancy, and overlaps based on student feedback. Corrective actions are taken after discussions with the academic staff and representatives for each SDS. Finally, after discussions also involving external stakeholders, the educational objectives are periodically updated to meet job and societal needs, creating the basis for a revised curriculum.

Premises at DIMEVET have been thought and organised to provide students with an environment fostering learning and welfare. The campus layout enables students to remain on-site throughout the day, offering both educational and recreational areas, as described in Standard 4.2. Moreover, the presence of students from other programmes, including an international DP, facilitates exchanges between different educational backgrounds and life experiences. This dynamic extends to postgraduate students (e.g. PhD candidates, residents), as well as to all academic and support staff, who share offices, laboratories, and any other facility, ensuring continuous and close connections between instructors and learners, both inside and outside the classrooms.

The VEE is committed to constantly enhancing a conducive learning environment. A large number of scientific and cultural events are organised annually at DIMEVET, including conferences,

workshops, seminars, to which student participation is always welcome. It is worth mentioning that some of these initiatives are promoted by the students themselves, through the valuable organisational work carried out by the two student associations IVSA Bologna and Omnia Universitatis.

Over the past decade, multiple projects have been started to improve the learning environment at the VEE. These encompasses the creation or renovation of several facilities and equipment (see Area 4), as well as the implementation of state-of-the-art learning resources (see Area 6). In particular, the availability of resources such as the Clinical Skills Lab, the Veterinary Teaching Portal, the educational plug-in of the VTH patient record system, and the Virtual Slaughterhouse software encourages self-learning throughout most of the student's career. The student-led presentations on clinical cases and real-life scenarios during various CCT rotations further enhances their skills in self-evaluation and critical analysis. In addition, curricular EPT, along with the opportunity to engage in extracurricular clinical and research activities under staff supervision, provide a precious mentoring setting that encourages in students the desire for lifelong learning.

Finally, the need to tackle the challenges arising from the Covid-19 emergency has been an additional driver towards the use and improvement of e-learning resources. This transition to seamless and effective online communication and teaching tools continues to facilitate the remote participation of students and staff in meetings and activities that would have otherwise been inaccessible.

Standard 3.3. Educational aims and strategy

The educational aims of the DP, like those of the other VEEs in Italy, are set at the national level (see Standard 3.1). Italian Agency of Accreditation of Universities (ANVUR) requires annual reporting from the VEE that documents the planning, implementation, self-assessment, and revision of such educational objectives. This self-assessment report is drafted by the DPD in collaboration with the Teaching Officer and is the core content of the SUA-CdS. Official communication of the learning outcomes to the teaching staff, students and stakeholders is ensured primarily by the online publication of the SUA-CdS on the [DP website](#).

Every year the DPQAC conducts a comprehensive review using the quantitative indicators on student progression, course attractiveness, internationalisation, and number and qualification of teaching staff provided by ANVUR. This critical review also incorporates analysis of students' feedback on each course, as well as employability data obtained from alumni 1 or 3 years after graduation (national database of the AlmaLaurea Interuniversity Consortium). The DPQAC also evaluates the effectiveness of corrective actions implemented in the preceding year to address critical issues and elaborates, for the coming year, new corrective actions to address any persisting critical points. Once completed, the document is analysed by the FSJC, and the resulting evaluation is taken into account before sharing and discussing it with the DPB. It is then approved by the DIMEVET Board and undergoes a final review by the University Evaluation Committee. A comprehensive description of the DP QA process and an explanatory diagram can be found in Standard 7.5.

The VEE's EAEVE Committee has worked with all faculty members engaged in the DP to carefully align the revised ESEVT Day One Competences to each course (see [Appendix 2](#)) and address potential gaps. A list of the specific contribution of each course to the attainment of the DOCs is accessible to both students and academic staff through the [dedicated page](#) of the DP website.

Standard 3.4. Committee structure and procedures

Various committees are involved in the assessment of the curriculum and its effectiveness. Indeed, while the core curriculum is defined and managed by the DPB and then approved by the DIMEVET Board, specific tasks are delegated to internal committees specifically appointed by the DPB. Students, through their representatives, are actively involved in the DPB and in most of such committees, as well as in the DIMEVET Board.

DPB: is composed of all the teachers responsible for the educational activities of the DP and three student representatives, elected according to the procedures established by Unibo regulations. The

DPB submits proposals to the DIMEVET Board concerning the planning of the teaching offer, the organisation of the teaching activities, as well as the revision of curriculum and teaching regulations. Among other functions, it deals with credit recognition, authorisation to carry out training activities abroad and their recognition, appointment of the examination boards, scheduling final examination sessions and appointment of Graduation Commissions.

DPQAC: supports the DPD in any activity related to the monitoring and quality assurance of the DP. It conducts annual and periodic (every 5 years) reviews of the DP, verifying the implementation of improvement actions approved annually by the DPB. Also, it monitors courses' syllabi and web guides, students' careers, their feedback on educational activities, satisfaction upon completion of the study program, and the employment status of graduates. The DPQAC finally shares the results of the conducted monitoring with the DPB. The student representation in the DPQAC is extensive, involving fifteen students from different cohorts. This includes DP Student Representatives, Year Student Representatives for each DP year, as well representatives for students who have completed the legal duration of the DP but have not yet graduated (so called "Out-of-course").

Year Committees: one for each of the 5 years of the DP, they provide an agile mechanism for promptly addressing critical issues. They consist of the Year Coordinator (a member of the academic staff appointed by the DPB as supervisor for each year of the DP) and the Year Students Representatives (two students elected from the cohort of each year of the DP). Close communication between students and teachers enables swift recognition, evaluation, and resolution of any concerns at this level or, if necessary, involving also the DPD.

FSJC: oversees all the aspects of the five DPs offered by DIMEVET, including the quality of teaching and the support given to students by teaching and support staff, with a keen focus on student opinion survey results. It also provides opinions on establishing, activating, modifying, or discontinuing DPs, and may propose matters regarding teaching and financial resources allocation to the DB. The FSJC produces an annual report and carries out other duties outlined in Unibo's relevant regulations. It is composed by 7 teachers (including the VEE's Head or a delegate) and 7 students.

Standard 3.5. Elective Practical Training (EPT)

During the fifth year, 8 ECTS (200 hours) of the curriculum are allocated to the EPT which can be carried out either extramurally or intramurally. This training can fall in any of the subjects of the degree programme, but may also involve a multidisciplinary approach. This practical component in the current curriculum is referred to as "Elective Practical Training in preparation for the final examination", and is commonly used by students to gain practical experience related to the thesis project. The selection process is unrestricted, allowing students to choose from topics proposed and published on each teacher's personal website, or to agree upon additional themes with them.

The EPT can also be carried out extramurally by activating a traineeship contract with the hosting institution for insurance purposes. In such cases, an academic tutor and a tutor from that institution will oversee the achievement of educational objectives. Every experience must have defined formative objectives, which will be confirmed at the end of the experience by the academic tutor, and then by the DP Director.

Although this "Elective Practical Training in preparation for the final examination" primarily entails practical activities, students are allowed to write a literature-based thesis that results from a thorough review of the state of the art in a particular topic.

Table 3.5.1. Curriculum days of Elective Practical Training (EPT) for each student

Fields of Practice	Minimum duration (weeks)	Year of programme
Companion animals		
Production animals		
Wild animals and exotic pets	200 hours	4 th – 5 th
Experimental animals	(5 weeks)	
VPH & FSQ		

Standard 3.6. EPT providers and agreement

The EPT is initiated by the student with technical support from Teaching Services' Practical Training Office, which activates the formal procedure, inclusive of insurance coverage. The EPT, whether conducted intramurally or extramurally, in Italy or abroad, is specifically designed to acquire practical competences and soft skills in a specific field of veterinary interest. In any case, the student must coordinate with the academic tutor to define educational objectives and program the activity.

Even in the case of an extramural EPT, formative objectives and the activity programme must be agreed upon with both the academic tutor and the external supervisor hosting the student. Companies hosting students for EPT are listed in a [Unibo repository](#); however, it is possible to request a new agreement if not already included. This process is entirely managed by the Practical Training Office. A copy of one of the agreements is available in [Appendix 12](#).

At the end of the EPT, the academic tutor evaluates the student's experience and provides a written opinion on the attained skills. If the EPT is conducted externally, the opinion of the external supervisor is also sought. The evaluation forms and attendance registers are then validated by the Practical Training Office, and the activity is finally recorded by the DPD.

Standard 3.7. Student responsibility during EPT

The students are deeply involved in the selection of the EPT experiences. If the EPT is conducted nationally (extra or intra-murally), the student can make contact with one or more academic staff members, depending on their field of research and teaching. They can also opt for an experience abroad by participating in specific calls for fellowships announced by Unibo. Before submitting their applications, students can seek advice from any teacher who has expertise in a specific field, in order to establish contact with a reference person at the abroad facility (public or private).

To aid students in selecting the subject matter, each academic staff member's webpage contains pages showcasing their topics and research fields of interest. Within their areas of expertise, all faculty members are capable of offering support and expert guidance to interested students. After the decision of the type of EPT (intramural or extramural, domestic or abroad) and the topic, the student also selects an academic tutor among the academic staff. Together, they establish the formative objectives of the EPT. Once the decision is finalised, the EPT is initiated with the support of the Teaching Services' Practical Training Office, as previously described.

During the EPT, the student can always turn to the tutor for assistance if the experience falls short of expectations, for specific situations, suggestions, or any other needs. If the experience is not optimal, the student has the option to suspend it and seek an alternative EPT opportunity, even with the help of another academic tutor. Teachers, 4th and 5th Year Coordinators, as well as the DPD, are always available to receive any request or complain regarding the EPT directly (via mail or in person) or, anonymously, through the relative Year Student Representatives.

In any case, upon completion of the experience, the student must compile a detailed report on the experiences gained, acquired skills, and the quality of support received from both the external and academic tutors.

Comments on Area 3

Please note that CCT has been translated as "Internship" in some webpage titles of the English version of the DP website, due to a choice by Unibo IT Service to use that term for all Unibo's DP when referring to the practical training. We have chosen not to use this term in the SER, nor in the website contents, and stick to the same terminology and abbreviations as in the ESEVT SOP to avoid confusion.

The existing Logbook has recently undergone improvements, also in consideration of, and to better align with, the most recent ESEVT Day One Competences. However, it is still paper-based and, most importantly, does not fully meet how we feel this kind of tool should be designed and used. A project

for the creation of a new and more fit-for-purpose digital portfolio of competences was started, but is currently on hold, pending the release of the EAEVE guidelines for creating this kind of resource. Although the curriculum design has not yet aligned with a fully “integrated model”, the staff engaging with early students are encouraged to integrate clinical relevance into the teaching of foundational subjects and basic sciences.

In 2019, an in-depth review of the curriculum was initiated by the DPD and dedicated working groups were appointed. This initiative was aimed to address suggestions for improvement highlighted during the last Visitation, align with the updated ESEVT SOP and Day One Competences, and cater to the changing needs of the veterinary profession, all within the confines of the national regulatory framework. Despite its launch, the project is still in progress, having suffered delays partly due to the impact of the pandemic (which hindered the activities of the commissions involved in the initial phase), but above all due to the pending modification of the national regulations for university courses. For the DP in Veterinary Medicine this revision also involved the potential extension of the duration to six years.

Meanwhile, however, we have implemented a number of improvements over the past few years. These include: a new class schedule (for 2nd, 3rd, and 4th years), which frees up one day a week for students providing a better time management for personal study and the acquisition of soft skills; optimisation of the 2nd year and 3rd year courses calendar; increased extramural activities to enrich student training experience in different fields; an experiment in blended teaching, in which part of the lectures have been replaced by recorded sessions to be enjoyed asynchronously at the student's convenience, allowing for greater flexibility; reorganisation of the CCT rotations, which included a reduction in the hours spent by students on night and weekend shifts at the VTH, based on their feedback. Finally, starting from AY 2023-24 a partial renovation of the curriculum has been introduced (involving only the recently enrolled cohort of students) to comply with already introduced national regulations that suppressed the State Examination after graduation and imposed to assess the professional ability of the students before the end of their academic career.

Suggestions for improvement in Area 3

We are committed to finalise two important actions which will strongly impact the quality of our educational offer. The curriculum renovation is the top priority for the staff involved in the process, who are ready to take up the work done and adapt it to the changed scenario. In parallel, the implementation of a new digital tool available to students throughout their academic career is essential to keep track of the quantity and variety of hands-on activities carried out along with the progressive achievement of Day One Competences.

Area 4. Facilities and equipment

Standard 4.1. General description

DIMEVET is located in the municipality of Ozzano dell'Emilia, approximately 14 km south-east of the centre of Bologna. It is [easily accessible](#) by car, train, or bus: some trains to and from Bologna stop at the Ozzano dell'Emilia station, which is a 30-minute walk away and is connected by a dedicated public bus service. Buses from the Ozzano dell'Emilia station and from the Bologna city centre stop right outside the VEE's gates. Another bus stop for the lines connecting Bologna with the towns along the Via Emilia is less than 1 km away. In addition, a bike path connects DIMEVET to the centre of Bologna almost without interruptions.

The campus covers a surface of approximately 106,000 m², with 38,000 m² of built-up area. The core complex dates back to 1991 and consists of three interconnected buildings that, when viewed from above, appear as a single structure in the shape of an 8. It includes DIMEVET's administrative offices, lecture theatres, most of laboratories for teaching and research activities, the necropsy room, student associations offices, designated study areas, the [Clinical Skills Lab](#), the [G.B. Ercolani Central Library](#), the [Museum of Domestic Animal Anatomy](#), the [Museum of Veterinary Pathology and Teratology](#), the cafeteria, and offices for academic and support staff.

The central building is surrounded by several other buildings, housing the [Veterinary Teaching Hospital](#), facilities for the hospitalisation and isolation of companion animals, equine, and food-producing animals, the pharmacy, the slaughterhouse, the goat breeding area, animal research facilities, the Wildlife Veterinary Centre, a refreshment room for students, as well as additional practical training theatres. Within the campus, there is also the guardian's residence, a guesthouse, and a creche. Many of the campus buildings are now equipped with photovoltaic solar panels for the production of green electricity.

Multiple parking areas are available for visitors, students, and staff in different parts of the campus. All facilities are accessible to people with reduced mobility and designated parking spaces are available near the various building entrances. DIMEVET gates are open from 7:00 am to 8:00 pm; outside these hours, they can be accessed only for VTH emergencies (24/7) or by authorised staff with personal magnetic badges.

The facilities used for the veterinary medicine curriculum also include Unibo's [Experimental and Teaching Farm \(ETF\)](#) and [National Institute for Artificial Insemination \(NIAI\)](#), both affiliated with DIMEVET. The ETF, which was completed in 2003, is located approximately 1 km away on the same road as the campus and covers approximately 2,900 m². It houses a dairy cattle farm with an average of 180 animals and is designed for practical teaching and experimental activities.

Established in the early 1970s, NIAI is located in Cadriano, 22 km from DIMEVET north-east of Bologna, on a surface of 33,000 m², with about 2,600 m² of built-up area. It currently provides services focused on equine and small ruminants reproduction, including pre- and post-graduate teaching and training activities. [Appendix 3](#) contains the general layout and detailed plans of all the DIMEVET facilities used in the core veterinary programme.

In addition, a variety of extramural facilities, such as farms, hatcheries, slaughterhouses, food processing industries, private clinics, and local health authorities, are also used for training activities. Although not directly involved in the veterinary curriculum, it is worth mentioning that DIMEVET also encompasses the [Cesenatico Local Operative Unit](#), located on the Northern Adriatic Sea at about 100 km from DIMEVET. The site hosts a 934 m² building encompassing laboratories as well as offices for academic and support staff, and the 235 m² "Massimo Trentini University Centre for Fish Production", which includes enclosures, equipment, and lecture halls where teaching and scientific activities linked to aquatic animals and fish products take place. The latter will soon be relocated to a newly completed 1,763 m² building, which will house state-of-the-art equipment, enabling the centre to further establish itself as a leading institution on the international stage.

A short distance from DIMEVET, just across the street, is the [Bologna-Ozzano Technopole “Rita Levi-Montalcini”](#), home to the [IRET Foundation](#) laboratories and the [Interdepartmental Centre for Industrial Research, Life Sciences and Technologies for Health \(CIRI-SDV\)](#) of the University of Bologna. The Technopole promotes RRI (Responsible Research and Innovation), offering assistance in the development of new products for health and wellness (pharmaceutical sector, biotechnologies, advanced therapies, biomedical devices), support in the technological transfer from research centres to industry, and TRL assessment and risk assessment with reference to the steps to bring a new product to the market. Some members of the DIMEVET academic staff operate at the Technopole, which thus represents an opportunity for students to participate in advanced research projects and operate facilities of the highest level.

Maintaining and updating of current facilities, as well as planning for the construction of new ones, is a priority for the VEE, being functional to the achievement of [BO1.1, BO1.2 and BO3.1 of the DIMEVET-SP](#). Interventions on DIMEVET facilities are responsibility of Unibo’s [Technical, Building and Sustainability Area \(ATES\)](#). A three-year work plan based on the needs of all Unibo’s campuses and structures and on financial availability is approved by the Board of Governors, and a list of interventions is put in place at the beginning of each year. An [ATES local unit](#) is in place at DIMEVET, serving as a connection to the central headquarters and responsible for supervising processes, gathering needs, and managing emergencies at departmental level.

The ETF and NIAI are under the management and regular maintenance of Unibo’s [Azienda Agraria](#), who designated a manager for each facility among the VEE’s academic staff.

Planning, implementing, managing, and overseeing the University’s IT services is the task of Unibo’s [IT Systems and Services Area \(CESIA\)](#), which is organised into various units capable of offering specialised support across a range of topics, including tools for teaching innovation. The CESIA task force at DIMEVET provides local support to staff and students, and ensures that IT resources in use in the Department’s lecture halls, laboratories, and other facilities are efficient.

Equipment for the VTH is purchased and maintained using VTH funds, following discussion of the proposals from the operative unit coordinators and deliberation by the VTH Committee. Contracts for periodic and specialised assistance have been activated for the main clinical equipment.

The acquisition, maintenance, and upgrading of equipment for research and teaching laboratories, including the Clinical Skills Lab, are supported by funds from DIMEVET and research funds. In accordance with DIMEVET’s QA system procedure [“PG 11 - Monitoring the equipment”](#), each piece of equipment is labelled, associated with a dedicated instrument profile, and scheduled for verification/calibration/maintenance, under the responsibility of the assigned Scientific-Educational Service. In additions, specific SOP may be present detailing procedures on certain instruments.

In accordance with available resources, the Department assumes responsibility for addressing any additional needs associated to its facilities and equipment.

Compliance of all physical facilities of DIMEVET with European and national regulations is responsibility of the previously mentioned ATES of Unibo. In addition, the Service for Health and Safety in the Workplace promotes activities aimed at improving working conditions and ensures the highest standards of safety and biosecurity in all campuses and structures of the University, in accordance with [Legislative Decree No 81/2008](#). These include taking care of planning periodical inspection and maintenance of the alarm systems, fire extinguishers, elevators, etc.

The maintenance of clinical instruments, diagnostic devices, laboratory hoods, as well as any other equipment is managed by the relevant DIMEVET SES, also in compliance with ISO 9001 quality management system.

The Biosecurity Committee and the Safety Officer of DIMEVET are responsible for the implementation and dissemination of procedures concerning biosecurity and safety aspects related to the departmental facilities (see Standard 4.9).

The Ministry of Health and the Regional Veterinary Service have authority over all facilities where animals are housed and material of animal origin are used (e.g. VTH, stables, ETF, necropsy room),

conducting regular inspections to ensure biosecurity and animal welfare compliance. In addition, Unibo's [Service for Animal Welfare](#) deals with all aspects related to animals used for scientific and educational purposes, also ensuring that premises comply with all applicable regulations.

Work in progress at DIMEVET - Thanks to substantial financial resources derived from ministerial funding (“Dipartimenti di Eccellenza” and “PNRR”, see Standard 2.1), investments of the University of Bologna, research projects, and private donations, a multitude of significant initiatives aimed at the renovation and enhancement of DIMEVET's facilities and equipment have been implemented over the past few years.

Completed works include both the construction or renovation of key facilities (e.g. clinical skills lab, veterinary clinical oncology centre, isolation facilities for different animal species, examination rooms for horses, research facilities for avian species, translational medicine centre, artificial insemination centre for small ruminants, research facilities for aquatic species) and the acquisition of high-level equipment (e.g. CT scanner, electromyograph, scanning electron microscope, milking robots at the ETF, horse treadmill, MALDI-TOF and MS/MS spectrometers). Moreover, the main building's entrance, reception, restrooms, Student Administration Office premises, and part of the flooring in the common areas have been completely renovated. A powerful generator set has been installed to ensure the continuous power supply to the VTH as well as other critical facilities and equipment.

At the time of writing, a series of further interventions are still in progress and are expected to be completed in the coming months. These include the complete renovation of the necropsy facility, the construction of a new small animal intensive care unit, the renovation of examination and waiting rooms in companion animals clinical facilities, the restoration of the clinical facilities for food-producing animals, the completion of the Wildlife Veterinary Centre (currently pending sanitary authorisation) and laboratory animal facilities, the activation of a veterinary biobank, the installation of smart feeders at the ETF and smart beehives, and the creation of new locker rooms in different areas of the VTH and at the ETF. The cafeteria will soon be moved from the main building to a completely renovated space within one of the surrounding buildings, thus freeing up a strategic space that will be converted into a new modular lecture theatre. In addition, the campus heating and cooling system is being completely replaced and an important energy efficiency project for the VTH buildings is underway.

In 2024, targeted initiatives aimed at improving both the quality of life (installation of a drinking fountain, outdoor furniture, and a bicycle repair station) and security (installation of security cameras and restoration of the campus perimeter fence) within the VEE will be implemented. The complete renovation of swine breeding facilities is also due to start soon. Once all these tasks are finished, the renovation of the internal road surface will be carried out.

Standard 4.2. Teaching facilities

All lecture halls are fully equipped with: computer with 27” touch monitor, video projector, audio/video connection for laptop, loudspeakers, environmental microphone, webcam, whiteboard, and Wi-Fi coverage. An [online system](#) is available for academic staff to consult the planned activities in each VEE's lecture hall.

The Messieri auditorium is also used for graduation ceremonies, conferences, and other events. The E6 and E41 halls have been recently renovated and are now furnished with individual modular desks that can be adapted for group work. The E7 hall is equipped with an interactive whiteboard. The Esterna Clinica Medica hall is equipped with a restraint cage for large animal visits, but is currently unavailable, pending renovation. As mentioned in Standard 4.1, the relocation of the bar has paved the way for the forthcoming creation of a brand-new modular lecture hall.

The list of premises for lecturing, many of which are named in memory of distinguished professors who played significant roles in the development of the VEE, is provided in Table 4.2.1.

Table 4.2.1. Premises for lecturing

Hall	Seats	Size (m ²)	Hall	Seats	Size (m ²)
Messieri	200	282	Cugnini	34	56
Chiodi	150	235	E7	24	66
Gherardini	150	281	E6	20	40
Lanfranchi	102	139	41	20	47
Esterna Clinica Medica	94	146	AP	20	45
Montroni	70	94	BIO	20	45
Borgatti	68	94	Fisiologia	20	39
Falaschini	52	64	Mal Inf	20	94
Mensa	52	64	MM OVU	20	35
Antonelli	40	58			

At the upper floors, various rooms, often housing historical collections of scientific texts, are available and are used for seminars, internal meetings, exams, and as study rooms (see Table 4.2.2).

Table 4.2.2. Premises for group work

Room	Seats	Size (m ²)	Room	Seats	Size (m ²)
Pathology	12	43	Animal Reproduction	10	60
Avian Pathology	15	85	Food Safety and Quality	10	38
Internal Medicine	10+10	30+33	Animal Production	10	40
Surgery	10	71	Pharmacology	8	66
Anatomy	10	28	Physiology	20	59

Premises for practical work are designed to allow working with small groups of students and are all equipped with computer, video projector, and Wi-Fi coverage. A complete list of these premises and a brief description of their specific features is provided in Table 4.2.3.

Practical work is also carried out in research laboratories and diagnostic facilities pertaining to the different Scientific-Educational Services, while clinical practical work takes place mainly at the VTH, ETF, NIAI, and in extra-mural facilities.

Table 4.2.3. Premises for practical work

Premise	Seats	Size (m ²)	Equipment
Laboratory E1	42	109	Laboratory benches with water, gas, and electrical supply, Bunsen burners, chemical hoods, laminar flow hood, incubator, spectrophotometers, pH meters, microscopes, shakers, centrifuge, combined fridge +4/-20 °C
Laboratory E2	35	77	Laboratory benches with water, gas, and electrical supply, Bunsen burners, microscopes, -20 °C freezer, window overlooking the slaughterhouse
Laboratory E3	29	54	Laboratory benches with gas and electrical supply, sinks
Laboratory E5	25	80	Laboratory benches with water, gas, and electrical supply, Bunsen burners, centrifuge, microscopes, fluorescence microscope with projector connection
Macroscopic Anatomy Room	48	100	4 anatomical marble tables, 4 anatomical stainless-steel tables, 3 refrigerated cells, carcass hoist
Microscopic Anatomy Room	45	46	41 microscopes
Necropsy Room	30	142	3 anatomical tables for small animals equipped with a suction system for liquids and fumes, 1 mobile large animal table with electric motor, 1 refrigerated cell, 1 freezer cell, carcass hoist, trimming station, scale
Stabulario AP	20	40	2 anatomical tables for small animals
LabInf Computer Room	40	63	24 computers, whiteboard
Diapason Computer Room	20	34	16 thin clients

The [Clinical Skills Lab](#) is housed in the former companion animal surgical area, covering an area of approximately 205 m². It consists of four interconnected rooms separated by doors and glass partitions, allowing different activities to be carried out simultaneously without interference.

Two of the rooms are equipped with individual modular desks that can be easily repositioned and grouped according to the required activity and number of participants. One of them also features a projector that supports wireless connection to laptops.

The CSL is in continuously growing and evolving and currently encompasses 16 different stations, including a recently completed communication lab (for detailed information and layout of the CSL see also Standard 6.3 and [Appendix 3](#)).

The [G.B. Ercolani Central Library](#) covers 1,139 m² on two floors and can accommodate up to 88 people (see Standard 6.2). It is open Monday to Friday, from 8:45 am to 6:00 pm, and lockers are available just outside. Two bright study rooms, offering 88 seats overall, are located close to the student associations offices. Additionally, students can find seats and tables in various corridors and common areas. Another external study room is available next to the VTH, but is currently unavailable due to the ongoing renovation. All these internal and external areas have Wi-Fi coverage.

Lockers are located at the entrance of each premise for practical work. Additional lockers are available for students along the main corridor in the common area of the main building. Locker rooms and lockers are also available at the VTH, although some are currently unavailable due to ongoing renovation works in the facility. Construction of new locker rooms at the ETF will start in 2024.

Two separated bedrooms are available for students during night shifts at the VTH.

As anticipated, the cafeteria is in the process of being relocated to one of the buildings surrounding the main block. The new location has a seating capacity of up to 56 people and also includes an outdoor area with tables and chairs. Vending machines for non-alcoholic beverages, hot drinks, and snacks are located in two different areas within the VEE. A large canteen is located less than 1 km away.

Plastic seats and tables are available in the green areas inside and around the main building, but they are going to be replaced by new, more durable metal ones provided by Unibo to all its Departments. A student lounge equipped with microwaves was also available next to the external study room. However, similarly to the latter, it has been temporary dismantled to serve as a waiting room for the VTH during the renovation works and will soon be restored. Other leisure spaces include the headquarters of the student associations present at the VEE (IVSA Bologna and Omnia Universitatis). The “[Preziosi University Sports Centre](#)”, named after a young professor who passed away prematurely, is within walking distance from the central complex. It includes a five-a-side football field, a basketball court, and a volleyball court, along with changing rooms. The swimming pool and gym in Ozzano dell’Emilia are located just a few hundred meters further down the road.

Restroom facilities, complete with toilets and sinks, are available throughout the VEE. The largest ones, which are located at easily accessible points of the ground floor, have undergone recent renovations and also include toilets for people with reduced mobility. Additionally, sanitary services pertaining to animal facilities (e.g. VTH, necropsy room) are equipped with showers.

In the main building, office space is adequate to the needs of academic staff, support staff, PhD students, and temporary personnel. Most academic staff have their own space, while sometimes temporary staff have shared premises. Each office is equipped with both Wi-Fi coverage and wired connection, and multiple all-in-one network printers are available at each floor. Premises pertaining to the different DIMEVET Scientific-Educational Services also include a large number of research laboratories, as shown in [Appendix 3](#).

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

Please see tables below for the requested information.

Table 4.3.1. Premises for housing healthy animals

Species	Premise	Size (m ²)	Description
Equine	VTH	15+15+13	3 resident healthy mares in individual straw-bedded stalls
Equine	NIAI	2,982	8 resident healthy mares housed in an outdoor grass paddock with a 36 m ² three-wall shelter; during the winter, the mares stay in individual straw-bedded stalls and are turned out daily
Cattle	VTH	58	2 resident healthy cows in multiple pens with straw bedding separate from the shelter pens
Cattle	ETF	2,242	180 cattle, including 110 cows and 70 young animals on average (2 pens for lactating cows, 2 for dry cows, 3-4 for breeding and pregnant heifers, 3 multiple boxes for calves >8 weeks, 17 individual pens for calves <8 weeks)
Small ruminants	VTH	85	25 goats are housed in a dedicated barn; approximately 50 kids are born annually and are kept in a collective pen within the barn until they are sold

Table 4.3.2. Premises for housing research animals

Species	SES (Unit) or Facility	Size (m ²)	Description
Swine	ANFI (ASA)	216	1 room with 8 farrowing crates for both conventional hybrid breeds and minipig breeds; 1 room with 3 individual pens for boars single housing; 2 rooms with 6 multiple pens each for up to 60 pigs
Swine	SPASA (PROBESUI)	138+56+199	2 rooms with 14 cages for sows; 1 room with 16 cages for up to 96 piglets; 4 rooms with 20 pens for 120 growing-finishing pigs
Rodents and lagomorphs	BSBT (STAL)	121	1 room with individually ventilated cages for mice (160) and rats (72), to host up to 1,100 mice and 140 rats; 1 room with 12 cages for rabbits, to host up to 12 rabbits or 120 guinea pigs
Poultry	SePAV	210	2 rooms with a total of 9 poultry isolators housing up to 300 animals in secure isolation conditions
Cattle	ETF	72	8 individual tie-stalls (in addition, research trials can be conducted on up to 180 free stalled cows)
Bulls	NIAI	128	8 individual boxes, 4 of which with outdoor paddock
Small ruminants	NIAI	290	8 indoor boxes for up to 20-24 sheep

Table 4.3.3. Premises for housing hospitalised animals

Species	Premise	Size (m ²)	Description
Dogs/Cats	General ward	30+21	2 separated premises, housing up to 25 dogs and cats
Dogs/Cats	Day hospital	31+10	12 dogs and 8 cats
Dogs/Cats	Emergency	46	3 cages
Dogs/Cats	Intensive Care	80	2 premises: one with 2 ICU paediatric beds, the other with 7 cages and 2 kennels for large dogs
Dogs/Cats	Isolation	19	3 cages
Dogs/Cats	Quarantine	13	3 cages
Dogs/Cats	Neonatology	40	4 boxes and 1 mobile double cage
Equine	General ward / intensive care	113	8 boxes; 2 grass paddocks for horses turn out
Equine	Perinatology / intensive care	202	15 boxes, of which 5 equipped for NIC and 1 equipped for adoption; 2 grass paddocks for horses turn out
Equine	Isolation	25+23+23	3 boxes (1 unit for an adult horse, 1 unit with 2 boxes equipped for foals and broodmares)
Equine	NIAI	248+37	30 boxes (25 indoor, 5 outdoor)
Cattle	Buiatrics	123+25+28+48	8 outdoor stalls for calves; 2 indoor boxes for adult cattle; 5 indoor stalls for calves or small ruminants; 1 isolation stall

Table 4.3.4. Premises for clinical and diagnostic activities at the VTH and NIAI

SES / Unit	Description	No. of rooms	Size (m ²)
Small Animals Clinical Service (SERCLIPA)			
	Day hospital	2	31+10
	General ward	2	60+21
	Waiting rooms	3	44+23+15
	Drug and consumable warehouse	6	0
<i>Internal Medicine Unit (MED)</i>	Consultation	8	15+18+18+17 14+14+22+15
	Chemotherapy	1	15
	Endoscopy	1	22
<i>Emergency and Critical Care Unit (MEDURG)</i>	Consultation and emergency service	4	11+11+12+12
	Intensive care	2	80
	Isolation	1	19
<i>Reproduction Unit (RIPRO)</i>	Quarantine	1	13
	Consultation	1	25
	Artificial insemination	1	27
<i>Surgery Unit (CHIR)</i>	Neonatology and whelping boxes	1	40
	Consultation	3	13+17+22
	Surgical theatre	4	35+36+35+28
	Equipment sterilisation (in common with the Equine Clinical Service)	1	35
Equine Clinical Service (SERE), including NIAI			
<i>Internal Medicine (UMI) and Surgery (UC) Units</i>	Examination	1	40
	Exam/radiology/standing surgery	1	55
	Consulting/reporting room	1	9
	High-speed treadmill facility	1	87
	Drug and consumable warehouse	1	10
<i>Surgery Unit (UC)</i>	Surgical theatre	1	127
	Surgical patient preparation	2	11+11
	Surgeons/materials preparation	2	15+11
<i>Perinatology and Reproduction Unit (UPER)</i>	Examination (with holding box and stock)	1	55
	Stall-side laboratory	1	9
	Foals adoption facility	1	10+10
	Consulting/reporting room	1	12
	Drug and consumable warehouse	2	13+13+9+9
<i>National Institute for Artificial Insemination (NIAI)</i>	Stallions breeding shed	1	195
	Stallions holding/preparation box	2	32
	Mares examination/AI	1	36
	Bull breeding shed	1	198
	Bulls breeding soundness evaluation	1	112
	Small ruminants semen collection/AI	1	5
	Semen production and cryopreservation laboratory	4	150
<i>Cell Therapy and Assisted Reproduction (LRBA)</i>	Cellular biology and biological therapy	4	52+19+37+60
Cattle and Small Ruminants Clinical Service (BUIATRIA)			
	Consultation	1	67
	Drug and consumable warehouse	3	14+9+14
	Isolation	1	48
Anaesthesia and Resuscitation Service (SANE)			
	Preparation room	1	18
	Recovery room for small animal	1	23
Diagnostic Imaging Service (SDIMM)			
	Small animals ultrasound room (including echocardiography)	3	19+19+22
	Small animals X rays room	2	19+33
	CT room	1	51

Clinical Pathology Service (CLINLAB)			
	Area 1 - Haematology	1	43
	Area 2 - Biochemistry and urinalysis	1	37
	Area 3 - Sample acceptance/registration	1	36
	Area 5 - Warehouse	1	34
	Area 6 - Sample storage	1	24
<i>Cytology unity (CITOLAB)</i>	Area 4 - Cytology	1	13
<i>Transfusion medicine unit (VeBS)</i>	Transfusion medicine	1	36
<i>Infectious Diseases Diagnostic Unit (INFLAB)</i>	Serology and nucleic acids extraction	1	15
	Molecular biology – mix preparation	1	16
	Molecular biology – nucleic acid amplification	1	13
	Virology – cell culture, viral isolation	2	21+21
	Virology – storage	1	19

Table 4.3.5. Other premises for diagnostic and support services

SES / Unit	Description	No. of rooms	Size (m ²)
Pathology (AP)	Necropsy room	2	142+40
	Histology laboratory	2	36+25
	Biomolecular laboratory	1	28
	Immunohistochemistry laboratory	1	31
	Cytology laboratory	1	20
Communicable Diseases and VPH (MTSPV) / PARMIC	Parasitology laboratory	2	34+42
	Mycology laboratory	2	26+25
Avian Pathology (SePAV) / VeLaBac	Bacteriology laboratory	2	36+26
Biosciences and Biotechnologies (BSBT) / FTCA	Pharmacology and Toxicology laboratory	4	31+42+55+29
Animal Production and Food Safety (SPASA) / DIETCeG	Dog and cat nutrition laboratory	3	63+19+20

A detailed list of the equipment used for clinical and diagnostic services is provided in [Appendix 10](#).

Experimental and Teaching Farm (ETF) – The [Experimental and Teaching Farm \(IG and FB pages\)](#) of the University of Bologna houses a total of 180 Holstein cows, including 95 lactating cows, dry animals, calves, and heifers. Lactating cows are housed in free stalls with straw-bedded cubicles, divided in two milking pens, each housing 42 and 45 animals. All pens are equipped with headlocks to restrain cattle for treatment or teaching activities such as pregnancy checks, artificial insemination, clinical visits, milk or blood sampling or treatments administrations. A specific cattle chute is present and used for hoof trimming. Environmental temperature and humidity inside the barn are controlled and recorded continuously by electronic probes. Temperature and Humidity Index (THI) is automatically calculated by the system, which activates the cooling system, composed of fans and sprinklers, independently activated in each different area, according to the specific THI recorded. Cows are milked by two automatic Fullwood Merlin M2 milking systems, equipped with Afimilk software to measure individual daily milk production (kg) and composition (% fat, protein, and lactose content) by mid-infrared spectroscopy. After calving, cow body weight is measured twice daily on an automatic weighing scale, located at the exit of each automatic milking system. Each animal is equipped with two accelerometers, positioned on the neck and the front leg, to record continuously rumination time, resting behaviour, and activity of each cow (AfiAct software). In addition, the farm is equipped with a management software (AfiFarm) in which all individual data related to health, fertility and movements of the animals are recorded. These systems are used daily by staff and students to manage health issues and heat detection, as well as for research purposes.

National Institute for Artificial Insemination (NIAI) – The [National Institute for Artificial Insemination](#) hosts mares and stallions for the purpose of clinical reproductive activity and semen production. A new facility for hosting small ruminants for semen production has been completed recently. Both indoor stalls and outdoor stalls with paddock are available at the NIAI. An andrology laboratory is available for evaluation of semen of all species, fully equipped with all the instruments including a computer-assisted-sperm analyser and a FacsCalibur flow cytometer. In addition, the facility encompasses the equine semen production centre, the equine artificial insemination centre, and the small ruminant semen production centre.

Premises for VPH & FSQ - An authorised slaughterhouse is present at DIMEVET and is operated by an external company (LEM CARNI Srl). The facility spans around 220 m² and comprise a bovine slaughter line enabled to process 20 adult animals per week. In addition to the slaughter hall, available premises include: 3 refrigeration rooms with space for 35-40 bovine carcasses, 2 offices, and changing rooms. Teaching activities carried out at the slaughterhouse primarily focus on slaughter hygiene, sanitisation of facilities and equipment, inspection methodologies, sampling techniques, and practices related to traceability and certification of meat products. As described in Standard 5.2, during the CCT students also visit different types of slaughterhouses on the territory. For a list of extramural facilities involved in VPH and FSQ training see [Appendix 11](#).

Standard 4.4. Organisation and management of the VTH and ambulatory clinics

As previously mentioned, the [Giuseppe Gentile Veterinary Teaching Hospital](#) is a multi-structure composed of six different Scientific-Educational Services (SES).

The [Small Animals Clinical Service \(SERCLIPA\)](#) recognises as areas of expertise those relating to surgery, internal medicine, emergency medicine, and reproduction in companion animals. It includes 4 different units:

- Emergency and Critical Care Unit (MEDURG), which operates 24 hours, every day, 365 days a year. It deals with triaging and treating major clinical emergencies, ensuring continuous care for critically ill hospitalised patients in the emergency room and intensive care areas. The service is provided by a dedicated team of veterinary professionals, supported by auxiliary staff. Surgical emergency coverage is provided by on-call staff from CHIR and SANE.
- Internal Medicine Unit (MED), which deals with all medical issues concerning small animals, providing cutting-edge expertise for optimal diagnoses and therapeutic management of diseases in dogs and cats. MED operates Monday to Friday (9:00 am to 5:00 pm) offering both general and specialised consultations: cardiology, dermatology, endocrinology, gastroenterology, haematology/transfusion medicine, oncology, neurology, nephrology/urology, and pneumology. Moreover, the MED staff ensures continuous care (24/7/365) for small animals hospitalised in the general ward.
- Reproduction Unit (RIPRO), which focuses on the reproductive sphere of both healthy and diseased animals. It offers consultations on weekdays from 9:00 am to 5:00 pm and provides on call emergency service 24/7/365. Services include: control of the oestrous cycle; cycle monitoring and mating management; assisted reproduction (sperm collection, evaluation and conservation, artificial insemination); pregnancy monitoring, birth assistance and emergency and scheduled caesarean section; neonatology and neonatal surgery; diagnosis and medical-surgical treatment of pathologies of the male and female genital tract; diagnosis and medical-surgical treatment of breast pathologies; surgery of the male and female genital systems and of the newborn; infertility treatment.
- Surgery Unit (CHIR), which provides elective (Monday-Friday, 9:00 am to 5:00 pm) and emergency (on call 24/7/365) surgical treatment for soft and hard tissue in small animals. The unit employs traditional or minimally invasive techniques such as thoracoscopy and laparoscopy. In particular, the services offered include: general surgery, thoracic surgery, abdominal surgery,

oncological surgery, emergency surgery, neurosurgery, orthopaedics, odontostomatology, and ophthalmology.

The [Equine Clinical Service \(SERE\)](#) includes 4 Units:

- Perinatology and Reproduction (UPER)
- Laboratory of Reproduction and Animal Biotechnology Laboratory (LRBA)
- Surgery (UC)
- Internal Medicine (UMI)

The Service operates with a 24/7 hospital and emergency service that can be accessed by phone for owners or referring veterinarians. Ambulatory patients seeking general or specialised consultations are admitted Monday to Friday, from 9:00 am to 5:00 pm. Upon arrival, patients are admitted by veterinary staff from the different units, based on the primary presenting complaint. These units also provide emergency and intensive care services. Specialised consultations in various internal medicine sub-disciplines (e.g. cardiology, gastroenterology, hepatology, nephrology, neurology, endocrinology, dermatology, respiratory, oncology, sports medicine, and ophthalmology), as well as surgery and orthopaedics, and perinatology-reproduction are available during weekday opening hours. Neurology and dermatology consultations are handled by respective specialists. An external consultant is available for advanced ophthalmology. Additionally, an external farrier service is available for hospitalised equine patients. At the NIAI, clinical reproductive activities for housed equines are operational 24/7. Semen production, commerce, and specialised clinical consultations occur during weekday opening hours.

The [Cattle and Small Ruminants Clinical Service \(BUIATRIA\)](#) recognises its areas of expertise in livestock and ovine/caprine medicine. The Service primarily focuses on providing clinical assistance to animals admitted to the VTH and to those owned by DIMEVET. In addition, it conducts animal on-site welfare assessments in collaboration with official veterinarians at farms and livestock facilities in the area. BUIATRIA includes the Hospitalisation Management (BURIC) and Animal Welfare (BENE) Units.

The [Anaesthesia and Resuscitation Service \(SANE\)](#) is responsible for carrying out specialised anaesthesia for elective (Monday-Friday; 9:00 am to 5:00 pm) and emergency procedures (on call 24/7/365) on patients referred to the VTH. SANE guarantees also anaesthesiologic support for research projects on animal models conducted at the VEE.

The [Diagnostic Imaging Service \(SDIMM\)](#) provides imaging services for all animal species Monday-Saturday, from 9:00 am to 5:00 pm, and is available on-call on Sunday. The service provides high quality, compassionate clinical care to patients through the use of medical imaging technology. Services offered include computer tomography, digital computed radiography, fluoroscopy, and ultrasonography.

The [Clinical Pathology Service \(CLINLAB\)](#) aims to evaluate the main laboratory parameters for all animal species. On a routine basis and as support to the 24h emergency service, CLINLAB performs haematology, chemistry, electrophoresis, urinalysis, cytology, endocrinology, diagnostic tests for infectious diseases (molecular, antigen, and serological tests), collection and processing of blood components, and genetics. The emergency lab is equipped with instrumentation for automated blood count, chemistry, and blood gas analysis. The service includes also the Infectious Diseases Diagnostic Unit (INFLAB), Cytology Unit (CITOLAB), and Transfusion Medicine Unit (VeBS).

The recent reorganisation of CCT rotations and extramural activities, which allowed to have small groups (1-3) of students, helped maximising individual hands-on training. The increased number of staff members working at the VTH and supervising students tasks has further supported this goal. Students are actively involved in the daily activities of the different areas, as extensively described in Standard 5.3. Their hands-on participation is consistent with a detailed list of practical competences and performance criteria that each student must acquire before graduation, and which are documented in the Logbook.

Clinical activities conducted within the VTH and during ambulatory clinics adhere to a QA framework that includes procedures designed to align to ESEVT standards. The VEE meets the [National Practice Standards](#).

Standard 4.5. Student access to diagnostic and therapeutic facilities

Students have access to all diagnostic and therapeutic facilities starting from some of the practical classes in the 3rd, 4th, and 5th year, and particularly during the CCT. Once engaged in the CCT rotations, they are provided with an ID badge and gain full access to the appropriate areas under the direction of academic and support staff. Students actively engage in clinical activities as well as in clinical rounds, discussing clinical cases and participating to the daily planning. As mentioned in Standard 4.2, a communication lab has recently been established within the Clinical Skills Lab premises. This facility will soon be fully operational, representing a useful resource for enabling the development of communication skills for students.

Standard 4.6. Isolation facilities

Once completed, the new 19 m² isolation unit for companion animals will accommodate two medium/large-size dogs or three small-size dogs/cats in individual cages, though not in separate rooms. It will also feature a negative pressure ventilation area and a 13 m² quarantine area. Both facilities will have dedicated intensive care monitors, infusion pumps, and an oxygen source. Waste materials will be collected and disposed of separately.

The isolation facility for adult horses includes a delimited outdoor area with a dedicated and separate entrance from other patients, a 10 m² room for staff entrance and dressing a 25 m² box equipped for highly infectious patients, featuring padded walls, winch, forced ventilation with HEPA filters, separate disposal of faeces and straw, and equipment for oxygen and fluid therapy. Additionally, the box can be configured to accommodate a horse stock for performing standing procedures.

At the Perinatology and Reproduction Unit, two 23 m² boxes are separated from the others and equipped to handle highly infectious critically ill neonatal foals accommodated with their mothers. These stalls do not have forced ventilation, share the animal entry area, but have a separate staff dressing room with its own access. The waste from these boxes is disposed of directly to the sewage treatment plant through the automated underground system.

The Cattle and Small Ruminants Clinical Service is equipped with a 24 m² stall that can be designated for patient isolation, if needed, due to its specific configuration. In such cases, appropriate signs are posted and biosecurity measures described in the relevant procedures are implemented.

Protocols concerning the management of infectious patients at the VTH are outlined in the DIMEVET Biosecurity manual (see Standard 4.9), and both staff and students undergo specific training before operating in the designated facilities. Individual protection devices and disinfection materials are required to access isolation facilities, and separate equipment is used. A washing system for wheels and side parts is available for the disinfection of trucks carrying suspicious patients.

Standard 4.7. Ambulatory clinic for production animals

Field veterinary medicine and Herd Health Management are taught to students by the academic staff during courses in the 3rd (“Epidemiology”, “Large animals infectious diseases”, “Aquaculture and small species breeding”, “Aviculture”), 4th (“Animal welfare and production quality”, “Cattle and sheep production”, “Pig production”), and 5th (“Obstetrics-gynaecology and andrology in livestock”, “Large animals clinical internal medicine and therapy”) curricular years. These courses also include visits to a dairy cow farm and a swine farm (“Large animals infectious diseases”), and to a poultry farming facility (“Aviculture”).

Students are then trained on Herd Health Management during the 4th and 5th year CCT. At the Experimental and Teaching Farm, practical activities are related to mastitis control and selective dry cow therapy, routine check of body condition scores, faecal, urine, and blood sampling for the control

of subclinical ketosis, hypocalcaemia, and digestive problems, as well as feed and ratio evaluation. Herd data collected are analysed by students to highlight potential problems and possible solutions related to herd composition, incidence of disease and mortality rate in adult and young animals, reproduction performance and milk quality. Students have the opportunity to volunteer at the ETF. Trips to external cattle and small ruminants farms, as well as poultry farms, are planned, where students are involved in health assessment activities and risk management evaluations under the supervision of the academic staff and of the official veterinarians of the Local Health Authorities (ASL). Similarly, visits to a pig breeding farm are organised, to instruct students on Herd Health Management (including vaccination plans and nutrition) and animal welfare. Details on the above-mentioned extramural activities are also provided in Standard 5.2.

During ambulatory clinic activities carried out on horses (under supervision of academic staff) and ruminants (under supervision of non-academic teaching staff) students also practice in field veterinary medicine (see also Standard 5.3 for further details). No dedicated vehicles are available at the VEE to be used for the ambulatory clinic. Vehicles belonging to the academic staff and non-academic teaching staff involved in such activities are equipped with necessary equipment and materials. Students generally reach the facilities on their own, but they can also coordinate with the staff to travel with them. In all cases, the school provides them with disposable gowns, surgical caps, and gloves.

Standard 4.8. Transports

Vehicles for transporting students, academic staff, and support staff available at DIMEVET include two 5-seater full electric cars (Nissan Leaf and Hyundai Ioniq), one 5-seater mild hybrid car (Fiat Panda Hybrid), and one gasoline 4-seater car (Fiat Panda). When needed (e.g. group visits to extramural facilities), 25 to 50-seats buses are rented from private companies. Staff members may also use their own vehicle to transport colleagues and students, under their own responsibility.

Live animals are transported to and from DIMEVET under the responsibility of their owners.

Although the movement and disposal of materials of animal origin is managed by two contracted companies (Vita Nova Srl and VTL Snc, see Standard 5.1), two minivans (Fiat Doblò Cargo) equipped with proper containers for the transportation of small cadavers and animal organs with the same standards are available at DIMEVET, one based at the Ozzano dell'Emilia campus and the other at the Cesenatico Local Operative Unit. The replacement of these vans with new electric equivalents is scheduled for the early months of 2024. Unibo manages the insurance and maintenance of all vehicles, which can be reserved through an online system that provides the authorised driver with a code for key pickup on the requested date and records destination and mileage information.

Standard 4.9. Operational policies and procedures

As described in Standard 4.1, changes in Unibo's facilities are planned at central level by the BG and managed by the [Technical, Building and Sustainability Area \(ATES\)](#) on a three-year basis. Additionally, like any other Department, DIMEVET can formally request specific maintenance interventions if necessary. The periodic revision or modification of safety and biosecurity equipment is the competence of Unibo's Service for Health and Safety in the Workplace (SHSW), with the collaboration of the DIMEVET Safety Officer.

The DIMEVET Services are responsible for the maintenance of their research and teaching equipment, covering the relative costs through the projected budget approved annually by the Department Board and individual research funds. Any supplementary needs can be highlighted by the Head of the Service in the annual review and then addressed to the Department Head, who collects all the information for discussion and decision within the DIMEVET Board. Issues related to the maintenance and renewal of VTH equipment are brought by the relevant Unit to the attention of the VTH Committee, which deals with them supported by both VTH funds and dedicated resources from DIMEVET and Unibo.

The VEE promotes the highest standards of safety and biosecurity for staff, students, and visitors through the Safety Officer and the Biosecurity Committee. The Safety Officer has duties and responsibilities defined in Unibo's [Regulation for Safety and Health in the Workplace](#) and is supported by several support staff units, creating a network of diverse skills and experiences in close contact with Unibo's SHSW.

The Biosecurity Committee is appointed by the DIMEVET Head, and its composition is renewed every three years. The Committee meets at least four times a year, but other meetings are organised with smaller groups to address specific issues. It is in charge of verifying available biosecurity procedures, drafting cross-cutting procedures, training staff and students, organising informative events, and planning and implementing surveillance systems at DIMEVET. The Committee is also responsible for updating and improving the VEE's Manual for Biosecurity, which is available for staff and students as an [online browsable document](#), easily reachable from the DIMEVET, DP, and VTH websites. [Appendix 6](#) contains a summary in English and the browsable (upon login) homepage of the document.

The management of special waste is regulated [at the Unibo central level](#). In addition, specific procedures are in place at the VEE for the storage and disposal of special waste resulting from teaching and research activities. Biological and chemical materials are collected in suitable containers, available in all laboratories and in the VTH, which are then stored in a dedicated facility before being picked up for final disposal by a specialised company. The runoff water and straw from the isolation facilities are collected in specific containers and disposed of separately.

Operational policies and procedures are continuously improved and communicated to relevant stakeholders by e-mail, DIMEVET website, and specific signals on the premises doors. Scanning the QR code applied at the entrance of a certain premise, students and staff can easily access the relevant section of the manual, containing the specific procedures that must be followed to work safely. Signs and infographics are displayed at the entrance of the VTH and other facilities to inform patients owners and any other visitors about relevant biological risks and biosecurity procedures.

All students, postgraduate students, academic staff, and support staff must attend a compulsory occupational health and safety training course in order to be allowed access to DIMEVET facilities, as required by [Legislative Decree No 81/2008](#) and the [State-Regions Agreement of 21 December 2011](#). The course consists of three sequential units, with a total duration of 12 hours, and a final assessment test must be passed to complete each unit. The first two units can be taken online at any time, while the third, focusing more extensively on specific (e.g. chemical, biological, and physical) hazards, must be completed in presence during one of the sessions periodically organised at the VEE and is valid for five years. Students can find any information related to the different modules of the course on the [dedicated page](#) of the DP website.

In addition, multiple formative events addressed to specific audiences are organised at DIMEVET. Every year, a seminar is held by the Biosecurity Committee for students in each year of the programme. Before accessing the Anatomy rooms for the first time, 1st year students are now required to fill out a digital form to confirm their acknowledgment and understanding of the pertinent biosafety procedures. Moreover, the manuals for the clinical management of companion animals and food-producing animals are provided to students, who must carefully read them and successfully pass the related evaluation tests before beginning their 5th year CCT. During rotations at the VTH, they are then involved in the application of biosecurity standards, in particular concerning infective patient isolation and the handling of biohazardous materials. Further specific training is provided to students who attend a particular facility (e.g. laboratories, animal facilities) for EPT activities.

The Biosecurity Committee also organises formative events on the manual and on specific aspects of biosecurity relevant for the staff operating in certain DIMEVET Services. Additionally, content related to biosecurity has been incorporated into the recently implemented teacher training programme (see Standard 9.1).

The [Health and Safety page](#) of the DIMEVET website contains all the information and links related to hazards, proper behaviour, and emergency management in the Department. Any matter concerning

any aspect of safety and biosafety at the VEE can be reported through two dedicated email addresses (dipsmedvet.sicurezza@unibo.it and dimevet.biosicurezza@unibo.it). These mailboxes are monitored by the Safety Officer and the Head of the Biosecurity Committee, who deal with incoming requests, reporting them to the relevant colleagues and helping them to find appropriate solutions supported by the other members of the Committee.

DIMEVET has an enduring dedication to best practices demonstrated by the extensive efforts to implement the ISO 9001 standards, a commitment that extends across all of the Department's facilities, including the VTH. Clients of the VTH can provide their informal feedback on the services received through a specific [online form](#), as indicated also on the patient discharge letter. The responses collected are constantly monitored by the VTH Medical Director, and the results are periodically shared and discussed within the VTH Committee.

A form for the formal submission of complaints by any VTH clients and VEE stakeholders is available on the DIMEVET [Quality Management System webpage](#). It must be sent to a designated email address supervised by DIMEVET's QA officer, who is responsible for forwarding the complaint to the person or unit involved, in accordance with the specific procedure "[PG 04 - Non-compliance and complaints management](#)". The latter then evaluates whether to accept or reject the complaint within 10 working days. Acceptance of the complaint implies analysis of the causes and implementation of corrective actions.

Each CCT activity is evaluated by students through the relevant anonymous form, which is administered by the teacher in charge at the end of the activity. The results are then shared with the DPQAC, which works with the relevant academic staff to design corrective actions and propose them to the DPB, which in turn monitors their efficacy over time.

Comments on Area 4

In recent years, DIMEVET has undergone numerous structural renovations. While some interventions were aimed at significantly enhancing certain areas, others were essential due to emergencies arising from aging infrastructure. However, the aforementioned delays in completing these renovations and obtaining required permits have inevitably affected the everyday organisation and activities at the VEE. The Wildlife Veterinary Centre, whose construction was finished some time ago, is currently awaiting health authorisation to become fully operational.

The main building housing DIMEVET was constructed relatively recently (in the '80s), but using low-cost building criteria with little emphasis on energy efficiency. This has led in recent years to dissatisfaction among staff and substantial and ongoing maintenance interventions, particularly due to recurrent breakdowns in the heating and cooling system, resulting in consequent flooding. To address this longstanding issue, Unibo has planned a substantial overhaul of the entire air conditioning system, involving the installation of new refrigeration units (already completed), a new thermal power plant (already completed), and a complete renewal of distribution systems work scheduled to begin in early 2024), with an overall budget exceeding 5 million Euros.

Furthermore, in 2022, Unibo financed an additional energy efficiency project for the VTH buildings, amounting to an additional 3 million Euros (work in progress). Unfortunately, these construction sites have added to those of other ongoing projects and continuous maintenance interventions. Some of these have experienced slowdowns and delays due to contractor non-compliance, resulting in overlapping activities and prolonged inconvenience for staff and students.

Another longstanding and still unresolved issue is the presence of a permanent pigeon colony in the building, due to architectural characteristics that facilitate roosting and nesting. Over the years, Unibo and DIMEVET have implemented various deterrence and pest control systems, but the results are still far from being considered satisfactory.

Despite the complications arising from these persistent temporary inconveniences, DIMEVET has nevertheless made continuous progress in biosecurity. In particular, an important project has been underway for some years aimed at gathering information on the prevalence, risk factors, and profiles of antimicrobial resistance of bacterial agents responsible for nosocomial infections in veterinary

facilities. The objective is to develop guidelines for their control and is focused on patients and environments within the VTH (with plans to extend it to other facilities in the area). It involves various members of the academic staff, support staff, and doctoral candidates, in collaboration with an expert human microbiologist from the Antimicrobial Stewardship Unit of the Emilia Romagna Region's healthcare system. This initiative facilitated the identification of critical elements and raised the awareness among the entire DIMEVET community regarding biosecurity. Consequently, it led to the definition and demarcation of the VTH area and drafting of related Standard Operating Procedures (SOPs), as well as the creation of a digital biosecurity manual that is readily accessible for immediate consultation and easily updatable at any time.

Suggestions for improvement in Area 4

One of the most critical issues deriving from the ongoing construction works is the current shortage of available locker rooms for staff and students. Restoring these premises as soon as possible is an absolute priority, but discussions are underway to identify additional spaces strategically allocated for this purpose.

Although the Clinical Skills Lab serves as an excellent and versatile facility for teaching, its utilisation during educational activities still has room for growth. In particular, the facility now also includes the communication lab, whose potential must certainly be utilised in a structured manner throughout the course of study.

Area 5. Animal resources and teaching material of animal origin

Standard 5.1. Use of animals and material of animal origin

An adequate pre-clinical and clinical practical training is essential for Veterinary Medicine students in order to achieve Day One Competences. In agreement with current standards and guidelines for quality assurance in the European higher education area (ESG 2015) issued by the European Association for Quality Assurance in Higher Education (ENQA), EU Directive 2005/36/EC (amended by 2013/55/EU), the principles established by EAEVE, and [BO1.2 and BO2.1 of the DIMEVET-SP](#), the VEE is strongly committed to making healthy and diseased animals, as well as materials of animal origin and cadavers, available to all students for practical training.

The necessary resources, identified through the annual monitoring of the ESEVT indicators, student opinions and specific needs of individual courses, are shared among the academic staff in order to implement timely corrective measures when needed, also in consideration of the number of students year by year. The regular involvement of the VTH, Experimental and Teaching Farm (ETF) and National Institute for Artificial Insemination (NIAI) management, together with multiple agreements with external facilities and practitioners guarantees a suitable number and variety of animals and material of animal origin for each student. Based on the type of activity and facility where it is being carried out, students are grouped in small groups to ensure practical and safe hands-on training in basic sciences, clinical sciences in both companion and food-producing animals, and veterinary public health.

The VEE vision in the use of animals for teaching recognises and applies both the 3R's principles (Replacement, Reduction, and Refinement) and EAEVE's "never the first time on a live animal" concept. Non-animal alternatives (e.g. models, dummies, simulators) are used wherever possible and are progressively implemented as part of an ongoing process aiming at innovative and more ethical teaching. These approaches are complementary and are not meant to replace practical activities on live animals, but to limit their number and minimise the risks to animal welfare.

All students must receive high-quality clinical training before graduation. Practical activities are conducted at the VTH, ETF, NIAI, and various external facilities, ensuring balance across the different animal species.

The rotations at the VTH are organised so that each student (alone or in pairs) is exposed to a comparable variety of activities in all major clinical disciplines, including internal medicine, surgery, anaesthesia, reproduction, clinical pathology, image diagnostics, emergency, and critical care. To maintain a balance between first opinion and referral cases, the scheduled rotations specifically include shifts at the first consultation room and the emergency service. The notable caseload of the VTH ensures a good balance between acute and chronic cases, as well as between visits and hospitalisations throughout the year.

Beyond VTH patients, the on-call ambulatory service offered in the area by the VEE also contributes to the diversity of equine patients seen. The recently introduced extramural activities on exotics pets at a local veterinary hospital provide students with a variety of species and clinical scenarios also in this category. Training in bovine medicine starts intramurally at the VEE core facilities and ETF, and is enhanced by the opportunity to participate in the daily activities of contracted practitioners at external farms. This combination exposes students to a wide diversity of cases, allowing them to gain valuable clinical skills in bovine medicine. For food-producing species, off-campus visits to a variety of farms (bovine, swine, poultry, rabbits) are organised starting from 3rd year to train all students in herd health management, nutrition, and animal welfare (see Standard 5.2).

The CCT Logbook ("Libretto di Tirocinio") and the forms for individually recording patients seen extramurally that each student must complete during the CCT are effective tools to provide evidence that the relevant core clinical training has been received. Based on periodical analysis of ESEVT indicators, revisions of the SOPs, and valuable suggestions by stakeholders, specific areas of

intervention are identified. In addition, the process also considers occasional circumstances, both internal (e.g. facilities undergoing renovations) and external (e.g. limited access to external facilities due to infectious diseases emergencies). Subsequently, corrective strategies are implemented to ensure the provision of up-to-standard clinical training for all students.

At DIMEVET, we are committed to ensuring the highest level of welfare for animals used in both educational and research activities. All procedures adopted strictly follow the requirements set by current Italian legislation ([Legislative Decree No 26/2014](#), implementing [Directive 2010/63/EU](#)) and procedures are continually reviewed and improved to ensure the highest standards of animal care. The Unibo's [Animal Welfare Committee \(CoBA\)](#), which is chaired by a member of the VEE academic staff, operates as the ethics committee for animal experiments and is the reference for animal-related ethical issues. Its duty is to verify that research projects involving the use of animal are ethically and scientifically acceptable, in compliance with the applicable legislation. It also provides expert advice for any procedures that could potentially compromise the welfare of animals used in research and therefore require approval from the Ministry of Health.

Students are trained in the fundamentals of animal welfare during multiple courses throughout their studies (e.g. animal breeding, physiology, ethology, legal medicine, animal protection and veterinary legislation, Animal welfare and production quality). To promote animal welfare and ensure student safety during practical training involving animals, academic staff members responsible for these educational activities have developed two manuals for the clinical management of [companion animals](#) and [food-producing animals](#). Students must carefully read these documents and successfully pass the related evaluation tests before beginning the CCT. Intramural and extramural activities carried out by students on animals are always supervised by staff members and/or tutors. Together with the low student/animal ratio, this helps to protect animal welfare and avoid any unnecessary pain or stress during all these activities.

Animals are used for teaching purposes only after obtaining owner authorisation through written informative consent (at the VTH) or oral consent (in field activities). As previously mentioned, DIMEVET's strategy is committed to reducing the use of animals in teaching, especially in early hands-on activities. A significant amount of effort has been put in the development of the Clinical Skills Lab and digital tools, which provide students with effective alternatives for gaining practical experience without the need for live animals.

Cadavers and organs from healthy animals or not dead for infectious diseases are used for practical training in anatomy. Dead dogs and cats are provided by the VTH, external private clinics, and kennels and catteries in the area. Lesions-free organs and carcasses of farm animals are purchased at local slaughterhouses or supplied by facilities within the VEE and other Unibo sources, such as the nearby Department of Agri-Food Science and Technology. Upon arrival, the material is properly stored according to specific needs in one cold room (4 °C) or two freezer rooms (-18 °C), located at the Anatomy and Physiology Service. Resources available for students training in anatomy also include a wide range of dry-prepared bones, joints and muscles of the main domestic species, as well as fixed specimens (in formalin-free fixative), organ preparations made from polyurethane casts and 3D models. The osteological material in the anatomy laboratory is available to students for self-learning outside official hours, and a loan service for bone specimens is in operation. Students can also access the DIMEVET [Museum of Domestic Animal Anatomy](#), collecting more than 1,600 preparations which include about 80 natural and artificial skeletons. In addition, a variety of slide collections are used for training in microscopic anatomy.

Hands-on training in pathology involves cadavers, organs and pathological specimens obtained from multiple sources. The Pathology Service receives companion animals, ruminants and horses that have died or been euthanised at the VTH, as well as from external private clinics, owners and shelters. These animals are provided for diagnostic necropsies to determine the cause of death, or for teaching purposes upon owner's authorisation, recorded through a [dedicated form](#). Local slaughterhouses provide bovine, swine and equine organs as well as small ruminants, piglets, poultry and rabbit

cadavers, according to the teaching schedule. Bovine, small ruminants, swine and rat cadavers are occasionally provided by other facilities within the VEE. Cadavers for diagnostic necropsies are delivered fresh or refrigerated and processed within a few hours or stored in a cold room until the next day. The material for teaching purposes is also frozen, kept at -18 °C and then thawed when needed. One cold room (4 °C) and one freezer room (-18 °C) are available at the Pathology Service. During necropsy, tissue samples are collected for diagnostic histopathology, cytopathology and immunohistochemistry. Paraffin-embedded samples and slides are stored in a catalogued archive and represent a useful resource for educational purposes. Necropsy reports are electronically stored on the Fenice platform (see Standard 5.4), each individual record containing gross pathological and histological findings, and results of virological, bacteriological and parasitological investigations. The valuable collection (more than 3,000 pieces) of real size organ models of domestic animals with pathological lesions at the DIMEVET [Museum of Veterinary Pathology and Teratology](#) is also available for students.

The necropsy room underwent a renovation process starting in A.A. 2022-23, which inevitably affected the teaching activities that usually take place there. In this phase, practical training involving companion animals and small-size farm animals are conducted in another dissection room available at the VEE, and the material is stored in the cold room located at the Anatomy and Physiology Service. In addition, an agreement has been made with the Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna (IZSLER) in Bologna, where students carry out practical training on large animals, always under the supervision of at least one member of the VEE teaching staff. The renovation is expected to be completed in the second half of AY 2023-24, however this collaboration is likely to be maintained thereafter to provide students with a greater variety of cases for training in pathology.

Vita Nova Srl and VTL Snc are contracted companies responsible for transporting and disposing of animal cadavers and organs at DIMEVET. Vita Nova Srl transports the materials from external sources to DIMEVET up to 3 times per week, according to teaching needs. VTL Snc collects the materials from a dedicated cold room (4°C) at DIMEVET and disposes of them through incineration at an external facility. Both companies use vehicles authorised for the transport of animal by-products in compliance with [Regulation \(EC\) No 1069/2009](#) and [Commission Regulation \(EU\) No 142/2011](#). If necessary, a vehicle equipped with proper containers to transport cadavers and animal-based materials with the same standards is available at the VEE.

The informed consent of the animal owner is always required before using cadavers and material of animal origin, from both internal and external sources. Detailed information on the collection, storage and disposal of animal by-products is provided in DIMEVET managing procedures “PG 13 – Category 1 animal by-products management”, “PG 14 – Biosecurity in necropsy and anatomy rooms” and “PG 12 – Hazardous waste management”, and in the relevant sections of the Biosecurity Manual.

The EAEVE Committee of the VEE monitors the number and variety of animals and material of animal origin used in pre-clinical and clinical training on an annual basis, according to DIMEVET managing procedure “PG 101 – Monitoring of EAEVE indicators”. With the support of designated members of the academic staff involved in practical activities, the Committee calculates ESEVT indicators and reports the collected data to the DPQAC, highlighting any critical issues. The DPQAC reviews the information and collaborates with the VTH Committee and academic staff responsible for specific areas of clinical training to develop potential solutions for addressing weaknesses. The DPQAC then submits suggestions to the DPB, which is in charge of deciding the actions to be taken and bringing them to the attention of the DIMEVET Board for discussion and approval, also in consideration of their sustainability for the VEE. Students are also actively involved in the whole process through their representatives within the DPQAC and DPB. Decisions taken to enhance clinical services and practical training are finally shared with teaching and support staff, students and relevant stakeholders before being implemented, and then assessed and revised by the relevant bodies over time.

An example of this process is given by the action taken before the beginning of AY 2022-23 to improve the number and variety of teaching activities on ruminants. Selected external practitioners have been trained and contracted by the VEE to offer supplemental extramural practical training to students, who follow them during their daily activities at several local farms. Given the satisfactory quantitative results for the indicators and the positive feedback from the evaluation questionnaires of the students involved, the DPQAC and DPB suggested implementing this strategy for the following years as well.

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

Species		2022-23	2021-22	2020-21	Mean
Cattle	Cadaver	0	0	0	0
	Organs/bones	370	350	350	356.7
Small ruminants	Cadaver	0	0	0	0
	Organs/bones	4	4	4	4.0
Pigs	Cadaver	0	0	0	0
	Organs/bones	247	237	237	240.3
Companion animals	Cadaver	155	160	155	156.7
	Organs/bones	75	75	75	75.0
Equine	Cadaver	0	0	0	0
	Organs/bones	235	235	241	237.0
Poultry & rabbits	Cadaver	30	40	35	35.0
	Organs/bones	1	10	1	4.0
Aquatic animals	Cadaver	80	80	80	80.0
	Organs/bones	0	0	0	0
Exotic pets	Cadaver	0	47	21	22.7
	Organs/bones	0	0	0	0
Others	Cadaver	0	0	0	0
	Organs/bones	1 (elephant)	2 (tiger)	0	1.0

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

Species	2022-23	2021-22	2020-21	Mean
Cattle	197	196	189	194.0
Small ruminants	54	22	75	50.3
Pigs	100	96	120	105.3
Companion animals	10*	10*	10*	10.0*
Equine	3	3	3	3.0
Poultry & rabbits	0	0	0	0
Exotic pets	0	0	0	0

* Dogs and cats owned by students or staff are used for pre-clinical training, approximate number

Table 5.1.3. Number of patients seen intra-murally

Species	2022-23	2021-22	2020-21	Mean
Cattle	146	149	149	148.0
Small ruminants	1	0	3	1.3
Pigs	0	0	0	0
Companion animals	6,402	6,517	6,111	6,343.3
Equine	489	496	420	468.3
Poultry & rabbits	0	0	0	0
Exotic pets	28	48	40	38.7

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

Species	2022-23	2021-22	2020-21	Mean
Cattle	1,647	179	264	696.7
Small ruminants	0	15	45	20.0
Pigs	138	218	207	187.7
Companion animals	0	0	0	0
Equine	96	74	79	83.0
Poultry & rabbits	82	91	68	80.3
Exotic pets	147	0	0	49.0

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

Species	2022-23	2021-22	2020-21	Mean
Cattle	75%	75%	75%	75%
Small ruminants	100%	100%	100%	100%
Pigs	100%	100%	100%	100%
Companion animals	34%	34%	34%	34%
Equine	15%	15%	15%	15%
Poultry & rabbits	100%	100%	100%	100%
Exotic pets	80%	80%	80%	80%

* These data are not recorded and are a projection based on three months analysis.

Table 5.1.6. Cadavers used in necropsy

Species	2022-23	2021-22	2020-21	Mean
Cattle	8	31	12	17.0
Small ruminants	4	4	0	2.7
Pigs	14	50	6	23.3
Companion animals	138	201	84	141.0
Equine	6	14	22	14.0
Poultry & rabbits	78	84	80	80.7
Aquatic animals	0	0	0	0
Exotic pets	7	10	10	9.0
Wild animals	19	185	184	129.3

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

Species	2022-23	2021-22	2020-21	Mean
Cattle	220	79	36	111.7
Small ruminants	0	7	1	2.7
Pigs	6	6	6	6.0
Poultry	11	21	4	16.0
Rabbits	2	0	0	1.0
Aquatic animals	0	0	0	0

Table 5.1.8. Number of visits (per student) in slaughterhouses and related premises for training in VPH (including FSQ)

Species	2022-23	2021-22	2020-21	Mean
Ruminant slaughterhouses	2	2	2	2.0
Pig slaughterhouses	2	2	2	2.0
Poultry slaughterhouses	3	3	3	3.0
Milk processing plants	1	0	0	0.3

Standard 5.2. Practical training at external sites

The curriculum includes a series of practical training activities conducted outside the VEE, which begin in the 3rd year. Within the integrated course in Communicable Diseases and Epidemiology, students participate in organised visits to a dairy cow farm and a swine farm located in the Modena area. During these visits, company veterinarians explain to students the facility's organisation, how various areas and phases are handled (e.g. milking parlour, dry cow area, animal movements), and, most importantly, the management and prophylaxis plans for infectious and parasitic diseases. As part of the integrated course in Animal Productions, students visit a dog breeding farm owned by a veterinarian, who describes the facility and discusses the various aspects of the breeding process. Moreover, the course includes visits to poultry farming facilities, hatcheries, slaughterhouses and feed mills, where students are accompanied by company technicians who provide practical details and insights into the production site being visited. External training on avian species is also scheduled during the 4th year CCT in Avian Pathology, when students first learn and practice the proper techniques for handling and restraining animals at Unibo's Department of Agri-Food Science and Technology (DISTAL). Then they visit one of the three types (broilers, pullets or laying hens) of selected farms in the area that made an agreement with the VEE to allow students to work alongside official veterinarians while carrying out inspections of prevention and biosecurity measures, as well as to perform blood sampling, respiratory swabs and cloacal swabs. All the above-mentioned activities are always carried out under the supervision of the teaching staff. Due to the avian influenza emergency, it was not possible to carry out some of the visits to breeding farms during the AY 2022-23. As compensation, the Animal Productions teacher arranged visits to the DISTAL experimental facility for avian species, where he conducts experiments in the field of nutrition. Students were given the opportunity to learn how an *in vivo* research study is organised, how experimental diets are prepared, how chick sexing is performed, and other activities related to ongoing experiments.

The ambulatory clinic activities involving students during the 5th year CCT in food-producing animals have been significantly expanded starting from AY 2022-23. Five experienced practitioners in the bovine sector have been trained and contracted as non-academic teaching staff, to allow students (individually or in pairs) to follow them on three different days in their activities at a large number of farms (almost 300) in the area. Here students assist the veterinarian, engage in case discussions and take active part in some of the clinical procedures, subject to suitable conditions and patients. At the end of the day, students record the patients they have personally cared for on the dedicated form, which is checked and validated by the veterinarian. In addition, visits are organised under supervision of academic staff to beef cattle farms, dairy cattle farms, and cheese dairies in the Parmigiano Reggiano production zone, to provide students with specific competences on farm management, morphological evaluation of animals, and haymaking and forage dehydration systems. The external training on pigs includes a visit to a partner breeding farm, where students learn about pig management (pig flow, batch rearing), health management, vaccination plans, nutrition, animal welfare (i.e. docking and tail biting) and biosecurity. Under the supervision of a member of the academic staff and the company veterinarian, students perform an assessment of the quality of the boar semen, at least one artificial insemination, and an ultrasound diagnosis of pregnancy.

Activities at external bovine and small ruminant farms are also arranged during the CCT in Veterinary Public Health, in collaboration with the official veterinarians of the Local Health Authorities (ASL) in the Emilia Romagna region. Students actively take part in the assessment of health, environmental, and management risks and, with the guidance of the teaching staff, interpret the data collected on the farm to produce a comprehensive risk analysis. Similarly, members of the academic staff take students to one of the kennel and catteries in the Bologna, Imola, Modena, Ferrara, and Romagna areas, allowing them to assist the official veterinarian during surveillance activities on management and health aspects. The external training in VPH focuses also on the Food Safety and Quality area: during seven separated days, students individually visit slaughterhouses of different types, including poultry/wild game, pig, and cattle. Twelve facilities are contracted with regional ASL, enabling students to assist the official veterinarians during their daily activities. Students are encouraged to

actively participate and, whenever possible, operate under the direct guidance of the veterinarian to gain hands-on experience in control activities at slaughterhouses and inspection of food of animal origin. As already mentioned in Standard 5.1, due to the ongoing renovation of the necropsy room, a part of the training in pathology (especially in large animals) is currently conducted at the IZSLER in Bologna under close supervision of both local and teaching staff in two separate days.

In addition to intramural clinical training on horses, students also participate in on-call activities carried out by members of the academic staff at stables, riding schools or farms around the Bologna area. The VEE has agreements with about 30 different sites, where 2-3 student can assist the academic tutor and take part in the clinical procedures required. Starting from AY 2022-23, the VEE contracted the owner of Modena Sud Veterinary Hospital, a recognised expert in exotic pets, to improve the core clinical training also in this field. Small groups (3, maximum 4) of students spend one full day at this external facility under his supervision, being involved in the management of these patients and actively participating in the clinical procedures.

All the practical activities conducted on individual patients or groups of animals at external sites are electronically recorded either by the supervising member of the academic staff or individually by each student present, depending on the type of activity, and monitored by the EAEVE Committee. A comprehensive list of the external sites involved in practical training is provided in [Appendix 11](#).

Standard 5.3. Nursing skills and procedures

Students start approaching nursing care skills during the activities organised at the VTH in the 1st year. In groups of 2-3 people, they experience the facility and its organisation for the first time, receiving preliminary training on how a clinical case is managed, and how to safely approach, restrain, and correctly position the patient on the examination table. These primary skills are reinforced and basic clinical procedures (e.g. blood sampling and testing) are taught on small animals and large animals during the practical classes of the 2nd year Physiology course and 3rd year Communicable Diseases and Epidemiology course. The training continues during practical activities with companion animals, horses, and ruminants within the 4th year clinical courses and 5th year CCT. Clinical rotations engage students in routine activities across various areas of the VTH, enabling the acquisition of a diverse range of nursing care skills in a clinical setting. These include confident animal handling, taking care of hospitalised patients (e.g. monitoring, feeding, cleaning, and walking animals), administering drugs and fluids, collecting biological samples, performing basic clinical tests and medications, assisting veterinary surgeons, applying biosafety procedures, and properly cleaning equipment, cages, and premises. In addition, students can improve their communication skills through interaction with the owner.

The “veterinary nurse” is not an officially recognised profession in Italy, therefore the responsibility for implementing and teaching nursing care skills to students lies with the academic staff, supporting staff and hired practitioners during rotations at the VTH, ETF and external sites. Students can also autonomously practice some procedures on dummies and simulators in the Clinical Skills Lab. In addition, peer-to-peer tutorship is strongly encouraged among students at any level.

The aforementioned manuals for the clinical management of [companion animals](#) and [food-producing animals](#) are easily accessible to all students, providing valuable support for the safe handling of patients and the correct execution of basic procedures.

The Equine Clinical Service offers students the opportunity to volunteer as early as their 1st year, allowing them to become familiar with horses and assist staff in patient management. All students who attend the Equine Perinatology and Reproduction Unit receive a concise manual detailing the nursing care of hospitalised foals and must pass a self-assessment test.

The clinical training is designed to provide adequate hands-on activities for all students. During clinical rotations at the VTH, students are assigned to each unit in groups of 1-3. Similarly, up to 3 students accompany academic staff members or hired practitioners during extramural activities on horses or at bovine farms, whereas when they visit the exotic pets hospital they are in groups of 3-4

students. Other CCT activities and clinical subjects practical classes are conducted with larger groups (up to 10 and 20-25 students, respectively, depending on the type and location of the activity), but always ensuring that each student has the opportunity to perform hands-on procedures on at least one animal.

Following the basic training on animal approaching and handling provided in the first part of the programme, the proper clinical training starts from the 3rd year. Students are taught and expected to execute various clinical procedures specific to each context in the different species.

Companion animals - During practical sessions, students are trained to perform the general physical examination, and respiratory, cardiologic, gastrointestinal, and neurologic clinical examinations on companion animals. During clinical rotations in internal medicine, each student executes a range of essential procedures, which include: performing a vaccination, conducting a CBC exam, reading a blood smear, performing a urinalysis, executing and interpreting a blood gas test, performing and commenting on a SNAP test, collecting at least two blood samples, placing a venous catheter, assembling and monitoring a fluid line, performing a non-invasive measurement of arterial blood pressure, and positioning the patient for a radiographic study. Students assist and participate in fine needle aspiration, skin punch biopsy, bone marrow aspiration, liquor collection, pericardial centesis, and joint centesis. Assisting the clinical staff during the procedures and discussing the results, they are also exposed to the principles of radiology, ultrasonography, echocardiography, and computed tomography. On hospitalised animals, students provide nursing care and perform daily physical examinations. Under the supervision of the intensive care unit staff, students administer drugs and provide oxygen supplementation, fluid therapy, and enteral nutrition through nasogastric or oesophagostomy tubes. In addition, they assist the clinician during the emergency visits and participate in the procedures, when needed. In case of euthanasia, they assist during the procedure and in the communication with the owner. Students have multiple occasions to familiarise themselves with writing reports and using the patient record software of the VEE.

The training in companion animal surgery initially focuses on specific biosecurity procedures, accessing the surgical theatre, preparing the surgical patient, and scrubbing in for surgical procedures (initially as an exercise and later to participate as assistant surgeons). Students are also trained to recognise and handle surgical instruments, apply a drain and an oesophagostomy tube on cadavers, and perform simple skin reconstructions and sutures. In addition, they can repeatedly practice on sutures and bandages on dummies and simulators at the Clinical Skills Lab. During clinical rotations, students are actively involved in collecting the patient's history, performing orthopaedic examinations, and compiling the relative medical record. Students are individually involved in elective or emergency surgeries, acting as assistant surgeons and having the opportunity to perform simple procedures under the supervision and guidance of experienced surgeons. Meanwhile, the other students take care of clipping the surgical site, disinfecting the skin, and positioning the patient. Students are also present during the decision process, evaluation of the diagnostic imaging, discussion about the post-operative plan, as well as consultation and discussion with the owner. After being instructed in the operation of the anaesthesia machine and practicing vascular access and intubation on simulators, students also collaborate with anaesthetists in examining the patient before anaesthesia to define the appropriate protocol for the specific surgical procedure, performing sedation and anaesthesia, and monitoring the animal until awakening. Moreover, they participate in the decision of the analgesic protocol to treat chronic pain in oncologic or orthopaedic patients.

The animal reproduction courses provide students with skills on how to collect a sample for vaginal cytology, perform palpation of the prostate gland as well as orchietomy and ovariectomy on phantoms. During the CCT, students participate in the management of all the clinical cases of obstetric, gynaecological, or andrological interest, collecting the anamnesis, filling medical records, and taking care of the neonates referred to the VTH. They perform clinical examinations with differential diagnosis in both male and female patients, execute basic reproductive procedures and collection of biological samples, administer drugs under the supervision of staff members, and participate in surgery sessions as surgeon assistants. Students also master the principles of neonatal

intensive therapy and participate in problem-oriented decision-making, interpretation of diagnostic tests, and discussion of therapeutic strategies. In addition, they learn the criteria and techniques for planning and conducting artificial insemination, including oestrus cycle monitoring and semen collection, evaluation, and preservation.

As for exotic pets, during the shifts at the external private hospital students perform handling and restraining of small mammals, reptiles, and birds. The contracted practitioner and his staff involve them in history taking, physical examination, sample collection, basic clinical procedures, and case discussion.

Equine - Students are first trained to operate in safe conditions, correctly approaching and handling a horse during a clinical examination. Then they are made aware of biosecurity procedures and are actively involved in the maintenance of biosecurity standards, in particular concerning infective patient isolation. Moreover, they engage in hospital infection surveillance activities, where they help collecting nasal and rectal swabs for active surveillance of commensal bacteria, with particular regard to ESBL, CPE and MRS. During the CCT, students collect signalment and history, fill the daily hospitalisation sheet, discuss with the teaching staff on diagnostic decision-making and therapeutic strategies, and administer therapies under their supervision. They perform the general physical examination, specific clinical examination of gastrointestinal, respiratory, and cardiologic apparatus, rectal palpation for colic diagnosis, and foot care management in healthy horses and patients. Students also assist during static and dynamic lameness examinations and radiographic exams according to standard recommendations, first aid management of emergencies, and provide nursing care to hospitalised patients. Moreover, they help the staff performing clinical procedures (e.g. broncho-alveolar lavage, catheter placement, rhino-gastric tube insertion, and assisted enteral feeding) and other diagnostic techniques (e.g. ultrasonography and endoscopy). Specific sessions are dedicated to learning the basic operation of endoscopes, ultrasonography, and electrocardiographic monitoring. During the management of clinical cases, students are involved in the preparation of the animal before performing sedation/anaesthesia (e.g. placement of intravenous catheters, dose calculation of drugs, and way of administration of different drugs, anaesthetic protocol intubation and perioperative monitoring), assist the surgeon performing a sterile surgical procedure (e.g. laparotomy, castration, arthroscopy, wound repair, and osteosynthesis surgery), and monitor animal awakening in the recovery box. Additionally, extramural activities include assistance to the teaching staff with internal medicine procedure and lameness management directly at private stables (see Standard 5.2).

Training in equine reproduction includes the macroscopical examination of equine normal and pathological placentae, and handling of instruments that could be required at foaling and during nursing to a critical neonate (e.g. insert an intravenous catheter on a phantom). In an *in vivo* session, students can perform transabdominal and transrectal ultrasonography of a pregnant mare. During the CCT in Equine Reproduction, they participate in the daily activities of the Equine Perinatology and Reproduction Unit, where they can also monitor the *peripartum* of mares with normal pregnancy, hospitalised for attending foaling. They assist the clinicians during first aid of obstetrical patients, or other reproductive emergencies, performing palpations and ultrasonography of pregnant mares, attending eutocic and dystocic foals, milking mares, collecting biological samples, examining newborn foals, evaluating the placenta, and participating in the clinical evaluation of older foals. Thereafter, they monitor completely healthy foals, feed the orphans, and assist the critical ones, evaluating their clinical status. They fill in medical records and discuss cases with teaching staff and peer-to-peer. Students are made aware of biosecurity procedures and are actively involved in the maintenance of biosecurity standards, especially concerning infective patient isolation. Students are also trained to perform standard semen evaluation, including the preparation and evaluation of smears, and the use of ultrasonography in andrology. In addition, they have the opportunity to spend some time at the National Institute for Artificial Insemination (NIAI, see Standard 4.X), where they first assist in stallion semen collection and participate in semen evaluation with advanced techniques. Then they perform ultrasound examinations for cycle evaluation and assist in pregnancy diagnoses and controls, evaluation of post-insemination endometritis, etc. In addition, they also evaluate the

motility of fresh, cooled, and frozen semen samples. Students also participate in the Caslick procedure, artificial insemination, embryo collection, and transfer.

Food-producing animals - After learning how to safely approach and handle patients, students are taught how to perform a general physical examination, as well as of the gastrointestinal, respiratory, and male and female genital tract in bovine. They are trained on uteri and ovaries to identify occurrence of pregnancy, presence of ovarian follicles or corpora lutea, and to correlate these findings with the cycling status of bovine, ovine, equine, and swine species. They also practice various reproduction techniques on models and organs (e.g. artificial insemination passing the cervix in a cow's uteri, ultrasound-guided follicular aspiration on bovine ovaries, blind palpation for pregnancy diagnosis, insemination, and uterine flushing on a phantom cow) and perform palpations in cows at different stages of the cycle at the ETF. During the CCT, students participate in clinical procedures and nursing activities on hospitalised patients. They contribute to maintaining biosecurity standards with particular care for infective patient isolation, assist the clinician in hair clipping and placing an intravenous catheter, and collect blood and urinary samples. Students are also involved in problem-oriented discussion and critical analysis of physical and laboratory findings for the decision of the therapeutic plan. Moreover, they are trained to use the patient record software, collect and report clinical and laboratory data, and write medical records. At the ETF, students perform body condition score, biological samples (single-quarter milk, faeces, blood, and urine) and feed collection, on-site testing of ketosis, and diet evaluation. They participate in the evaluation of individual milk data to assign cows to selective dry cow therapy and of colostrum quality, transfer of passive immunity (blood sample and analysis), and health status of newborn calves. In addition, they have the opportunity to examine cows for pre-calving evaluation, including udder palpation, vaginal examination, and foetal presentation evaluation through transrectal ultrasonography. They also palpate post-partum cows for uterine involution evaluation.

During activities on external farms, students have the opportunity to assist the contracted practitioners and actively participate in some of the clinical procedures under their supervision (e.g. vaccinations and anti-parasitic treatments, gynaecological examination and pregnancy diagnosis, artificial insemination, delivery assistance, post-partum examination, gastrointestinal examination, respiratory examination, podiatry examination, udder examination, biological samples collection, and electronic veterinary prescription). They also take part in the communication process with the owner. At the pig breeding farm, each student is involved in discussions on health management, nutrition, welfare, and biosecurity measures, and individually performs supervised artificial insemination, evaluation of oestrus and semen quality, and pregnancy diagnosis by ultrasound. Physical examinations, blood sampling, respiratory and cloacal swabs are also performed during visits to poultry farms.

Necropsies - During the practical activities of the pathology courses, students are trained in necropsy techniques, examination of pathological organs (cow, pig, and horse, and small ruminants), and sampling of specimens for cytology and histology examination. They perform supervised necropsies on various animals to become familiar with general necropsy techniques and, during the CCT, they perform diagnostic necropsies individually or in pairs. Each student is also involved in complete post-mortem report writing, evaluation of pathologic organs to perform a morphological diagnosis of gross pathology and provide a list of probable differential diagnoses, and discussion on histopathological and cytopathological slides.

Discussion, thinking and reading - As a complement to hands-on activities, students are offered several situations for discussion and reasoning aimed at better understanding clinical case management. These can be in the form of flipped classroom sessions, discussions on herd health, production, and reproductive data of the ETF, on-site discussions during and after activities at external sites, as well as presentation and discussion of clinically relevant cases seen both intramurally and extramurally. During clinical rotations at the VTH, morning rounds are scheduled daily to discuss and integrate clinical findings and differential diagnosis of the ongoing clinical cases with a problem-oriented approach, to define the most appropriate therapeutic protocols. Every day, students are required to present a case, followed by interactive discussion with the academic staff and the other

students. Using the dedicated educational add-on of the Fenice software, they also practice writing clinical records (e.g. letter to the owner, report of radiography, report of a uranalysis), which are then reviewed by the teacher and discussed with the students (see Standard 5.4).

Students are also encouraged to actively participate in discussion sessions and journal clubs organised by the different units for interns, residents, PhD students, and other junior staff.

To autonomously deepen their knowledge on specific topics, all students are guaranteed online access to scientific literature and books both at the VEE and from external sites via a proxy.

Standard 5.4. Patient record system

The Fenice patient record system (previously called ProMed) was introduced in the VEE in 1994 as an innovative archiving tool to support the daily activities of the former Veterinary Clinical Department. This Microsoft SQL Server based software, which is also currently in use in other Italian VEEs, ensures the collective management of all clinical, imaging, laboratory, microbiological, parasitological and pathological data relating to each individual patient. Upon admission, a personalised individual record is created, and all follow-up information is added to this file. Fenice is integrated with the official Italian electronic veterinary prescription system and is also equipped with an administrative section that streamlines the process of issuing direct invoices to clients. This centralised data-warehouse is accessible by staff members through their personal Unibo credentials from multiple access points in the VEE (located within the VTH, in all lecture rooms, in most offices, and on personal laptops upon request) and enables them to retrieve all patient, case management and administrative information. Additionally, it allows for an overview of the clinical activities planned by different VTH services for the day. The system has been implemented over time according to our needs, which include undergraduate and postgraduate clinical teaching. Students are taught how to access Fenice during practical lessons in clinical courses. Individual patients information, except for private financial and personal owner data, is readily available to students for learning purposes. This makes it an effective and versatile tool for case discussions and supervised self-learning activities during the practical training. With the recent addition of a specific educational add-on, students can now create simulated patient records by entering medical data and formulating diagnoses. Once the record has been drafted, an academic staff member at the VTH reviews and validates it or provides feedback to the student on how to improve it. This recent update has received positive feedback from students, as evidenced by both numerical data (529 records were created during AY 2022-23, with an average of 6.3 records per student) and qualitative feedback. The Fenice database can be also used for research purposes by the academic staff, PhD students and undergraduate students (e.g. for their graduation thesis).

Cows and calves at the ETF are recorded in a dedicated software (AfiFarm) that is accessible at the facility, due to the need for continuous real-time monitoring of multiple parameters for each animal and the unavailability of Fenice outside of the DIMEVET campus. For the same reason, animals at NIAI are tracked in a specifically designed electronic database.

Horses examined extramurally are subsequently recorded in the Fenice patient record system, in dedicated folders labelled "Home visit". Other patients seen under CCT extramural activities are cloud stored through a dedicated electronic form (created with Microsoft Forms) by the supervising teaching staff. Following the implementation of extramural bovine and exotic pet training activities from the 2022-23 academic year, students are required to record the patients they have worked with on paper forms that are reviewed and approved on site by the academic tutor. The data is then transferred by the student in an electronic form, that can be accessed by teaching staff for both teaching purposes and statistical analysis (e.g. ESEVT indicators monitoring). To enhance student engagement and responsibility during practical training, this approach will soon be extended to all extramural activities conducted during CCT. This is in preparation for the future introduction of a personal electronic case-log, which will allow students to continually document and reflect on their hands-on experiences.

Comments on Area 5

The VEE is capable of ensuring an adequate number and variety of animals and animal-origin materials for the enrolled student population. However, unforeseen factors can occasionally impact the actual resources availability and the possibility to conduct specific educational activities as planned. Above all, the Covid-19 pandemic has obviously had a major impact on practical activities, which were rapidly and effectively replaced by remote alternatives and accurate digital resources (either already available or created ad hoc) during the most critical periods. Even after the emergency, however, reinstating activities carried out at external facilities has proven to be sometimes complicated (if not impossible). In particular, while intramural activities experienced some disruptions during 2020 and 2021, some extramural activities suffered more than 2 years of strong limitations, beyond our control.

Regrettably, other unexpected health concerns such as avian influenza and African swine fever have emerged as recent emergencies for the veterinary world in this part of Europe. Undoubtedly, these circumstances have presented and continue to present a substantial impediment to conducting a high volume of extramural activities in farms and production facilities of these species.

However, the attempt to increase extramural activities has yielded excellent results in various areas during the last AY. The ambulatory clinic activities now managed by contracted external professionals, as well as the activities carried out at a reference facility for exotic animals, have significantly expanded the variety of cases and the professional environment in which students have been involved and, therefore, are being maintained even after 2023.

The complete renovation of the necropsy room, nearly finalised at the time of writing, has also impacted part of the activities on cadavers and organs during the last AY, which were partially substituted by external activities and educational videos, specifically provided for this purpose.

Suggestions for improvement in Area 5

The new necropsy room will significantly enhance our capabilities for conducting necropsies on animals of all sizes under optimal biosecurity conditions and improved biomechanical comfort. Additionally, it will streamline the establishment of formal agreements and partnerships with zootechnical companies to provide diagnostic support, resulting in a notable expansion of the number and variety of large animal necropsy cases available for student exposure.

Similarly, once completed, the renovated emergency room and intensive care unit will allow for a significant increase in first opinion cases in dog and cats. With the aim of further enhancing student experience with these species, activities may be organised at local dog kennels and cat shelters.

Alongside the considerable number of cattle farms students visit during their external training, it would be beneficial to schedule visits to some small ruminant farms, as well as to increase activities in swine facilities. Regarding the latter, the renovated intramural swine breeding facilities that will be available within two years will allow an increase in activities related to this species. This is particularly significant given the mentioned increasing difficulties in accessing external facilities.

The recent educational add-on of the Fenice software has been well received and is already being utilised by many teachers and students. Recognising its considerable potential, a further increase in its utilisation is desirable over time. The system still has, however, some limitations that restrict its usage: it's based on a local server, making it inaccessible from external sources (except for a few staff with justified VPN access), and its interface and technical limitations make it unsuitable for external cases. A working group has been appointed to collaborate with the software house and propose changes to improve its functionalities. In parallel, the development of a digital case log would certainly be helpful to track individual exposure of students to adequate diversity of clinical cases.

Finally, expanding the portfolio of affiliated facilities for practical training activities would certainly be useful to diversify the EPT possibilities.

Area 6. Learning resources

Standard 6.1. Adequacy of learning resources

The VEE is dedicated to maintaining and continuously improving the learning resources available to students. Acknowledging the rapid and ongoing evolution in this field, as well as the needs of the latest generation of students for new types of learning tools, actions have been undertaken and resources allocated to experiment with innovative teaching strategies, that stimulate interest and active participation. This involves the availability of state-of-the-art shared infrastructures, virtual laboratories and *phygital* spaces, in compliance with [BO1.2 and BO2.1 of the DIMEVET-SP](#) and the “never the first time on a live animal” concept.

The University of Bologna provides each student with a life-lasting email account ([@studio.unibo.it](#)) along with the environment for IT work (Office 365, MS teams as a communication tool). Unibo also furnishes a shared e-learning platform for all degree programmes and post graduate programmes named [Virtuale](#). Additionally, students and staff have access to a personal page on [My portal](#), a virtual office tool to manage their studies, from enrolment to graduation.

A dedicated [Veterinary Teaching Portal \(VTP\)](#) has been developed by DIMEVET and is freely accessible to both students and teachers, as well as the relative [YouTube channel](#) and [Facebook page](#). The platform offers videos and photographs of preparations, pre-clinical, and clinical procedures. The VTP was first introduced in 2013, but underwent substantial updates by 2020 to align with the evolving requirements of remote learning. The YouTube channel has emerged as the primary platform for adding new educational materials, allowing students to easily access video tutorials and other multimedia contents.

Recently, a new add-on to the patient record system (Fenice, see Standard 5.4) was implemented for specific teaching objectives. Each student attending the CCT has a personalised access to this resource and his/her activities are supervised by designated members of the academic staff.

The VEE houses the [G.B. Ercolani Central Library](#), established in 1991, which is part of the broader Unibo bibliothecarial system ([Sistema bibliotecario di Ateneo](#)). The library offers bibliographic resources encompassing all the scientific areas covered at DIMEVET, manages bibliographic services, and maintains numerous book and journal collections stored in the Departmental Services. and maintains certain book and journal collections housed in the Departmental Services. All bibliographic resources are indexed and catalogued to be easily accessible to users, who can retrieve and consult the resources either on-site with the assistance of dedicated library staff or remotely via remote access through the Single Sign-On IdP system.

In 2018, the VetSimLab was established for the production of simulators, and in 2020 the VEE opened a new [Clinical Skills Lab](#). This facility allows students to acquire their initial clinical skills through practice on anatomical models, mannequins, or simulated animals. They can practice both within the Clinical Skills Lab and remotely, thanks to the availability of a loan service for anatomical preparations and models.

Furthermore, various software applications are available for specific teaching purposes (e.g. [Virtual Physiology](#), [SmartZoom](#), and [Virtual Slaughterhouse Simulator](#)).

A welcome day is organised by the Degree Programme Director, [Tutor](#) and [Year Coordinators](#) for 1st year students. During this meeting, students are introduced to the VEE environment, as well as members of the academic staff with specific responsibilities (e.g. Delegate for international affairs, Delegate for student welfare, Year Coordinators, [Student Representatives](#), administrative staff dedicated to teaching). Moreover, learning resources (e.g. Virtuale platform, G.B. Ercolani Central Library) and related services (e.g. loan service for bone specimens, access to study rooms and library, IT facilities and resources) are presented. The dedicated webpage for [Students Online Services](#) is also introduced, and students receive guidance on how to activate their Unibo accounts, granting them full access to email and online resources.

At the beginning of each course, the teacher in charge presents the teaching materials available on the Virtuale platform, as well as other specific software if needed. The teaching staff is strongly encouraged to attend training courses available on demand aimed at effectively using both software and hardware resources. In addition, the library staff organises [courses](#) for bibliography research.

As for the materials available on the Veterinary Teaching Portal, comprehensive instructions on accessing and using the learning resources are provided through a brief informative video. This video is specifically presented to incoming students during the first week of lessons, providing them with a comprehensive overview of the platform's functionalities and features. This orientation process ensures that students are well-prepared to make the most of the educational resources offered by the VTP.

Students in their 5th year are required to attend a meeting that takes place in November with the Core Clinical Training officer. During this gathering, the overall functioning of the CCT is explained, along with instructions on using the educational add-on of the Fenice software. All students enrolled in the CCT receive personal accounts and are trained on effectively using this functionality to compile their medical records and get feedback from teachers. At the beginning of 2023, when the package was installed on the VEE computers, a training course was also organised for the teaching staff. Continuous monitoring and any necessary correction regarding its use is done by the appointed responsible of the software.

The library website has a page on "[how to use the library](#)", giving users all the relevant information. The teaching staff received communication from the DIMEVET Board about the procedure for accessing and requesting simulators for the Clinical Skills Lab. An online form has been set up for the teaching staff to request the availability of the desired simulators in advance for the scheduled activities. Students contracted by the VEE for staying at the CSL reception desk during scheduled sessions enable their peers to independently access the facility for self-learning activities.

The adoption of new software for teaching and research purposes is decided by the central IT office ([CESIA](#)). Following the subscription of contracts, specific courses are organised for both staff and students.

The selection of new materials to be published and developed in the VTP is driven by the specific educational requirements of each course the feedback received from our students. When students express specific requests through surveys or evaluation questionnaires, the VTP editorial team proactively engages with the relevant members of the academic staff to encourage the creation of new resources. The suitability of the newly produced materials is assessed by the responsible for the respective course, and they are finally published upon approval by the VTP editorial team, ensuring both originality and adherence to copyright regulations.

A dedicated staff group, appointed by the DIMEVET Board upon the VEE Head's recommendation, assesses issues related to the Fenice software and suggests necessary implementations to the company engineers. Each proposed software modification is evaluated by the staff group and, if deemed feasible, integrated into the software and explained to other staff members and students.

Library collections, available in both print and electronic formats, respond to teaching and research needs. Since 1995, the library has subscribed to all journals deemed of interest. Students and staff can recommend new books for purchase using an [online form](#) accessible from the library website. The Head Librarian then checks their relevance to subject areas pertinent to the library or the need for additional copies before the Library Scientific Committee takes the final decision. Additionally, the Library Scientific Committee annually assesses the use of each electronic resource (measured by the number of downloaded articles) and decides whether or not to maintain the subscription, with a primary focus on veterinary resources and also depending on available financial resources.

Finally, through a dedicated email address, teachers can request CSL staff to provide new simulators according to specific needs of their courses or CCT activities. Student feedback on each station is collected through a dedicated online form, as well as their suggestions for improving current simulators or creating new ones.

Standard 6.2. Library and electronic resources

The [G.B. Ercolani Central Library](#) belongs to the Medical macro-area of the [Unibo Library System](#). The library is managed by the Library Manager and the Library Scientific Committee (LSC), chaired by a designated VEE professor. The Library Manager supervises the library activities and services, and drafts the budgets and accounts. The LSC includes the Library Manager, the chairperson of the LSC, one academic staff member for each of the DIMEVET research areas (see Standard 10.1), a DP student representative, and a library staff representative. The Committee coordinates and supervises the cultural and scientific choices of the library, with special reference to the collection development policies. The library resources include collections of printed books and journals that were previously held by the libraries of the old institutes, before the reorganisation that led to the creation of DIMEVET. The older back issues of the journals and the less recent monographs are still located in some storage facilities in the Departmental Services.

The library staff consists of seven members (five diplomates and two graduates), corresponding to 6.17 FTE. Additionally, the facility employs students contracted for collaboration at the circulation desk during opening hours. In 2022, 14 students have been assigned to the library, for a total of 2,041 hours.

The library operates, during term-time, from Monday to Friday, between 8:45 am and 6:00 pm. Opening hours may vary during periods when classes are suspended (e.g. summer break in July and August, winter break from Christmas to January 6th, and the Easter suspension). Any changes in opening hours are promptly communicated online at the beginning of the year. In 2022, the library was closed for a total of 16 days.

The library operates under the Unibo [Cultural Heritage Area \(ARPAC\)](#), and funding is allocated directly through this channel. Since 2018, the library has been granted a budget of €73,150, primarily used for disciplinary electronic resources. For cross-disciplinary resources, a total amount of €3.328.203 is allocated by Unibo to ARPAC, with €74,776 dedicated to the library. DIMEVET contributes to this budget with an additional €32,000 annually.

The core collection of bibliographic resources is housed within the Central Library, located on the ground floor of the VEE. The library consists of three offices on the first floor, along with two library repositories (one of which is dedicated to preserving ancient book collections). Reading rooms offering 88 seats overall are present on both the ground floor and the first floor. Spanning a total area of 1,139 m², 500 m² are allocated for users.

The library is equipped with two stations for accessing the internet, consulting catalogues, and viewing documents. Seven staff stations are available for everyday work, equipped with Microsoft Office and specialised library software. In addition, the facility is furnished with a self-check station, a computer dedicated to the document delivery service, and 3 computers specifically designated for circulation services. Staff-accessible printers are available.

The library extends access to an array of [online databases and electronic resources](#) available through the University of Bologna, including databases, electronic journals, e-books, and encyclopaedias. Additionally, specialised tools for document supply ([NILDE](#)) and inter-library loan services ([Subito](#)) are available.

There are 11 storage units, corresponding to the libraries of the old Institutes (now DIMEVET Services), where back issues of journals and less recent monographs (predating 1995) are housed. Access to these resources is available by appointment, as these collections are not overseen by full-time staff. The Central Library has catalogued all the bibliographic resources (printed books and printed and/or online journals) that can be easily searched through Unibo's [OPAC](#) and the [National Union Archive of Periodicals \(ACNP\)](#). Currently, subsidiary libraries are used as spaces for small group work with students or for conducting oral examinations. A further [subsidiary library](#) is located

within the Cesenatico Local Operative Unit. This facility is a branch of the Central Library “Leon Battista Alberti” of the Cesena campus of Unibo and primarily focuses on themes related to blue growth.

At the Unibo level, the Information Systems and Services Area ([CESIA](#)) provides and maintains the IT environment, and takes care of accounts management, email boxes, general software, tools supporting teaching activities, VoIP telephones, and mobile phones. Two FTE staff members directly linked to the central CESIA administration are present for IT services at the VEE (CESIA Task Force Ozzano). Their roles include managing PCs lifecycle and infrastructure services (DNS Server, Print Server), providing level 1 help desk, printer technical support, assistance for the Fenice system, landline telephony, and lecture halls IT equipment, as well as addressing IT security concerns. Following the Covid-19 pandemic, every lecture hall has undergone significant upgrades and is now equipped with a new PC featuring 27” touchscreen monitor, two video cameras, and ambient microphones. Additionally, all desktop PCs and laptops, whether in lecture halls or used by staff and students, are installed with a comprehensive Office365 suite. Specific software (e.g. R, JASP, MATLAB, SATA, Fenice, and Virtual physiology) is available upon request.

The primary e-learning platform used for teaching is called [Virtuale](#), which is a versatile Moodle-based platform. It serves as a repository for teaching materials of all Unibo courses and can also be effectively used for formative assessment, students self-evaluation, and in-class live testing through the integrated [Wooclap](#) add-on. This resource is freely accessible to both students and staff from everywhere through a Single Sign-On IdP process.

The [Veterinary Teaching Portal \(VTP\)](#) is a web-based learning platform that was developed in 2012 as part of the “Special projects for the improvement of teaching and student services” sponsored by Unibo. Specifically designed to support the DP, this platform hosts a wide range of multi-disciplinary educational contents, freely accessible to students as supplementary material related to practical learning activities. All these contents are original and voluntarily produced by DIMEVET academic staff, with the valuable collaboration of young veterinarians paid with scholarships. They include videos demonstrating clinical and laboratory procedures, image galleries covering normal histology, histopathology, cytology, radiography, ultrasonography, surgical instruments, and animal breeds. Additionally, the VTP offers 3D animations of bones, a searchable pathology image database, and self-evaluation tests. Since its launch in 2013, the VTP marked a significant step towards incorporating digital resources into the students educational programme. The global pandemic further emphasised the importance of the VTP in remote learning and self-directed study. With lockdowns and restrictions limiting access to physical learning spaces and practical activities, students increasingly relied on the VTP’s resources in conjunction with remote lessons to ensure the continuity of their education. By 2020, the VTP underwent substantial updates to align with the emerging needs of remote learning. The primary platform for adding new educational materials became the [YouTube channel](#), enabling students to easily access video tutorials and other multimedia content. In 2023, the collaboration with the Clinical Skills Lab staff led to the publication of over 20 new videos (available on the CSL channel), providing students with clear instructions on the use of simulators during self-learning sessions. The VTP allows the integration of digital learning with traditional teaching methods, enriching classroom lectures, and promoting independent learning. This aligns perfectly with the above mentioned Objective OS1.2 of the strategic plan of the VEE, underscoring the significance of information and communication technologies (ICT) to enhance teaching quality and facilitate student learning.

The VEE campus offers comprehensive Wi-Fi coverage, including lecture halls, ground floor common spaces, most first floor spaces, and external practice halls. There are two dedicated IT halls: Laboratorio Informatico, equipped with 24 student seats and one for the teacher, featuring specialised software (e.g. R, Virtual Slaughterhouse, and Virtual Physiology), and Laboratorio Diapason, with 14 student seats and one for the teacher. More than 180 PCs have the Fenice patient record system software installed for research, clinical, and teaching activities. A DICOM PACS Server is linked to

Fenice, providing access to all ultrasound and CT images for both staff (enabled to actively work on the clinical refer) and for students (for viewing purposes only).

All Unibo users can connect to the AlmaWiFi network using their personal credentials. The Eduroam Wi-Fi network is available for hosts affiliated with universities that have subscribed to the agreement. Furthermore, Unibo credentials are automatically provided to visiting scholars and professors upon check-in, ensuring seamless access to the network. Students and staff can access the majority of electronic resources remotely through Single Sign-On IdP; electronic library resources can be accessed via the dedicated proxy server. Additionally, academic staff members requiring remote access to local resources can request activation of the VPN software provided by Unibo.

Standard 6.3. Access to learning resources

The G.B. Ercolani Central Library hosts around 27,500 books, 278 textbooks (of which 240 are in Italian), and 408 antique books. These items can be borrowed for 30 days, then the loans may be renewed for another 30 days. In addition, the library receives each year 17 hard copy journals.

The number and variety of resources available in electronic format has significantly increased in recent years. Full access is offered to 44 electronic journals directly subscribed to by the library, 5,250 electronic journals subscribed to by the Unibo Library System with partial or full contribution of the library, and 377 [bibliographic databases](#) for online literature search, 45 of which are specific to veterinary sciences. In addition, hundreds of veterinary textbooks are freely downloadable as e-books by Unibo users from publisher's websites or through multi-disciplinary databases.

The Naldo Maestrini Historical Collection comprises both antique volumes (pre-1830) and more modern publications. The Collection was assembled in 1994 following the donation of the "Antique Library of Veterinary Medicine" by the late Prof. Naldo Maestrini. Subsequently, the Historical Collection was expanded through donations of antique books from subsidiary libraries (former libraries from the old Institutes) until 2000. All the volumes within the Maestrini Collection have been included in the [Union catalogue of the National Library Service \(OPAC SBN\)](#), with materials dating from 1830 or earlier listed in the antique catalogue, and the rest in the modern catalogue. The Maestrini Collection consists of a total of 2,422 volumes, as well as other materials such as edicts, posters, and calls for applications for funding and programmes on animal health issues.

The learning resources made available to students through the Virtuale platform are evaluated as part of the student survey scheduled at the end of each Unibo course. Similarly, the VTP incorporates an internal survey system that collects real-time viewing data using web analytics tools. Currently, the VTP features approximately 1,000 images and 70 videos. Since its integration into teaching in 2013, the VTP has received high praise from students, as evidenced by the positive feedback and a steady increase in engagement, with over 3 million page views from January 2013 to the present date.

The Fenice software has been implemented with a new add-on which allows students to create simulated clinical case reports for cases followed during the CCT, to be reviewed by the academic staff (see Standard 5.4). A total of 529 cases have been recorded by students and assessed by teachers during AY 2022-23. Student-reported data within the system is kept separate from actual medical records. However, medical records are fully accessible to students for consultation.

During the pandemic, Unibo acquired [Virtual Physiology software](#), which enables virtual practices to be conducted online and is currently used for certain practices. The VEE holds perpetual licenses for teachers and time-limited licenses for students.

Since AY 2021-22, a new software called [Virtual Slaughterhouse Simulator](#) has been employed to perform a part of the training in FSQ. Developed by a consortium of European universities, it is used to introduce students to practices in a slaughterhouse before engaging in real activities at the facility. Moreover, it serves as a tool to assess students understanding and application of the taught procedures at the conclusion of the CCT period.

Finally, students have full access to Unibo's [SmartZoom](#) digital microscopy platform, which contains galleries of high-resolution digital slides uploaded by academic staff from various Departments. Among these are two galleries provided by the DIMEVET staff, featuring anatomy and pathology slides.

The implementation of models and the organisation and supervision of activities at the CSL is under the responsibility of a full professor of the VEE and a support staff member. The staff also includes a tutor student and students selected for collaboration activities. The CSL is used for practical activities in many courses (e.g. "Obstetrics-gynaecology and andrology in companion animals", "Veterinary orthopaedics", "Surgical veterinary medicine", "Physiopathology of animal reproduction") and during the CCT in companion animals. Each station within the CSL is equipped with a simulator, a QR code for online instructions (both written and video), and a written guide detailing step-by-step procedures. In addition to the [CSL website](#), [Instagram](#) and [Facebook](#) pages have been launched to facilitate communication and stimulate student engagement. An evaluation procedure has been implemented, allowing students to express their opinions on the organisation of specific teaching activities, their alignment with course contents, and the effectiveness of the simulators for their intended purposes. The collected feedback is systematically reviewed by the responsible staff members and carefully considered, along with inputs from teachers, when making decisions about improvement strategies. Although there is currently no dedicated budget allocated to CSL improvement, a portion of the teaching funds from the VEE is assigned for this purpose.

Comments on Area 6

The VEE has invested significant resources in new learning resources both to comply with the "never the first time on a living animal" principle and as a result of our strong commitment for teaching innovation to provide students with the best learning environment. The CSL is gaining continuously importance in the practical activities of the DP, providing a constantly increasing variety of home-made simulators that will also be central for the ongoing organisation of OSCEs at the end of the CCT. Many learning resources are accessible remotely for both staff and students, especially the Veterinary Teaching Portal and those pertaining to bibliography retrieval; on the other hand, the Fenice patient record system is currently only available at the VEE.

Suggestions for improvement in Area 6

There is potential for improved engagement among students and staff in using available learning resources. Students should be encouraged to use them not only in supervised conditions but also in a self-learning environment (which clearly implies increasing the opening hours of facilities such as the CSL). Additionally, it is highly advisable for new staff members to actively engage in promoting and utilising learning resources, especially before any practical work involving living animals. Increasing the number of support staff members dedicated to teaching would aid in achieving both these aims.

Area 7. Student admission, progression and welfare

Standard 7.1. Student “life-cycle” information

The main tool used to advertise information about the educational programme is the [degree programme website](#), which was developed in compliance with the current provisions on the accessibility of websites and using the Responsive Web Design technique to allow consultation also from mobile devices. The website includes the following channels:

- [Programme](#), including a programme overview, the expected learning outcomes, the relevant regulations, the organisation, and quality assurance policies
- [Admission](#), which contains information about requirements, deadlines, and methods for enrolment, tuition fees and study incentives, language requirements, as well as guidance on open days organised by the VEE and other specific needs students may have
- [Studying](#), with all the information on the programme structure, the academic calendar, the classes timetable, the exam dates, the organisation of the CCT, and information on the final examination
- [Opportunities](#), including scholarships, housing support, international mobility programmes, access to the job market, and services for students in the city
- [Notice board](#), where links to the latest events, news, and initiatives can be found
- [Contacts](#), which provides details for all offices and staff members that students might need to get in touch with

Advertising to prospective students also includes several platforms and initiatives:

- [Unibo Guidance Services](#), offering guidance to high school students through the [AlmaOrienta website](#) (with information, questionnaires, videos, and events, [also in English](#)), webinars, the [myAlmaOrienta app](#), organisation of open days, and participation in virtual fairs organised by specialised providers worldwide for foreign students.

In particular, during the online exhibition AlmaOrienta, which is organised every year around mid-January, students have the opportunity to get specific information about the Veterinary Medicine programme, “peek” into some classes, engage with students at the online “Students Café” to receive guidance from their peers, and get an overview of the VEE’s facilities. In addition, specific sessions are aimed at providing details about tuition fees and financial aid for international students, enrolment for both EU and NON-EU students, immigration and healthcare procedures for non-EU students, and specific information for Chinese students.

- [Open days and guided tours at the VEE](#), organised throughout the year to illustrate to prospective students the study path and the learning environment (lecture theatres, laboratories, library, museums, VTH, etc.).
- Presentations to secondary school students, carried out by members of the teaching staff and student tutors during the year.
- Welcome Day, where 1st year students are welcomed upon arrival by the DP Director, along with members of the teaching and administrative staff. They receive information about their academic journey and the organisation of the programme. International students are provided with a [handbook](#) that helps them comply with Italian and Unibo regulations and, starting from AY 2023-24, a specific welcome session is organised to help them get familiar with the Italian University System.
- Information sessions dedicated to international mobility programmes and opportunities to study abroad.
- Welcome Day for incoming exchange students, including a buddy tour to VEE’s facilities. Exchange students are provided with a [handbook](#) with targeted information.

Furthermore, the [Unibo Public Relations Office \(URP\)](#) serves as a central hub aimed at facilitating communication with the University. It is a first-access point for students, providing comprehensive

information on academic and administrative matters, details about the services offered by the University, and operates as a help desk for comments, suggestions, and complaints.

Additional activities have been planned for the 2023-26 period in the framework of the “OrientaVet: attività di Orientamento e Tutorato a supporto degli studenti” project, in partnership with the other 12 Italian VEEs and funded by the Ministry of University and Research (MUR). The Guidance and Tutoring Plan (POT) project is aimed at strengthening:

- guidance, including motivational guidance, for enrolling students and for those attending the last 3 years of their secondary school, in order to help them make an informed choice
- guidance for students enrolled in their first and second year, in order to remove barriers to academic progression, to reduce the drop-out rate and to improve the regularity of their careers

Finally, the VEE participates in school-to-work alternation projects upon the request of interested schools, hosting students who are motivated to gain an educational experience through direct operational engagement in one of the Department fields. This experience is valuable not only from an educational perspective, but also for helping students orient themselves in choosing their next university path. The Pathway for Transversal Skills and Orientation (PCTO) is an educational approach that enables upper secondary school students to consolidate the knowledge acquired in school and test their aptitudes in the field through practical experience. This enriches their education and guides their study pathway toward future employment opportunities.

The information is publicly available in the [Scheda Unica Annuale \(SUA-CdS\)](#) of the DP.

Standard 7.2. Number of students

In Italy, the DPs in Veterinary Medicine have a limited enrolment number, which is established at the national level through legal regulations ([Law no 264/1999](#)). The number of available places is determined annually by the Ministry of University and Research, taking into consideration proposals from the Universities proposals and consulting the National Federation of Veterinary Professional Associations (FNOVI).

For the AY 2022-23, the number of places assigned to the VEE of the University of Bologna increased from 110 (100 for Italian and EU students plus 10 for non-EU students) to 118 (108 for Italian and EU students plus 10 for non-EU students). Any non-EU student places remaining vacant may be allocated to EU students.

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

Type of students	2022-23	2021-22	2020-21	Mean
Standard students	108 + 10*	90 + 10*	90 + 10*	96 + 10*

* places reserved for non-EU student's not-resident in Italy

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

Year of programme	2022-23	2021-22	2020-21	Mean
First year	119	105	104	109.3
Second year	95	88	78	87.0
Third year	88	80	89	85.7
Fourth year	78	86	74	79.3
Fifth year	85	74	59	72.7
Out-of-course*	89	84	113	95.3

* registered at the degree programme for more than 5 years

Table 7.2.3. Number of veterinary students graduating annually

Type of students	2022-23	2021-22	2020-21	Mean
Standard students	62	79	80	73.7

Table 7.2.4. Average duration of veterinary studies

Duration	% of the students who graduated in 2022-23
+0	63%
+1 year	21%
+2 years	5%
+3 years or more	11%

Table 7.2.5. Number of postgraduate students registered at the VEE

Programmes	2022-23	2021-22	2020-21	Mean
Interns	8	16	23	15.7
Residents	24	25	24	24.3
PhD students	57	46	42	48.3
Research fellowship	34	35	23	30.7
Masters	45	48	33	42.0
Specialisation school	22	23	37	27.3
Advanced training courses	5	-	-	1.7

Standard 7.3. Selection and progression criteria

According to [Ministerial Decree 270/2004](#) and [Degree Programme Teaching Regulations](#), admission to the programme requires possession of a bachelor's degree or any other degree obtained abroad and recognised as suitable. Additionally, the following requirements must be fulfilled:

- Adequate knowledge and skills, as defined annually by Ministerial Decree on the subjects of the admission test and published in the admission notice
- Proficiency in the English language at a minimum level of B1 according to the CEFR scale

[Non-EU student residing abroad](#) must also demonstrate a sufficient level of [proficiency in the Italian language](#) to begin university studies.

According to [Ministerial Decree No 1107/2022](#) and [Directorial Decree No 1925/2022](#), for the AY 2023-24 and onwards, candidates wishing to enrol must pass the CISIA TOLC-VET test. The admission procedure consists of the following steps:

a) Sitting the test:

Candidates who intend to take the TOLC-VET must register through the [CISIA portal](#) and book the test. They can select the type of TOLC, the venue, and the date of the test from those available. The [TOLC-VET test](#) is prepared by MUR and is held nationwide on the same timeframe for all Italian VEEs (in 2023 it occurred in April and July). It is an online test held in presence and covers the following subjects: reading skills and knowledge acquired from previous studies (7 questions, 15 minutes), biology (12 questions, 20 minutes), chemistry and physics (18 questions, 30 minutes), mathematics and logical reasoning (13 questions, 25 minutes). The overall duration of the test is 90 minutes, for a total of 50 questions. The TOLC-VET score result is calculated based on an unadjusted score assigned according to the following criteria:

- 1 point for each correct answer
- -0.25 points for each incorrect answer
- 0 points for each unanswered question

The final score of each candidate is obtained by applying an equalisation coefficient, as described in the Annex 2 of the Ministerial Decree. Italian and EU students can be admitted to the programmes if their equalised score is at least 10. Non-EU students are admitted if their equalised score is higher than 0. Participants who have not provided answers to any questions are not be included in the ranking.

b) Applying for inclusion in the national ranking:

Students are required to apply for inclusion in the National Ranking through the [UniversItaly portal](#). During this application process, candidates can specify their preferences for universities of enrolment. If more than one TOLC-VET tests were taken, the one with the highest score will be considered. Only students who already possess a high school diploma or will obtain it by 31

December 2023 are eligible to apply for inclusion in the national ranking. The ranking has been published on the [CINECA website](#) at the beginning of September.

c) Applying for enrolment:

If admitted to the desired degree programme, students must apply for enrolment according to the timetable set out in the admission notice.

CISIA provides candidates a helpful [training platform](#) to practice through multiple test simulations and MOOCs.

Although the selection process is managed by MUR, CINECA, and CISIA, an internal Selection Committee is designated annually by the Rector (upon proposal by DIMEVET) to ensure that procedures are properly implemented, considering also policies for students with disabilities. The Selection Committee meets at least once before the test date to share procedures and is responsible for identifying candidates and overseeing the examination process.

In previous years, MUR implemented a different procedure involving an admission exam conducted nationwide on the same day. The test comprised 50 multiple-choice questions, with one correct answer out of five options. Students were given 100 minutes to complete the exam. Scores ranged from 0 to 90 and a national ranking list of candidates was established based on the results.

According to [Law No 104/1992](#) and [Law No 170/2010](#), candidates with disabilities, Specific Learning Disabilities (SLD), and special needs that may interfere with the admission test may request to:

- Have additional time (up to 30% for candidates with Specific Learning Disabilities, Special Educational Needs, or pathologies; up to 50% for candidates with legally recognised disabilities)
- Use aids such as a human reader, a scribe, a non-scientific calculator, a video magnifier, etc.

As specified in the admission call, students who wish to apply for such arrangements need to upload any relevant disability/SLD certification released by competent health authorities.

Although the TOLC-VET is established at national level, the local Selection Committee, appointed by Rectoral Decree, is responsible for the smooth running of the admission procedure. Before the test, the Administrative Division in charge of the organisation schedules a training meeting for all members of the Selection Committee to share and illustrate MUR guidelines and the rules set by the admission notice.

The procedures for lodging appeals against the selection process are regulated by Italian law. Students may appeal to the Regional Administrative Court (TAR) against MUR selection process. In the event that the initial appeal is rejected, students have the right to submit a further appeal to the Italian Council of State (second appeal).

The Ministerial Decree and the annual call are available on both the DP and MUR websites, far in advance of the admission test date.

The category of full-fee paying student does not exist at the VEE. At Unibo [fees are calculated](#) according to the year of enrolment and on a progressive basis, being less expensive for students who have lower income. Opportunities for exemption or reductions and right-to-study benefits are provided by the Regional Agency for the right to higher education (ER.GO).

Every year, the Degree Programme Board proposes to the Academic Senate an appropriate number of students to be enrolled in the 1st year, based on an internal analysis of resources, in particular in relation to the number of academic and support staff, supervisors for the CCT, animal resources, facilities capacity, and sustainability in terms of ESVET indicators. MUR every year defines by decree the final number of places available at each VEE, in relation to the local proposals and to the general need for graduates in veterinary medicine in Italy.

Several tutors are hired annually by the VEE to facilitate practical activities in small groups, especially during the CCT, thus ensuring effective training while maintaining appropriate biosecurity and animal welfare standards. The allocated resources are used according to the annual planning of teaching activities.

According to the internal analysis of available resources mentioned above, the prospective number of new students admitted for the next three AY should not increase in order to maintain current teaching standards and ensure stability of ESEVT indicators.

Standard 7.4. Policies for students with disabilities or illnesses

Unibo established a [Service for students with special needs](#), to ensure equal learning opportunities by identifying and planning with each student the steps to be taken to allow them to study and take exams as effectively as possible. The Service offers support for students with disabilities and learning disorders, from the moment they are admitted to the University and throughout their studies. It takes care of all students experiencing a disadvantage such as making them unable to avail fully of the educational, relational, and personal growth opportunities offered by the University due to a disability, a learning disorder, a congenital or acquired pathology, or a temporary injury. The guiding principle underlying the Service is to guarantee equal study opportunities for all, promoting the greatest possible degree of participation and autonomy for each student. To request specific services and to apply for adaptations to teaching activities, students need to provide the Service with the certification attesting to their disability under [Law No 104/1992](#), and/or legal disability or SLD diagnosis under [Law No 170/2010](#), or any other specialised documentation attesting to a particular pathology or disorder. They will then need to attend an introductory meeting with a member of the Service staff in order to provide more information on their particular needs and identify relevant measures and aids. The Service can also provide support in assessing the advisability of applying for disability certification under Law No 104/1992 or diagnosis of a specific learning disorder as an opportunity to protect the student's rights and as a means of applying compensatory measures guaranteeing equal access to higher education and equal opportunities towards obtaining a degree. The Service caters for students with: ADHD, Autism Spectrum Disorder, Health conditions that interfere with their regular ability to study, Hearing disability, Motor disabilities, psychological vulnerability, Specific Learning Disorders, specific developmental disorders, visual impairment, and temporary clinical conditions affecting the regular ability to study. The Service supports students with several measures: adaptations for exams/entrance exams/language proficiency tests, adaptations to lecture attendance, advice on study strategies, advice on the use of technological aids, assistance for international exchange programmes, documentation supporting the use of speech recognition software for dictation and subtitling purposes, extended deadlines for the loss of student status, grants for teaching aids and/or services, mediation with teachers, study support by a peer mentor, suspension or extension possibilities, etc.

The VEE designated a member of the Teaching staff as a [coordinator for students with disabilities](#), whose role is to facilitate students with disabilities and Specific Learning Disorders (SLDs) from the admission exam and throughout their university career.

Standard 7.5. Decisions on student progression

The rules governing academic progression are defined by the University of Bologna and the [Degree Programme Teaching Regulations](#). Students can be categorised based on their academic standing as follows:

- On-course students, regularly enrolled in one of the five curricular years
- Out-of-course students, referring to those who have exceeded the prescribed duration for degree completion

There is no prohibition on advancing to subsequent study years, except in cases involving Additional Learning Requirements (ALR), known in Italian as *Obblighi Formativi Aggiuntivi* (OFA). Some students are admitted to the 1st year with ALR, meaning they can progress to the 2nd year only if they fulfil such requirements by March 31st of the year following their enrolment year, otherwise, they will be considered repeaters of the 1st year. Starting from the AY 2023-24, non-EU students admitted with an equalised score below 5 are assigned ALR, which can be fulfilled by either:

- Successfully passing a test set by the Committee designated by the DPB covering reading skills, biology, chemistry and physics, mathematics, and logical reasoning
- Attaining at least 35 ECTS from the mandatory learning activities of the 1st year

Students who do not possess English language proficiency at a level of at least B1 of the CEFR scale are assigned an ALR. In order to fulfil it, they must either pass a B1 English test at Unibo or provide an equivalent certificate.

[Guidelines for conducting exams](#), issued by the DPQAC and approved by the DPB, essentially outline the following:

- In order to sit specific examinations, students must pass the preparatory examinations indicated in the Degree Programme Teaching Regulations;
- A minimum attendance of 50% of theoretical lecture hours and 75% of practical activity hours is required for admission to a course examination
- Students cannot graduate unless they have passed all the examinations, completed the CCT and submitted the graduation thesis

According to current [Student Regulations](#), students lose their status if they do not take any examination regardless of the result (including failing the exam or rejecting grades) for a period of 8 consecutive years from the year of their last exam (regardless of the result) or the year of their last regular enrolment, whichever is more favourable. Students with a disability rating of 66% or higher, those eligible for the benefits provided by Law No 104/1992, or those diagnosed with specific learning disabilities, can request a specific resolution regarding the loss-of-status deadlines, regardless of the year of their initial enrolment.

Student progression and performance are evaluation criteria monitored by ANVUR. The ANVUR criteria and quality indicators are published annually in the [SUA-CdS](#) and on the [degree programme website](#). The DPQAC reviews ANVUR indicators, the results of student evaluation questionnaires, and the opinions of graduates on yearly basis, then submits its recommendations to the DPB, which is responsible for determining corrective actions to be implemented.

Starting from the AY 2023-24, additional learning activities with tutors are provided to help non-EU students with ALR to fulfil them. When necessary, several contracts with tutors are activated annually by the VEE to support students in specific learning activities. Furthermore, following a resolution of Unibo's BG, starting from the AY 2022-23, 20% of the budget allocated by MUR for tutors is intended to support students facing challenges in their regular study path through personalised learning activities.

All the academic staff have fixed office hours, which are published on their personal webpage. Students can also rely on [Year Coordinators](#): for each of the 5 years of the degree programme, a reference teacher is appointed by the DP Director. The role of Year Coordinators is to support students in their academic progression, guiding, assisting, and motivating them to participate in the training process.

Criteria and procedures are permanently available on institutional webpages. Through Unibo [StudentiOnLine \(SOL\)](#) platform, students can easily check their current status and study progression and print transcripts at any time. Students actively participate in the decision-making process concerning progression criteria through their representatives in the different institutional bodies.

The drop-out rate is globally low and involves mainly 1st year students. However, first-year students who do not enrol in the following year are constantly decreasing, being currently below 5%. Student drop-outs are primarily associated with personal reasons or transfer to other degree programmes within Unibo or other Italian Universities.

All the aspects related to students admission are managed directly by the MUR.

In line with the almost thousand-year tradition of the University of Bologna, which was historically wanted and financed by the students themselves, students are considered the fundamental element of the institution. The degree programme, in line with both the measures taken by Unibo to ensure the quality of its teaching activities and facilities, and [BO1.2 and BO3.2 of the DIMEVET-SP](#), is constantly improved through direct interaction between students, staff, and relevant stakeholders.

Since the early 2000s, Alma Mater Studiorum has been participating in national-level assessments in the fields of teaching and research evaluation. Drawing from this experience, the University has promoted the gradual implementation of a Quality Assurance (QA) system aligned with the European standards and guidelines established by ENQA. The Quality Assurance System aims to:

- Enable active and well-informed participation by all University community members in the pursuit of clearly defined, communicated, and agreed-upon improvement objectives
- Engage the academic community by delivering straightforward, timely, current, and comprehensive information
- Foster a culture of quality by educating individuals at all levels and roles within the community about the QA procedures to be followed

The application of these principles must lead to documented and measurable improvements in teaching, research, third mission activities, as well as in administration and management.

Unibo's Quality Assurance System has undergone evaluation by ANVUR, following a visit from a Commission of Evaluation Experts, and MUR granted cyclic accreditation to the University and its degree programmes through [Ministerial Decree No 1154/2021](#). The overall organisation of teaching structures is outlined in the Statute and Regulations, which define roles and responsibilities (for specific details on the University's general organisation, multi-campus locations, and various structures, refer to the descriptions on the [Unibo portal](#)). Unibo has established a University Quality Committee tasked with guiding, supporting, and supervising degree programmes, PhD programmes, Departments, and Schools in the implementation of Quality Assurance policies, as outlined in [Ministerial Decree No 47/2013](#) and subsequent amendments, and in accordance with the national system of periodic accreditation of Universities (AVA3).

This system is based on the Plan-Do-Check-Act approach. The DPD works with the DPQAC to prepare periodical reports, to be submitted to the DPB. The DPD plays a pivotal role in overseeing the DP, striving to identify issues at their source through continuous monitoring of data, thereby ensuring timely action. The DPQAC is composed by 11 members of the academic staff, student representatives, and year student representatives, who assist the DPD in:

- Monitoring students' academic progress, feedback on teaching activities, satisfaction upon completing the educational journey, and the employment status of graduates
- Organising teaching activities and services
- Collecting data and information obtained from interactions with students and stakeholders
- Monitoring the maintenance and update of web guides and syllabi, as well as the proper conduct of courses, examinations, and all other educational activities
- Planning teaching and services improvements
- Verifying the implementation of the improvement actions approved annually by the DPB
- Drafting annual and cyclical review documents
- Sharing the results of the monitoring with the DPB

The DPQAC carries out a systematic process of self-assessment aimed at monitoring learning activities and checking the adequacy of the learning outcomes set by the DP, the alignment between the objectives and results achieved, and the efficiency of the DP management. This allows to identify opportunities for improvement and solid corrective actions. The process involves defining the timing, methods and responsibilities for their implementation, while monitoring the outcomes on a regular basis. The self-assessment is conducted on annual basis and is coupled with a long-term (not more than 5 years) analysis of the DP overall performances, aimed to ensure the relevance of the key

justifications supporting its existence. This periodic evaluation process is formalised in the Cyclic Review document.

After discussion and approval by the DPB, the report, along with the collected data, undergoes independent review by the Faculty-Student Joint Committee established at the Department level. This committee, within its designated responsibilities, addresses issues related to the learning experiences and educational paths of students from all the degree programmes active at DIMEVET, bringing them to the attention of the University bodies. The functions of the FSJC include:

- Monitoring the DP study plan and the quality of teaching and student services using specific parameters
- Providing opinions on the creation, activation, modification, and removal of activities from the DP study plan
- Proposing education-related matters and financial resource allocations to the Department Board, in alignment with the University Statute
- Compiling an annual report containing observations on the performance of the degree programme and review activities

The DPB acknowledges the evaluation produced by the FSJC and presents the review to the DIMEVET Board for approval.

The report is then reviewed by the University Evaluation Committee, which carries out a surveillance role to assess the overall effectiveness of the University's Quality Assurance system.

The whole process is resumed in Figure 7.5.1.

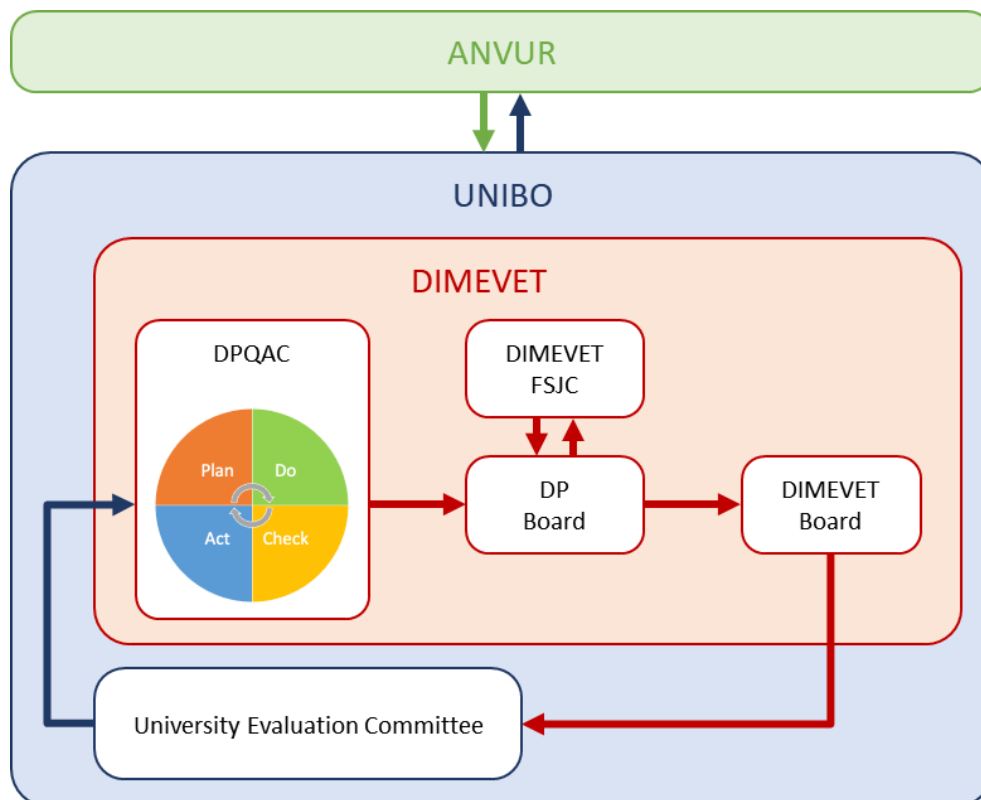


Figure 7.5.1. Diagram of the QA process of the degree programme

Standard 7.6. Student exclusion

There is no limit regarding the number of times students can enrol in supplementary years (out-of-course-students). Similarly, there is no provision for excluding students from the programme. Students lose their status only if they fail to take any examination for 8 years, as mentioned earlier. In this case, they cannot attend the DP any longer, unless they pass the admission test again for the following academic year. Those who are admitted and have a previous career can apply for credit

recognition and therefore a shortened DP. Additionally, students can apply for suspension (due to serious illnesses, significant changes in family financial situation, civil service, etc.), interruption, or withdrawal from studies. In these cases, it is the student who notifies the VEE of his/her career decision.

Students must comply with Unibo and VEE rules, in particular with reference to [Students Regulations](#), [Degree Programme Teaching Regulations](#), and [Ethical Code of Behaviour](#), whose Article 25 states the responsibilities of students in their studies:

- It is the right and duty of students to actively participate in teaching and training activities, adopting collaborative, correct, and respectful behaviour towards teachers and those involved in work or study activities in the University facilities, as well as sharing a culture based on honest behaviour, responsibility, and respect for the Institution
- During examinations, students shall refrain from behaviour that disrupts, obstructs, or is detrimental and/or dishonest to other students and the Institution. Plagiarism, copying others' work, or any other behaviour that may hinder a fair assessment are contrary to the principles of this Code

According to the [Regulation of Student Disciplinary Proceedings](#), disciplinary actions taken in the event of serious or repeated misconduct, may include: warning, exclusion from one or more examinations or from the final examination for a period of up to three months, and temporary suspension from the University for up to one year, including all academic records, examinations, and educational activities. The application of disciplinary measures must adhere to criteria of reasonableness and fairness, taking into account the nature of the violation, the course of events and the assessment of the evidence, the duration of the course, as well as previous sanctions imposed to the same student. Disciplinary provisions are definitive and, if not archived, registered in the student career.

In the event of a severe disciplinary offense, the Regulation of Student Disciplinary Proceedings outlines the inter-procedural process to safeguard the student's right to defence during disciplinary proceedings. Additionally, in accordance with Italian Law, students have the right to appeal both disciplinary actions and exclusion from the admission ranking through the Regional Administrative Court.

Standard 7.7. Support to student physical, emotional, and welfare needs

Unibo [Student Services \(ASES\)](#) manage the activities related to students career. Students can seek guidance from ASES and the Student Administration Office for matters concerning enrolment, changes and transfers to the degree programme, recognition of foreign qualifications, shortening of the degree programme, tuition fees, exemptions and study grants, insurance, classes attendance, leaving and returning to university (interruption, suspension, withdrawal, and loss of student status), recognition of student-athlete status, and application for an alias career (a provisional identity that remains active throughout the student's career, or until the court order for gender reassignment is issued).

Furthermore, the VEE [Teaching Services](#) offer support and guidance regarding teaching regulations, the organisation of teaching activities, the study plan (how and when to fill it out), electives courses, examinations, internal and external CCT activities, international mobility opportunities (Erasmus+, Overseas, and grants for abroad training periods), and final examination.

Once enrolled, students are guaranteed comprehensive assistance from the Degree Programme Director and the above-mentioned [Year Coordinators](#) for career advice and counselling. In addition, [Student Associations](#), [Student Representatives](#), [Year Student Representatives](#), and [Tutor Students](#) are available to provide "peer-to-peer" support and mentoring.

The VEE academic staff organises specific seminars and workshops in collaborations with external experts in psychology and counselling to help future practitioners develop soft skills, including communication with the owner and the prevention of word-related stress in the veterinary profession.

In 2022, the VEE promoted the seminar “How to prevent work-related stress in the veterinary medical profession”, held by a veterinarian who is also psychologist and systemic psychotherapist. The event was aimed at fifth-year students, who responded very positively and also suggested promoting similar initiatives more frequently, extending participation to all students in the degree programme.

In response to this feedback, in 2023 the VEE launched the “[Veterinario al tuo fianco](#)” (Veterinary by your side) project, supported by MSD Animal Health. The initiative aims to assist students in enhancing their interaction abilities, thereby improving their wellbeing both at work and in their private lives. Developing strategies for effective communication and stress management, as well as strengthening individual empathy and emotional intelligence, is considered crucial for modern veterinary professionals. The project comprises three parts, each with specific and complementary objectives:

- a) Preliminary information: conducting an online anonymous survey to raise awareness about student needs, expectations and current communication and relational skills
- b) Two lectures covering the following topics:
 - Veterinarian-patient and client relationship, an imperfect triangle: how to communicate effectively to establish the therapeutic alliance
 - How to manage critical situations in daily clinical activity, from reserved prognosis to euthanasia; how to recognise and manage related stress; how to communicate bad news; understanding the grieving process, helping the client when needed and defusing negative reactions by being assertive and empathic
- c) Lego Serious Play, as a tool to improve team-working, problem-solving, and communication skills (optional training addressed to the academic staff).

The Unibo [Guidance and Tutoring Service](#), in collaboration with representatives from the VEE, launched a pilot project during the AY 2022-23 to improve *in itinere* counselling services, with the aim of assisting students in overcoming difficulties during their career. With the support of a tutor, students are invited to complete an anonymous questionnaire designed to identify their specific needs and determine potential measures to support those who may be at risk of dropping out. Students then receive personalised feedback, highlighting their strengths and areas for improvement, and have the opportunity to participate in targeted workshops on personal academic skills (motivation, self-awareness of personal skills and resources), soft academic skills (time management during studies and teamwork), and career skills (decision-making processes and improving the ability to make informed choices). The tutor remained available throughout the project’s duration. This initiative will involve Veterinary Medicine students during the AY 2023-24.

Assistance to students in the case of illness, impairment, and disability was described above (see Standard 7.4.). In addition, [health care and other services](#) are offered to Unibo students. These include a free (covered by the Local Health Care Service of the Bologna area) [Psychological Support Service \(SAP\)](#) for all students and young people between 20 and 28 years old. People suffering from emotional and relational problems, affective and behavioural disorders, or troubles in their academic or working lives can apply to SAP.

The University of Bologna prioritises matters of [equity, diversity, and inclusion](#). A growing awareness has permeated also the DIMEVET community, and a member of the academic staff has been appointed as the [contact person for these themes](#). Recently, Veterinary Medicine students have promoted an open assembly to facilitate a student-faculty discussion on gender-based violence, demonstrating the increasing relevance of these matters in today’s student community. Many needs and, at the same time, several proposals have arisen from this assembly. As a result, a student working group has been established, outlining specific objectives such as organising an awareness event for the Department’s community (scheduled for late March 2024), promoting Unibo’s anti-violence helpdesk, supporting students in the reporting process, and many more initiatives.

In accordance with Legislative Decree No 81/2008, as all students participating in practical activities are exposed to specific risks, they are considered as workers under Italian regulations on occupational health and safety. Consequently, they are required to undergo a preliminary medical check and

complete training modules. The medical check takes place at the Occupational Medicine division of the University hospital and includes blood tests and medical examinations. The Occupational Medicine doctor evaluates students and issues the required eligibility certificate. Additionally, students must attend health and safety training, which consists of three modules (as described in Standard 4.9). Insurance coverage is guaranteed for all students, both within the VEE facilities and during extramural educational activities.

International students can rely on dedicated Unibo services such as:

- [International Desk](#), providing general information on how to enrol, immigration procedures, study grants and tuition fee waivers, guidance on arrival in Italy and on the services available at the Bologna Campus, and medical assistance
- [International Student Administration Office](#), to submit documents and complete enrolment to degree programmes
- [Tax Code Desk](#), to obtain the Italian tax code
- [Cross-cultural Counselling Service](#), established to prevent particularly critical situations relating to adaptation, study, excessive demands and complaints, isolation, conflicts with other students and/or teachers etc. through a cross-cultural perspective

The Italian National Health System (SSN) guarantees all medically necessary health services to students holding a valid European Health Insurance Card (EHIC) from their EU country of origin. Non-EU students must register with the SSN to obtain the same treatment. Italian students from outside Bologna, EU students, and non-EU students are also offered [a free health care service](#) from the ANT Foundation.

Unibo students may access [various forms of financial support](#) throughout their studies, offered by the University of Bologna, the Emilia Romagna Region, and external organisations.

They can also benefit from discounted [annual public transport passes](#) in the Region and have access to [specific opportunities](#) to fully enjoy university life (e.g. agreements with cinemas and museums, University Sports Centre, Language Centre, UniboCultura initiatives, discounts for software, YoungERcard).

Unibo recognises Student Associations in possession of given requirements and provides them financial support through specific calls. At DIMEVET, IVSA (International Veterinary Students' Association) and OMNIA Universitatis offer a wide range of services and support to students, and continuously organise events and initiatives, both scientific and recreational. They are also actively involved in the organisation of the "[Festa di Primavera](#)", the traditional event held annually at the VEE at the end of courses, representing a pleasant opportunity for staff and students to come together in a convivial setting.

The [Unibo Guidance Service](#) supports graduating students and recent graduates as they transition into the professional world, helping them recognise their skills, aptitudes, and aspirations. Additionally, the service offers information on job opportunities and assists in developing effective job search strategies.

Students may report their grievances to their year's student representatives, who refer to the relevant year's coordinator. The year coordinator shares the issue with the other colleagues of the same year and, if necessary, bring it to the attention of the DPD. They can also report specific problems to the Delegates for CCT and for internationalisation.

Students may also rely on the DIMEVET Faculty-Student Joint Committee, which organises every year an audition with students to share and discuss any critical issues or suggestions for improvements. Reports can also be sent anonymously through a [dedicated email address](#) monitored by the Teaching Services.

As part of the Department's ISO 9001 quality management system, a formal complaint reporting form is also available on the DIMEVET Quality Management System webpage for any concerns raised by stakeholders, including students (see Standard 4.9).

Standard 7.8. Student needs, complaints, comments, and suggestions to the VEE

Students can report any misconduct during examinations or any complaint related to the organisation of teaching or practical training activities to year coordinators, the Degree Programme Director, and the Faculty-Student Joint Committee.

Students elect their representatives in the Degree Programme Board and in the Department Board. According to the [Unibo Statute](#), they are also represented through the Student Council, whose members are appointed for two years, and elect representatives in the [University Senate](#) and the [Board of Governors](#). The primary responsibility of Student Council is to express opinions wherever student interests are concerned.

Students can also rely on [Student Ombudsman](#), envisaged in art. 15 of the Unibo Statute, whose role is to receive reports on dysfunctions and restrictions affecting the rights of students. This independent body does not report hierarchically or functionally, in any way, to University Bodies and exists solely to ensure compliance with current regulations. The main functions are specified in the [Regulations for the Student Ombudsman](#). Students can send a request or report in writing or request a face-to-face meeting. Students who contact the Ombudsman are entitled to anonymity. In fact, the Student Ombudsman works confidentially, in compliance with the right to anonymity of the student and any witnesses, and keeps secret the data and information obtained while performing the assigned tasks. Finally, it is worth mentioning that the evaluation forms administered at the end of each course also constitute a tool through which students can offer suggestions, comments and complaints regarding teaching.

Comments on Area 7

For some time now, the department has been addressing the issue of students falling behind in their studies, the so-called “out-of-course”. A few years ago, an action was implemented to facilitate the recovery of students who were lagging behind with their studies, feeling somewhat marginalized within the student community. Upon identifying, through a survey, the courses posing the greatest challenges and hindrances to academic progress, thanks to the willingness of the respective faculty members targeted remedial courses were organised for these students. This initiative was highly appreciated and undoubtedly contributed to the ongoing decline in the number of “out-of-course” students. Similarly, during the last academic years, a tutor was hired to provide support to foreign students who were struggling with their academic advancement, and the DP Director organised many individual meetings.

DIMEVET is committed to taking care of student needs also beyond the campus boundaries, having played a key-role in the Integrated Mobility Plan involving Emilia Romagna Region, Bologna Metropolitan City, Ozzano Municipality, TPER (Emilia Romagna Passenger Transportation), University of Bologna, and other local companies. This action has contributed to improving the public transportation service to and from the VEE. Furthermore, considering the challenging housing availability for students, DIMEVET is collaborating with the Ozzano Municipality to plan the establishment of a student dormitory in close proximity to the campus.

Suggestions for improvement in Area 7

In 2023, 6,906 students enrolled in the TOLC Vet to access a Veterinary Medicine degree programme in Italy, accounting for approximately 9% of the total prospective students. Despite recent changes to the national admission system, delays persist in completing the cohort in the 1st year of course. During the admission process, students can indicate multiple national locations in order of preference, leading to waiting lists as they await assignment to their preferred location. As the VEE cannot directly influence the selection process, the only feasible intervention involves reducing the workload in the first semester to support students experiencing delays.

In addition, to facilitate students’ progression, interventions are necessary at the DP structure level to decrease overall lecture hours, promote innovative teaching methods, achieve a more balanced distribution of subjects, and improve the scheduling of courses and assessment sessions.

Area 8. Student assessment

Standard 8.1. Student assessment strategy

Article 16 of the [Unibo Teaching Regulation](#) outlines the responsibilities and overarching strategies related to examinations and final examination. According to the document, “*The teaching regulation of the degree programmes define the types of assessment of the results of educational activities in accordance with the guidelines defined by the competent bodies*”.

The VEE has been committed in recent years to creating a new culture of veterinary education that also places significant emphasis on enhancing the evaluation process, in line with [BO1.2 and BO3.2 of the DIMEVET-SP](#). In this context, a number of initiatives have been organised at various times to train academic staff in this regard: the 5-days workshop “[Fundamentals in Veterinary Education](#)” was organised in collaboration with the Royal Veterinary College in 2019, a [cycle of seminars on the assessment](#) was organised in 2021 in collaboration with colleague from Unibo’s Department of Education Sciences and from the Royal Veterinary College in 2021, and the workshop “[The Objective Structured Practical Examination \(OSPE\)](#)” in collaboration with the University of Vienna in 2023. These events were attended by a substantial portion of the academic staff and, given the shared interest in the topic, colleagues from other Italian VEEs were also allowed to participate. This provided an excellent opportunity for constructive discussion and exchange.

The DP [guidelines for carrying out the examinations](#) are prepared in compliance with the requirements established by Unibo Quality Assurance system and EAEVE guidelines for accreditation. The assessment conducted within the degree programme aims to evaluate both the specific and transversal competencies associated with the professional profile and the expected occupational opportunities for veterinary medicine graduates.

The assessment is subject to monitoring and verification by the [Degree Programme Quality Assurance Committee \(DPQAC\)](#), which is responsible for taking care of the correct execution of the assessment procedures and monitoring the indicators of the degree programme processes, including assessment. The [Expected Learning Outcomes](#) of the programme include not only the acquisition and application of knowledge and skills essential for practicing the veterinary profession, but also the development of critical judgement, communication skills, and effective learning strategies. The choice of the assessment methods is aligned with the course objectives, promoting deep learning and providing opportunities for students to effectively demonstrate their understanding and skills. To provide a comprehensive evaluation of student performance and enhance their learning experience, a combination of different assessment methods is often used. Specific formative and summative assessment methodologies for each course unit are detailed in the “Assessment methods and evaluation of learning” section of the corresponding web guide.

Different methods are used, often in combination, to assess the acquisition of knowledge and skills.

Theoretical knowledge:

- Oral or written (multiple-choice, short answer, or essay-based examinations) examinations are used to assess students understanding of theories, principles, and concepts
- Assignments and projects (including research papers, case studies, literature reviews, or presentations) allow to verify students ability to apply theoretical knowledge to real-world scenarios

Pre-clinical practical skills:

- Hands-on sessions in laboratories allow students to demonstrate their proficiency in handling equipment, conducting experiments, and performing diagnostic tests
- In practical examinations, students ability to perform specific pre-clinical skills, such as animal handling, radiography interpretation, or surgical techniques is assessed

Clinical practical skills:

- During clinical rotations students can be evaluated while participating in case diagnosis and management, performing procedures on real patients, administering treatments
- Case presentation and discussion, to enable the evaluation of students clinical reasoning

Soft skills:

- Communication and reasoning assessment through problem-solving and decision-making activities
- Reflective journals or portfolios, used by students to document their experiences, self-assess their professional growth, and demonstrate their ability to apply ethical principles and critical thinking
- Peer and self-assessment, helpful for provide feedback to peers or engage in self-assessment activities, fostering self-reflection, self-awareness, and personal development

It is important to use a combination of these assessment methods to ensure a comprehensive evaluation of student knowledge, skills, and professional competencies throughout the curriculum. Additionally, formative assessments, such as quizzes or feedback sessions, can provide ongoing feedback and support student learning and improvement. Table 8.1.1 presents the distribution of summative assessment modes (oral, written, practical) across curriculum years. As observed in the last column, most integrated course assessments include a combination of these modes.

Table 8.1.1. Percentage distribution of summative assessment modes across curriculum years

Curriculum year	% Teaching units			% of integrated courses assessed in mixed mode
	Oral	Written	Practical	
1	37%	42%	21%	80%
2	40%	40%	20%	71%
3	38%	38%	24%	83%
4	53%	30%	17%	100%
5	33%	8%	59%	83%

The [final examination](#) consists in writing a dissertation on a topic relevant to the studies, written in an original way, and under the guidance of a supervisor. The dissertation will be discussed publicly during a specific final examination session before a Graduation Commission (GC) designated by the DPB. The GC may ask in-depth questions on methods, results, and any developments of the work presented. Multiple dates are scheduled during the AY, each with its own application deadlines, requirements, and dates.

In order to practice as a veterinarian, it is necessary for graduates to pass the [State Examination](#). The current situation is temporary due to the transition towards a profession-oriented degree. Those who have obtained a “class 47/S” degree in Veterinary Medicine under the previous regulation or a “class LM-42” unified master’s degree in Veterinary Medicine under the previous non-qualifying educational system will qualify for the practice of the veterinary profession by taking a State Examination to be conducted according to the simplified procedures outlined in [Ministerial Decree No 569/2022](#). A single oral examination is planned, covering subjects established by the specific regulations to assess the acquisition of competencies, knowledge, and skills required by the regulations concerning the professional profile of a veterinarian. The examination will focus on assessing critical reasoning skills within each of the professional areas that constitute the veterinary profession, including companion animal, equine, and exotic pets clinical practice, veterinary public health and food safety, animal production and livestock medicine. The decree applies to the State Examination sessions for the years 2022, 2023, 2024, 2025, and 2026, convened by order of the Minister of University and Research. In the subsequent years, graduates can request the University to take the State Examination in the sessions scheduled for the practical assessment of acquired professional skills. The practical examination is governed by a specific decree from the Ministry of University.

For the new profession-oriented degree programme, a practical and evaluative Core Clinical Training (CCT, equivalent to 37 ECTS) is included within the curriculum. Each ECTS of CCT corresponds to 18 hours of activities. The CCT is aimed at acquiring professional skills and abilities in various fields within the veterinary profession, in accordance with the ESEVT Day One Competences and European regulations. Upon completing the CCT, as well as all examinations, students must undergo a practical assessment (Prova Pratica Valutativa, PPV) consisting of three parts, one for each professional area: 1) companion animal, equine, and exotic pets clinical practice; 2) animal production and livestock medicine; 3) veterinary public veterinary health and food safety. This assessment is carried out by a designated committee, composed of 3 VEE's professors and 3 external practitioners. A positive judgement after the PPV is necessary to gain access to the final examination. The new regulation comes into effect starting from the cohort enrolled in AY 2023-24.

Standard 8.2. Assessment criteria and procedures

As described in the [Degree Programme Teaching Regulation](#), the methods of conducting examinations (oral, written, practical, or their combinations, individual or group examinations) are established annually by the DPB during the presentation of the educational programming and communicated to students through the degree programme website before the classes begin. Examination dates and other relevant information are published on the [dedicated webpage](#). Information on prerequisites is also available on the page. For each course, at least seven examination sessions are scheduled throughout the academic year. Depending on the academic calendar and the periods in which the courses are held, examinations may be taken as soon as the classes of all courses of that period have ended. Through the [AlmaEsami platform](#) and the [myUniBo app](#), students can check the examinations they can take according to their study plan and book for the desired session. Details on the methods of verification and assessment of learning are provided for each course in the corresponding web guide. Additionally, lecturers present such information during the opening lecture of each the course at the beginning of the semester. All oral examinations are conducted publicly to ensure the transparency of the assessment and to provide students with a valuable tool for approaching the examination appropriately.

The description of how the final examination is conducted is present on the [Degree Programme website](#). The [Guidelines for conducting the final examination](#), which includes supplementary information on the drafting and defence of the thesis, and the scheduled session dates are available for download from the same webpage.

All the necessary details pertaining to the veterinary State Examination can be accessed through the [relative web page](#). These include information about eligibility criteria, application deadlines, examination procedures, the composition of the examination board, test dates and venues, interim and final results, as well as instructions for obtaining diplomas and certificates.

The evaluation is expressed through a 30-point scale. The examination is considered passed with a score of at least 18/30, honours may be awarded. The student has the option to request the rejection of a grade, and such a request must be guaranteed by the teacher at least once for each course. A negative evaluation does not affect the overall average grade. These aspects are also generally defined by the above-mentioned Article 16 of the [Unibo Teaching Regulation](#).

In the web guide of each course, the specific criteria for assigning grades are specified in the “Methods of verification and assessment of learning” section. Barrier and prerequisites are determined by the DPB and [are available online](#). According to this regulation, due to the inherent consequential nature of learning, it is provided that the final assessment and the awarding of credits for certain learning activities are a prerequisite for undertaking the examination of other activities.

During the final examination, the GC evaluates the candidate, taking into account their academic career and the performance in the final examination. The evaluation is expressed on a 110-point scale, and the examination is considered passed with a minimum grade of 66/110. The GC may also decide to award honours by unanimous decision. A specific [web page](#) on the DP website illustrates in detail

how the final grade is assigned. The Commission evaluates the overall study path of the student, including thesis defence, curriculum of completed studies, and time taken to complete the degree programme, applying specific criteria. The starting grade, calculated as the weighted average of the candidate's grades throughout their entire academic career, is increased by 0.25 points for each "30 cum laude" and by 1 point if the candidate graduates on time. The graduation thesis is evaluated in terms of originality of the topic, methodological accuracy, depth of the research, appropriateness of writing, and presentation skills. The GC can add up to 10 points for the final examination, after evaluating the work presented, its originality, the interpretation of data, the writing, as well as presentation skills and understanding of the subject during the thesis defence. Up to 3 out of these 10 points are determined by a teaching staff member (referred to as the "Controrelatore"), external to the GC, who has been assigned to carefully read and evaluate the thesis few weeks before the graduation session.

As for the State Examination, the evaluation will be graded on a scale of one hundred, and qualification will be attained with a minimum score of 60/100.

In accordance with Unibo Teaching Regulation, the grades are recorded through the AlmaEsami digital platform. The electronic report is prepared and signed by the teacher responsible for the specific course within five days of the examination or, in the case of written tests, within five days from the evaluation of the tests. Students can verify the outcome of their examinations at any time by accessing AlmaEsami. Results of any interim/partial assessments are communicated to the student individually, either in person, via email, or through the AlmaEsami system, ensuring privacy. Students have the right and are welcome to reach out to the responsible teacher to review the correction of written assessments and ask for any necessary clarifications.

Different options for appeal are available to students. To start with, they can interact with [Student Representatives](#), in particular [Student Year Representatives](#), whose responsibilities include gathering issues raised by students and presenting them to the [Year Coordinators](#) for further discussion. The matter can also be brought to the attention of the DPD, who is supported by the DPQAC in managing the proper conduct of examination procedures.

The FSJC organises an annual hearing with students aimed at dealing with any concerns and gather feedback and suggestions. To improve communication with the student body, the FSJC has set up an [email inbox](#) exclusively accessed by the [VEE Teaching Services](#) for the purpose of receiving reports while guaranteeing anonymity.

Students can also appeal to the [Student Ombudsman](#) (see Standard 7.8), whose role is to independently ensure that Unibo's activities related to teaching, research, and services, which affect the rights and interests of students, are conducted in alignment with the values and regulations outlined in the University's Code of Ethics, as well as the principles and rights indicated in the University Statute. Students can submit a request or report, or ask for a face-to-face meeting, always ensuring the anonymity of the student and any witnesses. Upon receiving reports or ex officio, the Student Ombudsman takes all necessary steps to conduct an investigation of the facts in order to promote possible solutions, taking into account the functions of the University bodies, Departments, and administrative offices, along with the specific attributes of the case.

Standard 8.3. Student assessment review

Aligned with Unibo's efforts to uphold teaching quality, the degree programme is committed to continuous improvement through dialogue with students. This initiative encompasses collecting data and information by interacting with students, as well as assessing the efficacy of the educational programme and devising strategies for enhancing teaching. During the Annual and Cyclical review processes, students careers and examination results are carefully analysed by the DPQAC and during DPB meetings, in order to undertake any necessary improvement actions.

In line with Unibo's Teaching Regulation, the members of the examination committees are appointed by the DPB at the beginning of each academic year. Examination committees are composed of the teacher responsible for the subject or teaching activity, and at least one other member of the academic staff with expertise in the discipline. In the case of integrated examinations for multiple courses, the teachers responsible for each course participate in the overall assessment of the student.

Members of the final examination committees are decided by the DPD few weeks before each session, and always include thesis supervisor (and possible assistant supervisors) for the students participating to that specific session. All such information is promptly reported on the relevant sections of the degree programme website.

The assessment strategies for each course are detailed in the relevant web guide available online. The DPQAC tasks Students Representatives with reviewing the web guides for different courses, including the assessment-related information. The goal is to as determine if there are situations where the content outlined in the guide is not being implemented as stated.

The committee for the State Examination consists of six members, including three members of the academic staff and three experienced professionals designated by the locally competent Veterinary Order.

In recent years, a process of raising awareness among academic staff about the principle of "constructive alignment" between teaching and learning activities and their respective assessment tasks was initiated. For each course, the responsible teacher is in charge of ensuring consistency between learning outcomes and assessment methods, making sure that the relevant information is correctly reported in the web guide. The DPQAC annually verifies the content of the web guides and, with the support of year representative students, ensures that they correspond to how the examinations are actually conducted. The DPQAC then reports to the DPD, who contacts and assists teachers if any corrective actions are needed.

This has been a strong driver in pushing many teachers to switch from traditional modes of assessment to others and to include multiple formats (typically, written tests or essays followed by an oral or practical examination). Oral assessment is still predominant in the early years of study, being a useful tool to familiarise students with the use of appropriate terminology and encourage verbal interactions. Written examinations have been introduced in different professional subjects and practical assessment becomes more common from basic to professional subjects. The elaboration and discussion of clinical cases has become more and more common as a tool for evaluating clinical reasoning and communication skills.

Standard 8.4. Student achievement certification

The certification of the achievement of learning outcomes occurs through various means, depending on the type of activity. These include:

- a positive grade (18/30 or higher) in the final examination of a teaching unit, for learning outcomes indicated in the corresponding web guide
- a positive grade in partial/ad interim examinations (when applicable)
- the signature of the designated academic staff in the box related to a specific competence that was assessed, among those listed in the CCT Logbook
- the final grade obtained after graduation thesis defence

Certified grades for each student are recorded on the AlmaEsami platform, with access restricted to the academic staff for recording and limited to the respective student for viewing. Authorised support staff may also access to students career to verify the compliance with the established prerequisites and to provide the DPQAC with data and statistics at cohort level when needed for QA processes. The successful completion of all the examinations and validation of all activities in the CCT Logbook certifies the achievement of the learning outcomes.

Students are encouraged to actively engage in both theoretical and practical activities. In theoretical activities, active participation involves responding to queries and contributing to discussions, encouraging self-assessment of one's understanding of the subject. Additionally, certain courses include case-driven problem-solving activities, in-class exercises, collaborative teamwork, and multiple-choice test for self-evaluation. Some activities require students to prepare and present oral reports, for example on research papers or clinical cases.

Practical activities typically involve small groups of students for hands-on participation and direct supervision by instructors. In this context, students carry out assigned tasks either individually or as part of a group, and are then involved in teacher-driven discussions.

In addition, the VEE made important resources always available to students for active learning:

- [Veterinary Teaching Portal \(VTP\)](#): the platform is aimed at providing students with additional materials that can be freely accessed to complement their regular practical educational tasks (see Standard 6.2).
- [Clinical Skills Lab](#): it offers a secure and supervised setting in which students can enhance their practical abilities, boost their self-assurance and clinical proficiency, and get ready for real-world veterinary practice scenarios (see Standard 6.3).

Students also actively engage in the learning process while working on their thesis. After conducting thorough literature review, they actively contribute to formulating research questions and designing scientific methodologies. They present their progress, adapt their approaches, and refine their hypotheses. This active participation stimulates critical thinking, research skills, and ownership of their work.

During the survey aimed at collecting feedback from students at the end of each course, they can highlight the positive aspects and any difficulties or issues they encountered, as well as offer suggestions and insights to improve the organisation and conduct of the course they attended.

Standard 8.5. Assessment methodologies

The already mentioned efforts made to improve assessment methods have resulted in a good level of alignment between learning outcomes, ESEVT Day One Competences, and the evaluation process. Therefore, the different forms of assessment throughout the core curriculum ensure that every graduate has achieved the minimum level of competence.

Various modes of formative assessment are used to gather feedback and track student progress during the learning process:

- Quizzes and tests are used to assess understanding and identify areas that need further attention
- Class discussions on a topic can reveal students understanding and misconceptions
- Polls and surveys are used to gather quick feedback on concepts or teaching methods
- Quick questions at the end of a lesson help verify immediate understanding and identify any doubts
- Supervisor moderation of group discussions or activities allow to assess collaboration and understanding of concepts
- Think-Pair-Share: students reflect on a question, discuss it with a partner, and then share their thoughts with the class
- Interactive simulations in which students can play with variables and observe outcomes
- Observation of students as they work on assignments or engage in activities
- Feedback on self-directed activities
- Role-play scenarios related to a specific topic, in which students act out and demonstrate their understanding of real-world applications

The final examination for each course unit encompasses a summative assessment and uses various strategies, as already described in Standard 8.1 and detailed in the “Assessment methods” section of the corresponding web guide.

Clinical skills are assessed by the academic staff within the different CCT rotations. Students are responsible for maintaining their CCT Logbook, obtaining the signature from the academic staff for all the skills they are expected to acquire. The CCT Logbook must be completed before admission to the public discussion of the graduation thesis, 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.

The State Examination, which is mandatory to access the veterinary profession, serves as a further assessment of graduate students general knowledge and acquisition of the Day One Competences. The examination covers all the main areas of the veterinary profession and is the sole occasion where students competences and skills are also assessed by external members.

The student assessment process has also benefited from the adoption of the Self-Assessment, Periodic Evaluation, and Accreditation system (AVA) of the Italian University System, which follows the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). This system provides for quality assurance checks on various aspects, including learning assessment methods. The AVA audit includes verification of assessment methods for individual courses to ensure that they are clearly described in the course guides, aligned with the specific educational objectives, and appropriate for assessing the achievement of the expected learning outcomes.

Comments on Area 8

As described in this chapter, many aspects of the assessment process are established by the Ministry of University and Research and by Unibo. As reported in Table 8.1.1, most assessments within the degree programme are conducted using a mixed mode. This represents a significant change compared to the time of the last EAEVE visitation, when assessment primarily relied on oral examinations.

Another crucial aspect pertains the alignment of curricular courses and CCT with State Examination, to foster the development of professional skills and competencies across diverse domains within the veterinary profession, in accordance with the Day One Competences set by the ESEVT and European regulations.

Efforts to enhance the transparency of the assessment system were significantly bolstered by Unibo, which provided specific guidelines to outline assessment methods and criteria in the web guide for each course.

Suggestions for improvement in Area 8

As outlined in the cyclical review of the Veterinary Medicine degree programme, implementing a validation system for the different assessment methods used would be beneficial for both staff and students. This would involve the development of a management procedure that aligns with the ISO 9001 certification system of the Department.

Once again, building a completely new digital logbook/portfolio of competences is among the top priorities for the VEE, which will strongly impact on the whole student assessment process.

Area 9. Teaching and support staff

Standard 9.1. Staff qualification in compliance with national and EU regulations

As a general rule, all employees of the University of Bologna are required to comply with Unibo's [Ethical Code of Behaviour](#), which represents the reference for regulating the internal and external relations of Unibo in ethical terms. It is a declaration of principles accepted by teachers and researchers, managers and support staff, students and all those who establish relationships with the University and share its values.

According to [Law No 240/2010](#), the academic staff comprises permanent and temporary positions. Permanent positions include full professors, associate professors, and assistant professors. With the implementation of this rule, assistant professor positions are no longer permanent and have been substituted by temporary assistant professors, classified into type A assistant professors (RTDa, untenured) and type B assistant professors (RTDb, with tenure-track). The University can stipulate one-year contracts for highly qualified teaching activities with non-academic experts possessing extensive scientific or professional backgrounds. Furthermore, experienced and specifically trained practitioners may be hired to supervise students during CCT activities. Additionally, PhD students can carry out support teaching activities (e.g. exercises, seminars), subject to approval by the PhD Programme Board.

Access to academic positions requires passing a national public selection. For the positions of associate professor and full professor, candidates must hold the National Scientific Qualification at the time of participating in the selection (further details on the entry process and progression into academic roles are provided in Standard 9.4).

Annual assignment of individual courses to academic staff members are proposed by the DP Board to the DIMEVET Board, which decides for approval. Appointments are based on the Scientific Disciplinary Sector (SDS) to which each teacher belongs, ensuring their qualification for the role through the recognition of their individual field of expertise, in accordance with Italian law.

Over 80% of the teaching staff involved in the degree programme are qualified veterinarians (see Table 9.2.2 and [Appendix 1](#)). Currently, 28 members of the academic staff are board-certified (and 5 residents) at EBVS colleges, and 13 have held or hold important positions (including the presidency) within the European Colleges they belong to, fully aligned with [BO3.2 of the DIMEVET-SP](#). In addition, 7 members of the academic staff currently hold a National Veterinary Specialisation. Most academic staff are affiliated with the most important national and international scientific societies in their respective fields and regularly participate in conferences, committees, and training activities. Also, 11 professors collaborate, or have collaborated, with important European and global institutions (e.g. EFSA, FAO, WAB).

Support staff contributing to the operation of the VEE is selected and trained for specific competences (e.g. research, administration, teaching services, internationalisation, practical training).

Unibo is strongly committed to improving the quality of its educational activities and, in recent years, has offered the academic community numerous initiatives, both in-person and online. Workshops were proposed on creativity, design thinking, questioning, tools and strategies for interaction in mixed classrooms, methods and strategies for evaluating university learning, digital tools, and e-learning platforms. In addition, Unibo pays special attention to newly recruited academic staff, for whom further courses on specific topics have also been created and are proposed periodically throughout each academic year (see Standard 9.2).

With the aim of “promoting high-quality, innovative, and highly qualified education”, which is [BO1.2 of the DIMEVET-SP](#), the VEE strongly encouraged its academic staff to take part in the aforementioned training activities. This contributed to its recognition as one of the top Departments in terms of participant numbers (more than 50 members of the academic staff per year on average over the 2018-2021 period). Over the last 8 years, however, the VEE has also independently organised a series of initiatives focused on enhancing the quality of education in veterinary medicine and on

biosecurity, involving specialists from other Unibo Departments as well as other Italian and foreigner VEEs (see Standard 9.3).

In addition, two formal training courses have been specifically created for the staff involved in the degree programme: an intermediate-level course, which is required to all non-academic teaching staff participating in educational activities, and an advanced-level course, strongly recommended for all the academic staff and required to newly appointed staff (see Standard 9.2), in compliance with [BO2.2 of the DIMEVET-SP](#). The quality of teaching is monitored through the anonymous acquisition of the student opinions at the end of each teaching unit, which are discussed annually and open during the DPB meeting (for further details, see Standard 9.5).

All academic staff have access to information on Unibo's QA system related to teaching, research, and the third mission. Specific training on QA procedures is provided for members in relevant roles (e.g. Department Head, DP Director, FSJC members). However, since most academic staff members are part of VEE committees, awareness and participation in QA processes are ensured. All information relating to the QA procedures is shared publicly with all academic staff during the DPB meetings, which are organised approximately every 4-6 weeks.

Moreover, the DIMEVET Head has appointed a designated faculty member for matters related to teaching, who liaises with both the Department staff and the central organisation of the University of Bologna.

According to [Legislative Decree No 81/2008](#), students are considered equivalent to workers during practical activities carried out under the supervision of teachers, who are responsible for their safety. In this context, both students and VEE's staff are required to periodically attend a three-level occupational health and safety training (see Standard 4.9). In addition, several staff members are part of the VEE's emergency team and have therefore been specifically trained in firefighting and first aid. The staff is required to also attend the mandatory training on personal data protection.

Standard 9.2. Staff recruitment, progression, and training

Table 9.2.1. Teaching staff involved with the core veterinary programme

Type of contract	2022-23	2021-22	2020-21	Mean
Academic staff (FTE)	104.4	99.9	99.9	101.5
Practitioners (FTE)	2.0	1.0	1.3	1.4
Total (FTE)	106.4	100.9	101.2	102.9

PhD students do not contribute to the formal teaching, they may assist academic staff during practical activities.

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

Type of contract	2022-23	2021-22	2020-21	Mean
Permanent (FTE)	79%	79%	78%	78.7%
Temporary (FTE)	86%	85%	85%	85.3%

Table 9.2.3. Support staff of the veterinary programme

Type of contract	2022-23	2021-22	2020-21	Mean
Permanent (FTE)	77.3	76.3	76.9	76.8
Temporary (FTE)	-	-	-	-
Total (FTE)	77.3	76.3	76.9	76.8

Table 9.2.4. Research staff of the VEE

Type of contract	2022-23	2021-22	2020-21	Mean
Permanent (FTE)	_*	_*	_*	_*
Temporary (FTE)	91	81	65	79.0
Total (FTE)	91	81	65	79.0

** Permanent research position does not exist in the Italian academia*

In addition, each year tutoring contracts may be established according to specific needs to provide support for activities within the degree programme.

Almost all academic staff have full-time employment. The academic staff is gender balanced and currently comprises 48.1% women and 51.9% men. About 90% of permanent teaching staff are affiliated with DIMEVET, while teachers from other Unibo Departments represent the remaining portion. This facilitates a natural synergy and collaborative spirit among faculty members, fostering a shared vision and understanding of the DP mission.

The number of FTE academic and support staff involved in the veterinary programme is not expected to change significantly in the next three academic years. However, thanks to the extraordinary recruitment plan endorsed by MUR, along with additional recruitment and career advancement opportunities deriving from the “Dipartimenti di Eccellenza” and “National Recovery and Resilience Plan (NRRP)” national initiatives (see Area 2), DIMEVET is currently hiring and promoting academic staff to compensate for the forthcoming retirement of senior colleagues and potentiate strategic scientific areas.

The recruitment and advancement of academic staff is dependent on public funding. Every year, Unibo allocates variable amounts of “budget points” to the Departments. The Italian Ministry of University and Research defines one point as the budget required to hire a full professor. The number of budget points depends on the Ministry’s overall resource allocation, as well as locally established parameters, including student population size and expected academic turnover. The allocation of budget points at the DIMEVET level is based on criteria such as teaching needs and strategic development of research activities, and is balanced across the different Scientific Disciplinary Sectors (SDS) and academic positions. After consulting with the representative of each SDS, the Department Executive Committee formulates a proposal to be presented to the Department Board, where it is discussed and approved. Proposals are then presented to the Board of Governors for final approval. Notices of competition are published by the University’s central administration.

The recruitment of academic staff occurs through public selection procedures. To access an associate professor or full professor position, candidates must hold the [National Scientific Qualification](#), as established by [Law no 240/2010](#). The “direct call”, as per [Law no 230/2005](#), is an alternative and less frequent recruitment method reserved for Italian and foreign individuals with specific merits, primarily based on their significant scientific reputation.

As for fixed-term assistant professor positions, holding a PhD is a prerequisite for both RTDa and RTDb, and in both cases candidates must pass a national public selection. RTDa have a three-year contract, with the possibility of a two-year extension. RTDb can only be hired for a maximum of 3 years and, at the end of the period, they are evaluated by an internal commission for their research and teaching activities in order to be eligible for the position of associate professor.

As anticipated, DIMEVET places great emphasis on the teaching and assessment skills of the staff involved in the degree programme. For this reason, newly hired RTDa and RTDb associate professors are strongly recommended to participate in the training programme “[The Alma Mater community: instructions for use](#)” launched by Unibo. This initiative aims to promote their awareness of the guidelines, organisational structures, and services provided by our University for research, teaching, and the third mission. It consists of a one-day event, including four different sessions: two on research, one on teaching, and one on the organisation of the University and other institutional aspects.

Academic staff newly (less than 3 years) hired at DIMEVET and with teaching assignments in the DP are required to also complete the “Educational training for DIMEVET academic staff” training course, specifically designed to grant a comprehensive starting point for teaching and assessment activities in the context of veterinary education. The course is accessible on Unibo’s Digital learning platform using institutional credentials and contains different units, covering primary and imperative topics (e.g. code of conduct, ESEVT Day One Competences, Good Clinical Practices) as well as teaching and assessment strategies. After attending the course, the participant must successfully pass the final evaluation test for the training to be formally validated. The course is also open to all members of the VEE’s academic staff, whose attendance is highly and repeatedly encouraged.

In addition, the “[Unibo ONLINE](#)” learning environment provides on-demand training on the digital tools available to academic staff for teaching and assessment purposes.

An educational programme that addresses the same topics but in a less detailed manner is mandatory for all non-academic staff participating in the DP. Similarly to the advanced course, “Educational training for DIMEVET non-academic teaching staff” can be taken on demand using the credentials provided by Unibo and a final assessment is required for completion of the activity.

In line with its proactive approach towards the continuing education of its academic staff, DIMEVET has also organised a series of other initiatives throughout the years, with the involvement of internationally recognised experts in the fields of teaching, assessment, communication, quality assurance, and veterinary education. These include:

- “[Quality assurance in veterinary higher education: a model of integration between the European and the national QA system](#)” (2016)
- “[Innovating veterinary education: the Royal Veterinary College experience](#)” (2017)
- “[Teaching the iGeneration](#)” (2018)
- “[Fundamentals in veterinary education](#)” (2019)
- “[Some ideas on using Moodle for teaching innovation and evaluation](#)” (2019)
- “[Innovating the veterinary medicine curriculum & setting up a Clinical Skills Lab](#)” (2019)
- “[The curriculum and teaching methods of the Veterinary Medicine degree programme in Helsinki](#)” (2019)
- “[Formative Educational Evaluation \(EDUVET\)](#)” (2020)
- [Cycle of webinars on assessment](#) (2021): “Methods and strategies for assessing university learning”; “Developing modern and integrated teaching and assessment for Veterinary basic sciences”; “Developing modern and integrated teaching and assessment for Veterinary clinical educators”
- “[Expanding the frontiers in Veterinary Public Health Education](#)” (2022)
- “[EAEVE accreditation: The VEE must demonstrate a clear commitment for the delivery of biosafety and biosecurity](#)” (2022)
- “[Nextvet - Una Europa Summer School in Veterinary Public Health \(Meat Hygiene\)](#)” (2023)
- “[The Objective Structured Practical Examination \(OSPE\)](#)” (2023)

These professional development opportunities have been welcomed by the academic staff with great interest and participation, demonstrating the collective focus on improving and modernising the educational approach.

The recruitment of support staff takes place annually through a public selection process managed by the Department, which periodically identifies new administrative and technical needs. The proposal of the Department requires authorisation from Unibo. Candidates undergo a competitive selection process, evaluated against a profile outlining the general and specific skills required for the position. The qualification of support staff is ensured not only through the selection procedure for hiring or promotion, but also by specific training courses organised by Unibo (see standards 9.4).

According to Law no 240/2010, full-time teaching staff are prohibited from engaging in any private professional activity as Veterinarians. However, subject to authorisation from Unibo, they may carry out some external activities (e.g. consultancy), as long as they are occasional, do not conflict with Unibo’s interests, do not exceed 340 hours per year, and do not interfere with institutional tasks (e.g. teaching). Part-time staff members are allowed to conduct private veterinary activities, provided that they do not interfere with institutional duties and there is no conflict of interest with the University. In any case, the remuneration of part-time teachers is reduced proportionally to their reduced working hours. In addition, external employment for Unibo staff is governed by a specific [Unibo regulation](#). On the other hand, scientific assignments (e.g. expert roles in scientific committees) do not require authorisation but only need to be notified.

Standard 9.3. Staff employment peculiarities

The Italian University System does not regulate the specific balance between teaching, research, and the third mission (defined by ANVUR as the “*openness towards the socio-economic context through the valorisation and transfer of knowledge*”, meaning universities engaging with society and industry, not just through teaching and research but also by applying their knowledge to practical, real-world problems and fostering collaboration with various stakeholders). However, it defines certain requirements concerning the teaching load and the total number of hours dedicated to teaching activities (including tutoring and assessment). Full-time professors are expected to teach 120 hours/year and devote 350 hours/year in total to educational tasks. For part-time academic staff these figures are reduced to 80 and 250 hours/year, respectively. RTDb assistant professors have a teaching commitment of 60 hours/year, while RTDa assistant professors have no obligation and can teach up to 60 hours/year. Reductions in teaching load are allowed in the case of concurrent demanding academic assignments (e.g. VEE Head, DP Director).

National regulations, and more broadly the Italian University System, continue to heavily favour the recognition and valorisation of research activities over teaching. Consequently, neither Unibo nor DIMEVET currently offer an officially recognised reward system for excellence in teaching. However, in line with the strong community spirit that has always characterised the DIMEVET environment, during the annual presentation and discussion of the results of the students assessment of teachers at the DPB meeting, the DPD highlights the academic staff members who scored the top and publicly congratulates them.

The Department’s continuous efforts in promoting opportunities for enhancing and expanding the teaching and assessment skills of its staff are highlighted in Standards 9.1, 9.2, and 9.4. Furthermore, the University of Bologna has an extensive network of international contacts and participates in various programmes (e.g. Erasmus+, Marie Curie actions) for teachers, support staff, and students, which give the staff a wide range of opportunities to spend a period abroad (EU and non-EU countries) for training and research activities. To encourage and facilitate these continuing education initiatives, financial support options are available, and insurance cover for staff travelling abroad is refundable. The MOOC “Personal risk reduction in insecure contexts” is available for staff members travelling to countries where security issues exist. The [Mobility section](#) of Unibo’s intranet channel (whose access is restricted to Unibo’s staff) outlines international opportunities for academic staff.

The academic staff is also warmly invited to take on institutional roles both within the Department and in the University bodies. However, with the exception of Department Heads, this commitment is not associated with any financial recognition or career advancements.

Salaries for both teaching and support staff are mandated by law. Academic staff receive pre-established salary increases every two years following a positive evaluation; support staff undergo periodic evaluations to determine category pay raises (see Standard 9.4).

Standard 9.4. Staff professional growth and contribution to the VEE’s direction

To ensure lifelong learning and continuous professional growth, the Department encourages the participation of all academic staff in courses, seminars, workshops, as well as national and international conferences. The costs for these initiatives can involve public funds available to the teachers. Membership fees for scientific societies and colleges can also be reimbursed. Additionally, international mobility and exchange programmes are facilitated through various Unibo programmes (as described in Standard 9.3). Foreign language courses are available for the staff.

The Department continuously organises scientific initiatives involving both internal speakers and external Italian and foreign experts, covering a wide range of topics (see [Appendix 13](#)).

Unibo considers professional training a fundamental tool for personal and professional growth also for support staff, promoting advanced professional training initiatives, [professional development courses in various fields](#), foreign language courses, and [international traineeships](#). Moreover, support staff are invited to participate in events organised by DIMEVET, based on their interests.

Formal appraisal of academic staff takes place through student evaluations and the attainment of the National Scientific Qualification. Vertical promotions from one category to another take place through a public call, followed by an evaluation by a Commission specifically appointed. As already mentioned in this chapter, competitive selection procedures can only be accessed by participants who already have the National Scientific Qualification. Candidates are evaluated on the basis of their teaching, scientific, organisational, and institutional activities carried out within their own Department, Unibo, and on a national and international scale. The evaluation commission consists of three full professors, two of whom are external to Unibo, belonging to the academic recruitment field (as defined by the Ministry of University and Research) for which the selection was announced. The selected candidate for the academic position is finally submitted to approval by the Department Board, where only teachers of equal or higher academic rank participate in the voting process. Horizontal economic progression of teaching staff occurs on a two-year basis. To obtain the salary increase, teachers must demonstrate that they have fulfilled research, teaching, and institutional tasks established by Unibo. An ad hoc commission, consisting of 3 full professors from Unibo, evaluates the applications twice a year.

Support staff may benefit from horizontal and vertical economic progressions after evaluation, depending on the needs of the Department and available resources. Additionally, support staff who have additional professional assignments associated with specific allowances are evaluated on an annual basis. A [regulation for the distribution of incentives](#) for the technical functions carried out by support staff at the University of Bologna has been recently published.

Academic and support staff are part of a teaching and research team, depending on their area of expertise. Each group is led by one or more senior academics, who are responsible for creating a collaborative environment as well as providing guidance, coaching, and support to the team members. For specific aspects, informal mentoring may also be offered by the DP Director and appointed DIMEVET Committees supervisors.

All members of the DIMEVET community are encouraged to take on organisational roles. Academic staff, along with support staff representatives, participate in both the DIMEVET Board and DIMEVET Executive Committee, actively contributing to the decision-making process. All motions are submitted to the vote of the assemblies, and each member has the right to vote.

Standard 9.5. Teaching staff assessment

Students regularly evaluate the quality of the teaching through the Unibo evaluation system. At the end of each teaching unit, they are required to fill out a mandatory and anonymous online evaluation form (a [demo version](#) is freely accessible). Students must complete the teaching staff evaluation before registering to sit the examination, as requested by the ANVUR. The questionnaire follows the [AVA guidelines](#) scheme and comprises six main topics: teaching unit, teacher, interest and satisfaction, organisation and infrastructure, importance given by the teacher to the questionnaire, and suggestions.

The form also allows to express detailed comments and suggestions. At the end of each AY, the Unibo Quality Assurance Office transmits the survey results to the individual teachers, the DPD, and the FSJC of DIMEVET. The discussion of the student opinions takes place openly during the meetings of the DPB, where data collected for all the teaching units of the curriculum are examined. Cut-off thresholds have been set for sub-optimal (66% positive ratings) and potentially critical (50% positive ratings) situations. In such cases, the DPD arranges a meeting with the relevant teacher to discuss the reasons for the failure and take corrective measures. The results of the analysis of students feedback, any issues encountered, and the corrective measures adopted are detailed in the DP annual review produced by the DPQAC. The document is then discussed within the DPB and monitored by the FSJC before being submitted to the University Evaluation Unit (see Figure 7.5.1 for an illustration of the QA process). Student opinions on the DP, expressed in the form of aggregate data for each AY, are publicly available on the [dedicated Unibo website](#).

Anonymous online surveys have been specifically developed for the assessment of the CCT. They

are administered to students upon completion of each part of the programme and subsequently reviewed by the responsible teacher as well as the DPQAC. Similarly, students assess non-academic teaching staff involved in CCT activities through a dedicated online form. The results of this evaluation are shared with the contracted practitioners and analysed by the DPQAC to identify potential issues and determine contract renewal for the following year.

Comments on Area 9

Both the national extraordinary plan for career progression and the “Dipartimenti di Eccellenza” project have facilitated staff advancement and the recruitment of new academic staff. Since the consolidation into a unified department, the VEE has directed considerable attention towards the multi-year planning (typically spanning three years) of academic roles. Recently, this approach has been extended to encompass support staff as well, enabling the recruitment of new staff members with skills and experience tailored to the needs of the VEE.

These initiatives have significantly impacted the composition in terms of roles and gender. From 2019, the most substantial increase was observed for associate professor positions, which grew by 32%. The Glass Ceiling Index, calculated as the ratio between the proportion of women within the academic staff and the proportion of women in the role of full professor, decreased from 2.88 to a 2022 value of 1.92. The Strategic Plan aims to further decrease this index. Furthermore, a modest reduction in the average age has been observed across various role positions.

The recent reform of the pre-tenure system in the Italian university has abolished the distinction between “RTDa” and “RTDb” assistant professor positions introducing a unified position called “RTT” (acronym for “fixed-term researcher in tenure track”), which spans a maximum duration of 6 years. Upon completing the third year of contract, a RTT holding the National Scientific Qualification is eligible for appointment as an associate professor.

Suggestions for improvement in Area 9

As extensively described in this chapter, in recent years there has been a heightened focus on the professional growth and development of academic staff at DIMEVET, and a considerable effort has been made to promote initiatives in this regard. Nevertheless, it is strongly advisable to continue investing in this direction with new strategic actions, also aimed at a constant improvement and updating of the content offered within the formal training courses introduced for the staff involved in the Degree Programme.

In this context, opportunities for improvement will hopefully be offered by the recently established Unibo’s Teaching and Learning Centre. Its vision encompasses building a comprehensive pathway for the training of the academic community, organising courses dedicated to new cross-disciplinary skills, proposing and experimenting with new teaching and learning methods as well as innovative educational formats.

Designing more substantial strategies to reward deserving teachers would contribute to further enhancing the awareness of the academic staff regarding these matters. Thus, we are striving to devise effective actions within the strict regulatory frameworks established by the university system.

Area 10. Research programmes, continuing and postgraduate education

Standard 10.1. Research activities

The research conducted at DIMEVET involves academic staff and collaborators from different Services, each with distinct expertise and resources. The research activity covers a wide range of subjects, which can be grouped in the following areas:

- Basic sciences
- Veterinary clinical sciences
- Veterinary public health and animal pathology
- Food safety and animal production

The academic staff actively participates in research programmes that receive funding from both public and private sources. Notably, in 2018, DIMEVET ranked first among the VEEs in Italy, thereby receiving a special ministerial funding (“[Dipartimenti di Eccellenza](#)”) of approximately 8.1 million Euros over 5 years (see Standard 2.1).

Recently, the University of Bologna has been also significantly engaged in four out of the six Missions outlined in Italy’s [National Recovery and Resilience Plan \(NRRP\)](#). Notably, within Mission 4 “Education and research”, Unibo stands as Italy’s leading university in projects participation, being a partner in every winning project selected for each theme. Regarding DIMEVET, it plays a direct role in two [Extended partnerships](#) (“Neuroscience and neuropharmacology” and “Emerging infectious diseases”) and is involved in various Spokes of the “[Agricultural technologies \(CN2\) - Agritech – National Research Centre for Agricultural Technologies](#)”, which focuses on sustainable animal production. These engagements will result in significant funding availability starting from AY 2023-24 for improving research facilities and equipment (see Standard 4.1), as well as recruiting and promoting staff (see Standard 9.2).

Table 10.1.1 shows a summary of the major ongoing research programmes in the four research areas of DIMEVET during 2022-23; more detailed information on each individual initiative can be found in [Appendix 14](#). Furthermore, the research output is evidenced by the number of publications in peer-reviewed scientific journals, in particular the number of indexed publications (Scopus indexed journals) of DIMEVET academic staff is 226 in 2023, 259 in 2022, and 267 in 2021 (for a complete list see [Appendix 5](#)).

The teaching staff considers research pivotal for student education and training and research activities contribute to student education in various ways. The pedagogical approach of lecturers is profoundly influenced by their research experience, which is reflected in their selection of topical issues for in-depth examination, provision of real-world scenarios, and guidance in managing the clinical caseload. Students who actively participate in research activities during the preparation and writing of their graduation thesis gain direct access to the comprehensive research background. Furthermore, the national and international research collaborations of the staff, as well as the presence of Visiting Professors at the VEE, often serve as catalysts igniting students interest in research and offering them opportunities to pursue studies, thesis projects or training periods abroad (e.g. Erasmus+).

Table 10.1.1. List of the major funded research programmes in the VEE which were ongoing during the last complete academic year prior the Visitation

Scientific topic	Number of projects	Total grant/year (€)	Average duration (Years)
Basic sciences	20	593.497	1.58
Veterinary clinical sciences	11	193.528	1.68
Veterinary public health and animal pathology	22	385.714	2.25
Food safety and animal production	45	1.545.048	1.94

Standard 10.2. Student research training

Students are encouraged to approach evidence-based medicine, scientific research, and lifelong learning through various methods. From the early stages of the curriculum, they gain awareness of the importance of data in scientific thinking, understanding its analysis, interpretation, and proper presentation (e.g. through statistics and epidemiology courses). Students receive progressive training in the scientific approach, including through teacher-provided case studies drawn from their own research experience, classroom discussions on relevant and topical issues, small-group practical activities, and flipped classrooms.

Students of the degree programme are invited to participate in research-oriented events, such as Journal Clubs, seminars organised in the framework of Specialisation Schools and PhD programmes, as well as the PhD thesis defence. In addition, IVSA Bologna organises the event “[Game of Research](#)” a dedicated day for sharing scientific research carried out within DIMEVET. The protagonists are the young researchers (PhD students, research fellows, and junior assistant-professors), who expose research results obtained during their activities. Students are also encouraged to participate in other research-promoting events, including those associated with the [European Researchers’ Night](#).

In order to guide students in effectively accessing scientific literature, the VEE library organises courses twice a year aimed at introducing students to the use of search tools for scientific literature databases. The courses consist of three sessions (each of 90 minutes) and an e-learning part, which also includes assigned exercises. While attendance is not compulsory, full participation entails the assignment of 1 ECTS. While introducing undergraduate students to writing scientific papers is not an explicit learning objective, they may contribute to the drafting of scientific articles based on their thesis work.

The opportunity to participate in research projects is offered to students through EPT and experimental thesis activities for the final examination. Usually, the student identifies the subject of interest and approaches the supervisor (a member of the academic staff), who then proposes an ongoing research project, aiming to align it as closely as possible with the topic chosen by the student. It is also possible for teachers to post thesis proposals on the DP website. Engaging with the research group, students come into contact with different research techniques and are stimulated by an environment in which experience is gained on the scientific method and on evidence-based thinking. As described in the [relative web page](#), the final examination consists in writing a dissertation on a subject pertinent to study curriculum and discussing it in front of a Graduation Commission (see Standard 8.1). Students can choose between two types of thesis:

- Experimental thesis, which involves the formulation and demonstration of a hypothesis or methodology through direct experience. The central emphasis of this work lies in the methodological rigour adopted in the collection, analysis and interpretation of data
- Review thesis, which concerns the analysis of a chosen topic, mainly based on bibliographical sources. In this thesis the activity of the student involves compiling a review and a clear synthesis of already published information

The thesis produced are stored in a closed University database and may be published based on the supervisor’s discretion.

The VEE offers the opportunity to [conduct the thesis research project abroad](#), providing grants to partially cover living expenses.

Standard 10.3. Postgraduate degree programmes

Postgraduate degree programmes and other opportunities are presented in the “[Postgraduate Education](#)” section of the DP website. In particular, they include:

- [PhD programme in Veterinary Sciences](#) – A doctoral research degree is the highest level of academic qualification achievable and it takes three years of full-time work to be completed. As stipulated by the [Ministerial Decree No 226/2021](#), the programme must provide students with the “*skills necessary to carry out highly qualified research activities at universities, public or*

private institutions, to also facilitate the access to careers in public administration and the integration of highly innovative professional paths". Admission to the PhD programme is conditional upon a public comparative assessment of the applicants. Candidates apply by submission a research project proposal on specific topics mentioned in the call. Then, all candidates undergo an oral interview and are evaluated by a specific committee, also taking into account the basis of their curriculum vitae and research proposal.

The programme, managed by a Board and headed by a Coordinator elected among DIMEVET's academic staff, encompasses structured teaching activities, articulated on transversal themes, specific themes, and transdisciplinary themes, offered by both the VEE and Unibo. Additionally, annual meetings are organised among doctoral students to encourage dialogue and critical discussion between peers, through the presentation of individual projects, ongoing results, challenges faced, proposed solutions, and experiences abroad and/or in the industry. The PhD programme is organised according to [Unibo regulations](#), which provide information on the rules governing PhD studies at the University of Bologna.

The PhD programme in Veterinary Sciences is characterised by four different curricula:

- Basic Sciences
- Animal Production and Food Safety
- Animal Health
- Clinical Sciences
- [Specialisation School in Animal Health, Livestock Breeding and Animal Production](#) - The aim of the Specialisation School is to train specialists who have acquired a comprehensive understanding of the structure of shelters, nutrition, reproduction, animal welfare, and related legal and economic aspects associated with domestic animals. Knowledge and skills are provided regarding the pathology, diagnosis and control of infectious diseases, with a specific emphasis on the prevention of zoonotic risks. Basic notions are also provided about farm management, from both economic and health-related perspectives. The Specialisation Diploma is an essential requirement for participating in public selections for positions in the National Health System. The Specialisation School is financially supported by the Emilia Romagna Region, which ensures the availability of necessary funds to provide students with grants. Moreover, the programme includes a practical training at public regional centres in the field of animal health, such as the [Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini" \(IZSLER\)](#) or the Local Health Authorities (ASL) in the Emilia Romagna region.
- EBVS training programmes - Currently, the VEE offers residency programmes for 14 different EBVS disciplines (see table 10.3.1)
- Internship programmes - Several internship programmes are offered at the VTH, aimed to provide postgraduate clinical and educational training useful for tackling the veterinary profession and/or a residency programme. Details for each programme are provided in the dedicated section of the [VTH website](#)
- Professional master's programme - The VEE offers one-year 2nd level master's programmes in clinical and not clinical topics (see Tables 10.3.1 and 10.3.2). Details on the offer are presented in the [DIMEVET website](#)
- Research Fellowship - These grants are available for post-doc or post-graduates to carry out specific research projects. These positions can last 1-5 years and are financed through individual academic staff funds with, in some cases, a co-funding of the DIMEVET

Table 10.3.1. Number of students registered at postgraduate clinical training

Training	2022-23	2021-22	2020-21	Mean
Residents				
EC Veterinary Neurology (ECVN)	1	1	0	0.7
EC Animal Reproduction (ECAR)	5	5	5	5
EC Animal Welfare and Behavioural medicine (ECAWBM) Animal welfare ethics and law	1	2	2	1.7
EC Aquatic Animal Health (ECAAH)	1	1	1	1
EC Bovine Health Management (ECBHM)	1	1	1	1
EC Veterinary Comparative nutrition (ECVCN)	2	2	2	2
EC Veterinary Emergency and Critical Care (ECVECC)	3	2	1	2
EC Veterinary Internal Medicine-Companion Animals (ECVIM-CA)				
Oncology	2	2	2	2
Internal medicine	2	2	2	2
Cardiology	0	0	1	0.3
EC Veterinary Pathology (ECVP)	5	5	5	5
EC Veterinary Surgery (ECVS)	0	1	1	0.7
EC Sports Medicine and Rehabilitation (ECVSMR)	1	1	1	1
EC Veterinary Microbiology (ECVM)	0	0	0	0
Total	24	25	24	24.3
Internship				
Small animal surgery	-	4	3	2.3
Endocrinology in companion animals	2	2	2	2
Equine medicine	-	1	-	0.3
Internal medicine in companion animals	5	6	11	7.3
Emergency medicine in companion animals	1	2	5	2.7
Oncology in companion animals	-	1	1	0.7
Reproduction in companion animals	-	-	1	0.3
Total	8	16	23	15.7
Master				
Anaesthesia and analgesia of small animals	25	22	22	23
Sports medicine and rehabilitation of dogs	-	16	-	5.3
Ultrasonography in small animal veterinary medicine	20	-	-	6.7
Total	45	38	22	35

Table 10.3.2. Number of students registered at postgraduate research training

Training	2022-23	2021-22	2020-21	Mean
PhD programme in Veterinary Science				
CV Basic Sciences	9	7	6	7.3
CV Animal Production and Food Safety	21	18	14	17.7
CV Animal Health	12	8	7	9
CV Clinical Sciences	15	13	15	14.3
Total	57	46	42	48.3
Research Fellowship				
Total	34	35	23	30.7

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)

Programmes	2022-23	2021-22	2020-21	Mean
Specialisation School				
Animal Health, Livestock Breeding and Production	22	23	37	27.3
Master				
Veterinary Phytotherapy	-	-	11	3.7
Aquaculture and Fish Pathology	-	10	-	3.3
Advanced training courses				
Advanced Biotechnologies in Veterinary Medicine	5	-	-	1.7

Continuing education courses organised by the VEE during the last three AY are listed in [Appendix 13](#). The number of courses and total participants for each AY are presented in Table 10.3.4.

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

Courses	2022-23	2021-22	2020-21	Mean
Number of courses	19	12	11	14
Number of attendees	1,725	1,047	980	1,251

The number of students enrolled in post-graduate programmes is expected to increase or remain static in the next three academic years. In particular, new residency programmes will be available, due to the growing number of diplomates in the academic staff and new residents enrolling in the already active programmes. The Specialisation School will be offered again annually, continuing to benefit from grants sponsored by the Emilia Romagna region. The number of PhD students has increased significantly in recent years, and this trend will continue next year due to extraordinary funding provided by the Italian Recovery and Resilience Plan (PNRR) supported by European Commission.

Post-graduate students, in particular residents, interns, and PhD students, play an active role in supervising the activities of undergraduate students, all under the guidance of the academic staff. During clinical rotations, undergraduate students participate in hands-on case management as members of a team formed by both permanent and temporary staff. In small-group settings, qualified post-graduate students significantly contribute by sharing their knowledge and skills in clinical case management. This interaction proves fundamental in enhancing the understanding and proficiency of undergraduate students. Additionally, seminars and journal clubs are also organised, where post-graduate students can present clinical cases or topics related to their ongoing research activities.

Potential conflicts might arise in relation to clinical cases management or activity coordination between post-graduate and undergraduate students. However, the complexity and responsibility levels of the activities differ among the individuals involved, and the abundance of available cases ensures that the distinct learning needs can be met.

One of the main focuses of the VEE is “Third Mission and Public Engagement”, aimed to generate knowledge beyond academic settings for the betterment of social, cultural, and economic development. The staff is widely engaged in organising seminars, conferences, and events like Summer Schools on specific and pertinent subjects, to cater to the needs of different stakeholders, the veterinary profession, and the broad community. In Italy, veterinary continuing education is mandatory for non-academic practitioners, and must be substantiated by professionals acquiring at least 150 ECM (Continuing Education in Medicine) credits every three years. Some of the courses offered by the VEE hold ECM accreditation, and frequently members of the VEE are involved in ECM events organised by external organisations.

Standard 10.4. QA system in research activities

The research activities conducted by the VEE staff are monitored at different levels through QA systems, locally and nationally organised. This comprehensive process evaluates the research quality of the VEE, contributing to the integration of research-based training within the study programmes. At the national level, ANVUR has recently introduced a new model for periodic accreditation of universities and degree programmes, called AVA3. This model was developed in response to the need highlighted at the European level by the European Association for Quality Assurance in Higher Education (ENQA) and the European Quality Assurance Register (EQAR). The revised quality requirements now encompass a comprehensive perspective on teaching, research, third mission/social impact, and other institutional and management activities, with a special focus on PhD programmes. Furthermore, ANVUR evaluates research quality through the VQR system, a peer review process of the research outputs (scientific publications), on a five-year basis. The VQR outcomes play a role in determining the allocation of financial resources from the Ordinary Financing Fund. The resulting

report is reviewed during Department Board meetings to identify specific corrective actions for addressing any gaps.

At the Unibo level, the [University Quality Assurance Office \(UQAO\)](#) oversees quality assurance procedures across degree programmes, PhD programmes, and departmental activities (including research), based on the guidelines established by the Governance. As part of this activity, the UQAO promotes a culture of quality and the implementation of informative and training initiatives, also in collaboration with other University units. Furthermore, UQAO supports the monitoring and revision of the QA System, intended as a set of organisational structures, processes, and procedures aimed at promoting and improving the quality of teaching, research, and third mission/social impact.

At the DIMEVET level, a [Research Committee](#) is engaged in investigative functions related to research evaluation (criteria and indicators), proposal of research management procedures, monitoring research activities and instrumental resources, criteria for allocating research resources, suggesting research support initiatives (fundraising), dissemination and updating personnel with information from Unibo and other institutions regarding opportunities for participation in competitive grants, promotion of aggregation and integration of research groups active in the Department, and dissemination of the obtained results. In particular, enhancing research activities and promoting third mission initiatives that meet the needs of society, also involving public, private, and third-sector entities are [BO1.1, BO3.1 and BO3.2 of the DIMEVET-SP](#).

DIMEVET is committed to operating in an integrated manner for all its activities (research, teaching, and third mission/social impact), in line with Quality Assurance systems. DIMEVET has obtained UNI EN ISO 9001 certification for research and analytical activities for all its Scientific-Educational Services. This strategic choice aims to strengthen departmental organisation, transparency, and ethics by integrating with regulatory requirements on safety, environment, and worker health. Regular planning and monitoring of the activities and services provided, attention to the needs of the customer and all stakeholders, performance evaluation, periodic review of critical processes, and a commitment to continuous improvement have become integral to DIMEVET's management approach. The continuous loop is guaranteed by all the different levels of the organisation and its monitoring is documented annually in the [DIMEVET SUA-RD report](#). The document is prepared by the Quality Management System officer through a series of meetings with the Department's Head and their delegates. After being presented and approved at the Department Board, it is then published on the DIMEVET website. The PDCA cycle implemented by DIMEVET for research activities is shown in Standard 1.4.

Comments on Area 10

The success rate in international research projects has shown a significant growth trend in recent years (from 1 active project in 2015 to 11 in 2023), resulting in positive effects on available resources and the expansion of the international research partner network.

Simultaneously, the postgraduate offer has increased, involving a growing number of master programmes (in addition, a new master programme in dog and cat reproduction will begin in 2024) and continuing education courses, along with a recently introduced advanced training course in biotechnologies.

The number of PhD students has also increased, mainly due to the extraordinary resources allocated by the Ministry of Universities and Research over the past two years.

Suggestions for improvement in Area 10

The VEE should continue its commitment to providing a broader range of postgraduate courses in various fields of the veterinary profession. These could also include specialisation schools in clinical disciplines, which would meet the demands of the professional world.

Drawing from the recent successes achieved by some research groups within DIMEVET in international research grants, enhancing the sharing and dissemination of best practices in participating in such calls would be advantageous for the entire community.

ESEVT Indicators

Raw data from the last 3 complete academic years	2022-23	2021-22	2020-21	Mean
1 n° of FTE teaching staff involved in veterinary training	106.4	100.9	101.2	102.8
2 n° of undergraduate students	554	517	517	529.3
3 n° of FTE veterinarians involved in veterinary training	83.5	81.0	80.3	81.6
4 n° of students graduating annually	62	79	80	73.7
5 n° of FTE support staff involved in veterinary training	77.3	76.3	76.9	76.8
6 n° of hours of practical (non-clinical) training	705	705	705	705.0
7 n° of hours of Core Clinical Training (CCT)	800	800	800	800.0
8 n° of hours of VPH (including FSQ) training	366	366	366	366.0
9 n° of hours of extra-mural practical training in VPH (incl. FSQ)	107	107	107	107.0
10 n° of companion animal patients seen intra-murally	6402	6517	6111	6343.3
11 n° of individual ruminant and pig patients seen intra-murally	147	149	152	149.3
12 n° of equine patients seen intra-murally	489	496	420	468.3
13 n° of rabbit, rodent, bird and exotic patients seen intra-murally	28	48	40	38.7
14 n° of companion animal patients seen extra-murally	0	0	0	0.0
15 n° of individual ruminants and pig patients seen extra-murally	1785	412	516	904.3
16 n° of equine patients seen extra-murally	96	74	79	83.0
17 n° of rabbit, rodent, bird and exotic patients seen extra-murally	229	91	68	129.3
18 n° of visits to ruminant and pig herds	226	92	43	120.3
19 n° of visits to poultry and farmed rabbit units	13	21	4	12.7
20 n° of companion animal necropsies	138	201	84	141.0
21 n° of ruminant and pig necropsies	26	85	18	43.0
22 n° of equine necropsies	6	14	22	14.0
23 n° of rabbit, rodent, bird and exotic pet necropsies	85	94	90	89.7
24 n° of FTE specialised veterinarians involved in veterinary training	33	30	30	31.0
25 n° of PhD graduating annually	22	11	11	14.7

Calculated Indicators from raw data	VEE values	Median values	Minimal values	Balance
I1 n° of FTE teaching staff involved in veterinary training / n° of undergraduate students	0.194	0.150	0.126	0.068
I2 n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	1.108	0.840	0.630	0.478
I3 n° of FTE support staff involved in veterinary training / n° of students graduating annually	1.043	0.880	0.540	0.503
I4 n° of hours of practical (non-clinical) training	705.000	953.500	700.590	4.410
I5 n° of hours of Core Clinical Training (CCT)	800.000	941.580	704.800	95.200
I6 n° of hours of VPH (including FSQ) training	366.000	293.500	191.800	174.200
I7 n° of hours of extra-mural practical training in VPH (including FSQ)	107.000	75.000	31.800	75.200
I8 n° of companion animal patients seen intra-murally and extra-murally / n° of students graduating annually	86.109	67.370	44.010	42.099
I9 n° of individual ruminants and pig patients seen intra-murally and extra-murally / n° of students graduating annually	14.303	18.750	9.740	4.563
I10 n° of equine patients seen intra-murally and extra-murally / n° of students graduating annually	7.484	5.960	2.150	5.334
I11 n° of rabbit, rodent, bird and exotic seen intra-murally and extra-murally / n° of students graduating annually	2.281	3.110	1.160	1.121
I12 n° of visits to ruminant and pig herds / n° of students graduating annually	1.633	1.290	0.540	1.093
I13 n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.172	0.110	0.045	0.127
I14 n° of companion animal necropsies / n° of students graduating annually	1.914	2.110	1.400	0.514
I15 n° of ruminant and pig necropsies / n° of students graduating annually	0.584	1.360	0.900	-0.316
I16 n° of equine necropsies / n° of students graduating annually	0.190	0.180	0.100	0.090
I17 n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	1.217	2.650	0.880	0.337
I18 n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.380	0.270	0.060	0.320
I19 n° of PhD graduating annually / n° of students graduating annually	0.199	0.150	0.070	0.129

Comments on the Indicators

The indicators are generally positive over the three-year observation period, in many cases above the median values. In particular, in addition to the large caseload available to students for most species, there is a high number of staff members (including numerous specialised veterinarians) involved in veterinary training and of PhD students graduating annually.

The annual monitoring of indicators has facilitated the timely implementation of improvement actions to address various circumstances. This has resulted in a notable increase in activities on food-producing animals, exotic pets, and visits to poultry units.

The only value with a negative balance pertains to ruminant and pig necropsies. This data has experienced fluctuations, partly due to the effects of Covid-19 during the first year and the unavailability of the necropsy room (recently undergoing renovation works) during the third year. Partially outsourcing these activities was not enough to boost the collected cases. However, as mentioned, after the completion of the works, the situation will return to normal, with a significant increase expected in this category as well.

Suggestions for improvement on Indicators

Suggestions for improvement provided for Area 5 aim to maintain consistently high numbers of patients, visits, and necropsies in all categories.

Regarding the indicators related to the different types of training, we are well aware that the forthcoming curriculum must be structured in a way that ensures an even higher number of hours dedicated to practical activities, particularly hands-on training.

Glossary

ANVUR: National Agency for the Evaluation of Universities and Research Institutes

AY: Academic Year

BG: Board of Governors (*Consiglio di Amministrazione*)

CCT: Core Clinical Training (*Tirocinio*)

CSL: Clinical Skills Lab

DB: Department Board (*Consiglio di Dipartimento*)

DEC: Department Executive Committee (*Giunta di Dipartimento*)

DIMEVET: Department of Veterinary Medical Sciences

DIMEVET-SP: DIMEVET Strategic Plan

DP: Degree Programme

DPD: Degree Programme Director

DPB: Degree Programme Board (*Consiglio di Corso di Studio*)

DPQAC: Degree Programme Quality Assurance Committee

EAEVE: European Association of Establishments for Veterinary Education

EBVS: European Board of Veterinary Specialisation

EPT: Elective Practical Training

ESEVT: European System of Evaluation of Veterinary Training

ETF: Experimental and Teaching Farm (*Stalla Didattica e Sperimentale*)

FSJC: Faculty-Student Joint Committee (*Commissione Paritetica*)

FSQ: Food Safety and Quality

FTE: Full Time Equivalent

LSC: Library Scientific Committee

MUR: Ministry of University and Research (*Ministero dell'Università e della Ricerca*)

NIAI: National Institute for Artificial Insemination (*INFA*)

NSQ: National Scientific Qualification (*Abilitazione Scientifica Nazionale - ASN*)

QMS: Quality Management System (*Sistema di Gestione Qualità*)

SAO: Student Administration Office (*Segreteria studenti*)

SUA-CdS: Annual Self-Assessment of the Degree Programme

SUA-RD: Annual Self-Assessment of the Research at the Department

Unibo: University of Bologna

VEE: Veterinary Education Establishment

VPH: Veterinary Public Health

VQR: Research Quality Assessment

VTH: Veterinary Teaching Hospital (*Ospedale Veterinario Universitario*)

VTP: Veterinary Teaching Portal (*Portale Didattico Veterinario*)

List of Appendices

Appendix 1. Current teaching staff

Appendix 2. Units of study of the core veterinary programme

Appendix 3. Maps of the VEE facilities used in the core veterinary programme

Appendix 4. Written assessment procedures for QA

Appendix 5. List of scientific publications from the VEE's teaching staff in peer-reviewed journals during the last three years

Appendix 6. Biosecurity Manual summary and homepage

Appendix 7. DIMEVET Strategic Plan 2022-24

Appendix 8. DIMEVET Scientific and Educational Services and their Units

Appendix 9. Logbook ("Libretto di Tirocinio")

Appendix 10. Equipment used for clinical and diagnostic services

Appendix 11. Main extramural facilities involved in CCT

Appendix 12. Copy of an agreement for practical training with an external institution

Appendix 13. Continuing education courses organised at the VEE in the last 3 AY

Appendix 14. Ongoing research projects during 2022-23



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DEPARTMENT OF VETERINARY MEDICAL SCIENCES

Via Tolara di Sopra 50 | Ozzano dell'Emilia | Bologna
scienzemedicheveterinarie.unibo.it