EAEVE
Self Evaluation
Report
2019

University of Veterinary Medicine, Vienna

vetmeduni vienna

Overview

Introduction

The University of Veterinary Medicine, Vienna (Vetmeduni Vienna) is prepared for the European Association of Establishments for Veterinary Education (EAEVE) reaccreditation in 2019. The present document serves the purpose of self-reflection (and in-depth scrutiny of quality management at the University). It also defines how quality is understood at Vetmeduni Vienna, describing the quality assurance (QA) and quality management (QM) system employed and its compliance with statutory and EAEVE requirements. Each area to be examined is described following the criteria set by the European System of Evaluation of Veterinary Training Standard Operating Procedure (ESEVT Zagreb SOP, May 2019).
In undergoing this accreditation to meet statutory requirements and for other purposes, Vetmeduni Vienna is embracing an opportunity to interrogate the maturity of its internal QA, to engage in collective reflection, and to identify potential for development. We expect that our interactions with the evaluators during the visitation will provide us with valuable stimuli for our ongoing work and our pursuit of quality. Care has been taken to ensure that the composition of the groups contributing to and validating this self-evaluation report reflects a broad range of perspectives on each thematic area within the organisation. Members of the University with as many roles and from as many levels as possible have been recruited for the cross-sectional groups. All department heads, the Head of the Senate, the Chairperson of the Curricular Committee (CuCo) for the Diploma Programme in Veterinary Medicine, all professors, members of the Student Union, and teaching, research and administrative staff at every level have been included in the process.

Brief history of the Establishment and of its previous ESEVT Visitations

The Vetmeduni Vienna is the only academic establishment in Austria to carry out teaching and research in veterinary medicine. It is also the oldest school of veterinary medicine in the German-speaking countries (founded in 1765 by Empress Maria Theresa). The University remains dedicated to fostering animal health, preventive veterinary medicine, public health and food safety. Its research focus is on establishing a sound scientific basis for judgements on the health and well-being of animals considering all issues arising in animal husbandry, protection, and ethics. In 1996, the new campus opened in the 21st district of Vienna and in 2015, the University celebrated its 250th anniversary. Vetmeduni Vienna was successfully evaluated by EAEVE in 1996, 2006 and 2012; no major deficiencies were found. The minor deficiencies have been addressed by developing organisation and the Diploma Programme in Veterinary Medicine.

Main features of the Establishment

Vetmeduni Vienna is an autonomous university. Its commitment to promoting the health and welfare of animals in research, higher education and lifelong learning has been rewarded with success in the Global Shanghai Ranking for Veterinary Sciences in 2017 (rank 8), 2018 (rank 6) and 2019 (rank 5) and in the QS Ranking for Veterinary Science in 2018 (rank 33) and in 2019 (rank 31).
Teaching, research and clinics are currently structured into five subject-specific departments including the research institute on human-animal interactions (the Messerli Research Institute), the latter in cooperation with the Medical University of Vienna and the University of Vienna. Two of the research institutes of Department 5 are located outside the campus Wilhelminenberg in the west of Vienna. The spacious VetFarm in the south of Vienna, its external site, the Reproduction Center Wieselburg (RCW), and the Department for Agrobiotechnology (IFA) in Tulln are further extensions and also part of the Vetmeduni Vienna.

Brief summary of the main developments since the last Visitation and main changes due to the suggestions of expert group

A new Development Plan (until 2025) and new Performance Agreement (until 2021) are in place. The Establishment has made substantial progress regarding:

Major organisational changes

- Institute of Topographic Anatomy established
- Histology and Embryology Work Group established at the Institute for Pathology
- Konrad Lorenz Institute of Ethology and Messerli Research Institute integrated into Department 5
- Postgraduate Studies Unit established
- Establishment of the Institute of Food Safety, Food Technology and Veterinary Public Health in Department 3
- Implementation of a tenure-track system for Associate Professors according to the changes to the Universities Act

New buildings and major items of equipment

- New building for the University Clinic for Small Animals (in progress)
- Extension to the Seebarn branch of the Austrian Ornithological Centre (AOC)
- Vienna Mouse-breeding Facility: additional housing of laboratory animals (capacity up to 3000 mice) is available at the Vetmeduni Vienna breeding facility at the Vienna BioCenter
- New building at the Wilhelminenberg site to accommodate two of the institutes of Department 5 (in planning)
- Reconfiguration of VetFarm buildings

Main changes to the academic programme

- New student-centred curriculum, based on ECCVT Day One Competences (DOC) and learning outcomes, for the Diploma Programme in Veterinary Medicine since the winter semester 2014/2015. Feedback given by the EAEVE evaluation team in 2012 has been integrated into the revised programme
- Compulsory courses on communication, data protection, economics, ethics, and scientific practice introduced
- A School of Lifelong Learning has been planned (to open in 2020)
- Certified Canine Rehabilitation Practitioner (CCRP) course launched in the academic year 2014/15
- Postgraduate course for Public Health Veterinarians (Tierärztliches Physikat) coordinated across Austria and launched in the academic year 2018/19

Further developments and changes in reaction to the 2012 EAEVE Visitation can be found in the appendix.

Major problems encountered by the Establishment (whether resolved or not)

Vetmeduni Vienna is undergoing a large number of infrastructural changes due to the new building for the University Clinic for Small Animals.

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

The Self Evaluation Report follows the requirements set out in the ESEVT Standards for Accreditation (as approved by the EAEVE General Assembly on 30 May 2019, ESEVT SOP 2019).

Standard 1: Objectives, Organisation and QA Policy

Factual information

1.1 Mission statement and objectives

Description of the mission statement and the objectives

Mission statement and objectives

Mission: Responsible teaching, visionary research and ambitious curing.

The Vetmeduni Vienna is wholly committed to continuing to fulfil its mission as Austria's only academic veterinary education and research facility and fully assumes its responsibility of ensuring veterinary care and is working at the interface of animal, human and environmental health (One Health). The Establishment offers a unique curricular constellation and expertise, ranging from basic to clinical and applied research. This creates interdisciplinary, transdisciplinary and complementary professional collaboration, internally, nationally and internationally, with partners in academia and private sector. The Veterinary Teaching Hospital (VTH) links basic sciences with research-driven clinical medicine for pets, companion animals, food-producing animals and wildlife. Comparative and translational medicine, animal health, animal welfare and the human-animal relationship are approached on a scientific basis. The Establishment supports the continuous improvement of animal health, establishing preventive measures and better understanding of disease and adaptation processes, therefore contributing to food safety and thus to human health, while safeguarding biodiversity and healthy ecosystems.

Vetmeduni Vienna strives to be among the top academic establishments for veterinary medicine in Europe. As an internationally competitive employer for highly qualified staff, it contributes to the sustainable supply of veterinary care in Austria and beyond. Its priority is supporting its highly motivated and highly qualified staff to reach outstanding performance, professional transfer of knowledge and research-based training.

Vetmeduni Vienna is wholly committed to fulfilling its mission to prepare students for excellent careers in which they take responsibility in animal health, public health, scientific research and in the public sphere. Students are equipped with the necessary skills to elaborate how knowledge is created and shared among scientists working together across disciplines and establishments to meet today's challenges, and where human-animal interaction takes place. Like no other university, Vetmeduni Vienna operates at the interface of human, animal and environmental health. It sustainably fosters the health and well-being of animals, people and ecosystems through innovation and excellence in research, teaching and clinical activities, and also as a social role model. Vetmeduni Vienna offers a unique curricular constellation in undergraduate and postgraduate education, in which the VTH plays a vital role and is the central asset for patient-oriented clinical hands-on training and links basic sciences with research-driven clinical medicine for companion animals, equine, livestock and wildlife in an ethical, research, knowledge and evidence-based manner. Daily interaction between staff, students, researchers, animal owners and partners is firmly founded in mutual respect, trust, a sense of responsibility, willingness to change and the best possible use of resources.

Description of how the Establishment ensures that the provided core curriculum enables all new graduates to perform as veterinarians capable of entering all commonly recognised branches of the veterinary profession

The Diploma Programme in Veterinary Medicine aims to be among the best in the world by offering a state-of-the-art, research-driven education using modern educational principles and learning platforms. The overall mission is to train highly qualified veterinarians committed to sustaining and improving animal and human health and ecosystems through ethical, responsible and professional conduct. These veterinarians are adept in basic animal science, pathology, food safety and quality as well as veterinary public health and possess in-depth knowledge of the diagnosis, treatment and pre-

vention of animal diseases. They take a problem-based approach in line with the University's core values: dedication, competence and responsibility. The entire Diploma Programme lasts six years, thus surpassing the requirements of EU Directives 2005/36 and 2013/55.[1] In the final tier of the Diploma Programme, students are trained in depth in their chosen specialisation tracks. Upon completion of the Diploma Programme, students are awarded the "Magister/Magistra medicinae veterinariae" degree and are eligible for Austrian and European veterinary authorisation, since they have acquired the DOC needed to start their careers as veterinarians in all commonly recognised branches of the veterinary profession.

The focus on undergraduate education is reflected in the commitment to provide infrastructure, instructions and opportunities for research-based teaching and clinical hands-on-training to gain work experience, holistic problem-solving skills with a wide variety of animals, including companion animals, food-producing animals and wildlife. Furthermore, students acquire expertise in food safety, veterinary public health, laboratory animal medicine, conservation medicine and other aspects of the multi-faceted interactions between animals, humans and the environment. Vetmeduni Vienna constructively and carefully acts on regular structured feedback from internal stakeholders (e.g. students, lecturers) and external (e.g. alumni, Austrian Chamber of Veterinarians [ÖTK], instructors). With the acquisition of DOC, graduates have a solid basis for a successful career in a highly competitive and diverse job market. Combined with lifelong learning and vocational training, this education makes graduates experts in the different veterinary fields.

1.2 Organisational and structural details of the Establishment

Details of the Establishment, i.e. official name, address, phone number, e-mail and website addresses, Establishment's Head, official authority overseeing the Establishment

Vetmeduni Vienna is an autonomous stand-alone state university comparable to a one-faculty establishment. Like all Austrian higher educational establishments, Vetmeduni Vienna is supervised by the Austrian Federal Ministry of Education, Science and Research (BMBWF) in accordance with the Austrian Universities Act (UG 2002).

Table 1A Details of the Establishment

University of Veterinary Medicine, Vienna (Vetmeduni Vienna) Veterinärplatz 1, 1210 Vienna Phone: +43 1 25077-0 Fax: +43 1 25077-1090 Website: https://www.vetmeduni.ac.at/ E-mail: rektorat@vetmeduni.ac.at	
Establishment Head (Rector)	Ao. Univ.-Prof. Dr. Petra Winter, Dipl. ECBHM
Vice-Rector for Study Affairs (VRSA)	Ao. Univ.-Prof. Dr. Sibylle Kneissl (Veterinarian)
Vice-Rector for Clinical Veterinary Medicine (VRCVM)	Ao. Univ.-Prof. Dr. Petra Winter, Dipl. ECBHM
Vice-Rector for Research and International Relations (VRRIR)	Ao. Univ.-Prof. Dr. Otto Doblhoff-Dier
Vice-Rector for Resources (VRR)	Dr. Manuela Raith, MBA

[1] Consideration has also been given to: Directive (EU) 2010/63 (on the protection of animals used for scientific purposes); Regulation (EC) 852/2004 (on the hygiene of foodstuffs); Regulation (EC) 853/2004 (on specific hygiene rules for food of animal origin); Regulation (EC) 854/2004 (on specific rules for the organisation of official controls on products of animal origin intended for human consumption), Regulation (EU) 2017/625 (on official controls); Regulation (EC) 1099/2009 (on the protection of animals at the time of killing) as amended by Regulation (EU) 2017/625; Regulation (EU) 2016/429 (on transmissible animal diseases and amending and repealing certain acts in the area of animal health).

Table 1B Department Heads	
Department of Biomedical Sciences	Univ.-Prof. Dr. Christian Schlötterer
Department of Pathobiology	Univ.-Prof. Dr. Armin Saalmüller
Department / University Clinic for Farm Animals and Veterinary Public Health	Univ.-Prof. Dr. Michael Hess, Dipl. ECPVS
Department / University Clinic for Companion Animals and Horses	Univ.-Prof. Dr. Joerg Aurich, Dipl. ECAR
Department of Interdisciplinary Life Sciences	Univ.-Prof. Dr. Walter Arnold

Table 1C Person responsible for the professional, ethical and academic affairs of the VTH	
University Clinic for Small Animals	Univ.-Prof. Dr. Iwan Burgener Dipl. ECVIM-CA, Dipl. ACVIM
Equine University Clinic	Univ.-Prof. Dr. Florien Jenner Dipl. ECVS, Dipl. ACVS
University Clinic for Swine	Univ.-Prof. Andrea Ladinig Dipl. ECPHM
University Clinic for Ruminants	Univ.-Prof. Dr. Thomas Wittek Dipl. ECBHM
University Clinic for Poultry and Fish	Univ.-Prof. Dr. Michael Hess Dipl. ECPVS

List of the councils / boards / committees with a very brief description of their composition / function / responsibilities and implication of staff, students and stakeholders (further information may be provided in the appendices)

Table 1D List of main councils / boards / committees

Council / Board / Committee	Composition	Function / Responsibilities
University Council	5 members: 2 members appointed by the Senate, 2 appointed by the Federal Government, fifth member is appointed by the 4 members	Electing a Rector, approving the Development Plan, organisational plan, Performance Agreement, founding of societies and foundations; Statement of accounts, performance report of the Rectorate and the Intellectual Capital Report; determining the University's future direction and the strategies required to achieve set goals
Rectorate	Rector and Vice-Rectors (VRRIR, VRSA, VRR, VRCVM)	Conducting routine business affairs, negotiating Performance Agreements, selecting professors, enacting legal regulations, reporting to the University Council, BMWBF and Senate
Senate	18 members: 9 professors, 4 representatives of scientific staff, 4 students, 1 non-academic staff delegate	Duties are laid down in the Universities Act (§25 UG 2002); the Senate relies on Curricular Committees to lay the groundwork for all required decisionmaking on academic issues within existing degree programmes. Approving the Development Plan, organisational plan, shortlisting for election of the Rector and participating in professorial appointment and habilitation procedures
Curricular Committees (CuCo)	At least 6 members: 2 professors, 2 representatives of teaching staff, 2 students VRSA is an associate member	In charge of one or several substantially related curricula; duties primarily relate to the enactment of curricula for degree programmes and University courses according to §25 (1) (10) UG 2002
Equal Opportunities Working Party	8 members: elected by the Senate	Counteracting discrimination by university bodies on the basis of gender, ethnicity, religion, ideology, age or sexual orientation and advising and supporting the members and bodies of the University in these matters

Council / Board / Committee	Composition	Function / Responsibilities
Arbitration Board	6 members: Senate, University Council and Equal Opportunities Working Party nominate 2 members each	Regulated by §(43) (1) UG 2002, mediating in disputes between University members; deciding about complaints lodged by the Equal Opportunities Working Party in cases of discrimination due to gender, ethnicity, religion, ideology, age or sexual orientation
Ombudsperson for Good Scientific Practice	1 member: of Senior Academic Staff	Advising on scientific integrity and settling minor cases of scientific misconduct; cooperation with Committee of the Austrian Agency for Scientific Integrity
Scientific Advisory Board (SAB)	6 members: international experts in various disciplines of veterinary medicine	Helping to define Vetmeduni Vienna's main research areas and goals, supporting young scientists and evaluating research
Ethics and Animal Welfare Committee	13 members: 12 members of Senior Academic Staff 1 Student Representative	Peer reviewing projects that involve animal experiments in the sense of the Laboratory Animals Act, securing compliance with good scientific practice guidelines and the Animal Welfare Act; assuring quality of filed projects
Hygiene, Animal Diseases, Zoonoses and Biosecurity Committee	16 members VRCVM; Quality Management, Quality Development & Evaluation, representatives from clinics, paraclinical institutes, veterinary public health, VetFarm, TierQuarTier, pharmacy	Developing and monitoring the implementation of key issues such as epidemic plans, hygiene regulations, hygiene plans and antibiotic stewardship; advising all university members on issues of hygiene, notifiable diseases, zoonoses and biosecurity to promote awareness and information exchange
Biosafety Committee	3 members: Biosafety Unit, 1 professor, 1 external expert	Handling all applications dealing with genetically modified organisms (GMOs) on campus in research and teaching according to the Austrian Genetic Engineering Act §16 GTG
Innovation Vet Circle	Maximum of 15 persons: half of the committee is made up of appointed professors and half of experienced scientists	Making recommendations to the Rectorate for decisions on the allocation of internal funding, strategic advice on scientific and technological development, focus (e.g. profiles), developing instruments to promote scientific research and young researchers, promoting a culture of innovation, networking with SAB

Description of the formal collaborations with other establishments

The University is convinced that close cooperation between universities, dialogue between internationally leading scientists and lecturers, and transnational mobility of talents and ideas are vital for the continuing development of veterinary medicine. The Vetmeduni Vienna's excellence and international reputation are underpinned by these alliances and networks. Examples include the network of veterinary medical faculties, Veterinärmedizinischer Fakultätentag, the collaboration between Viennese research institutions, Wissenschaftsstandort Wien, VetNest, cooperative study programmes, double appointments of professorships and the Messerli Research Institute.

Name and degrees of the person(s) responsible for the veterinary curriculum and for the professional, ethical, and academic affairs of the VTH

Responsibilities for the veterinary curriculum and for professional, ethical, and academic affairs of the VTH	
Vice-Rector for Study Affairs	Univ.-Prof. Dr. Sibylle Kneissl (Veterinarian)
Vice-Rector for Clinical Veterinary Medicine	Univ.-Prof. Dr. Petra Winter, Dipl. ECBHM

List of departments / units / clinics with a very brief description of their composition and management (further information may be provided in the appendices)

As shown in the organisational charts (see appendix), the Vetmeduni Vienna is divided for research and teaching into five departments and centrally organised service and administrative units. The heads of the departments are referred to as department heads and, like heads of interdisciplinary units, are appointed in accordance with §20 UG 2002. The administrative and service units are governed by the Rectorate. The VTH is a teaching hospital providing veterinary services to animal patients, veterinarians, public authorities, farmers and other stakeholders.

Organisational chart (diagram) of the Establishment with a brief description of the decision-making process

General guidelines for the organisational and decision structure of Austrian universities are set out in detail in the UG 2002. The highest governing bodies of the Vetmeduni Vienna, defined in §21 UG 2002, are the University Council, the Rectorate and the Senate. The organisational chart can be found in the appendix.

1.3 Strategic plan of the establishment

The fundamental direction of the long-term development of Vetmeduni Vienna is agreed between the Rectorate and BMBWF, through the Development Plan and the Performance Agreement. The measures necessary for profile enhancement, development and the University's success in international competition, are defined in the Performance Agreement with the BMBWF. Further details are shaped autonomously within this general framework between the University and involved stakeholder groups. The overarching strategic aims of Vetmeduni Vienna and its Development Plans, agreed objectives and Performance Agreements are formulated in a participative process involving researchers, teaching and support non-teaching staff from all departments, and students.

The model also envisages intensive interaction with individuals, University Council, external stakeholders like alumni and organisations (e.g. ÖTK), outside the University. Over about 12 months, participants reflect on and formulate objectives. In this phase, strategic aims for the next three to six years are identified in a structured decision-making process. Consideration is given to developments, trends and forecasts identified in relevant regional, national and international contexts, and the feasibility of objectives is assessed internally based on the available resources. Objectives are then prioritised and defined in the Performance Agreement, which is concluded with the BMBWF and subsequently with the departments.

Summary of the Establishment Operating Plan with timeframe and indicators of achievement

Austrian universities are autonomous establishments with different decision-making bodies (e.g. Senate, University Council) and they are monitored according to indicators defined in the Performance Agreement with the BMBWF. Financial support is allocated by the BMBWF on the basis of indicators (teaching, research compliance with targets and infrastructure/strategy) as a result of negotiations with the Rectorate. To complete milestones defined in the cycle, Vetmeduni Vienna has to publish a standardised comprehensive annual Intellectual Capital Report. This report focuses on competence, social objectives, goals and strategies, intellectual capital and performance indicators. In parallel with this process, the Rectorate holds twice-yearly talks with the BMBWF. To achieve the goals, the overall strategy is broken down into individual strategic contributions, Performance Agreements and agreed objectives communicated to the departments, its heads, professors and employees.

Besides these annual reports, the Vetmeduni Vienna publishes plans, decisions and developments in the areas of research, study and organisation in several media, including the Statement of Accounts

and press releases. These communications create several opportunities for discussion with all stakeholders which influence decision-making about future plans.

Summary of the Establishment strategic plan with an updated SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) (the full Strategic Plan may be provided in the appendices)

The Development Plan of the Vetmeduni Vienna in teaching, research and service is embedded in the landscape of the different areas and stakeholders (internal and external), from which the mission and objectives are derived.

Strenghts	Weaknesses
1. University with guaranteed government funding, long historical tradition, unique position as only Establishment for veterinary education in Austria	**1.** Little active engagement of Vetmeduni staff in international organisations (e.g. EFSA)
2. Dedicated, enthusiastic and highly qualified staff with an excellent scientific reputation, strong focus on equal opportunities and continuing professional development programmes for all staff, high percentage of lecturers with veterinary training background	**2.** Recruitment and retention of faculty for specific veterinary disciplines compete strongly with private sector
3. Intrinsically highly motivated student body, every year large pool of talented and promising applicants	**3.** Suboptimal multi-species cooperation and translational research across departments and clinics
4. Strong, international, interdisciplinary competitive veterinary research with significant impact on animal welfare and health, high third-party funding, broad research themes with high scientific and societal relevance, interdisciplinary research in cooperation with leading establishments in the Vienna area and internationally, outstanding quality and quantity of publications	**4.** Project funding is characterised by strong competition
5. Research-based education, student-centered, competence-based curriculum for the Diploma Programme in Veterinary Medicine (including food hygiene, food safety and quality and veterinary public health) with advanced practical and specialised training, and compulsory soft skills education	**5.** Structure of the buildings does not support establishing interdisciplinary organisational units, buildings need adapting to biosecurity and hygiene needs
6. Comprehensive postgraduate education / training programmes (e.g. residencies)	**6.** Insufficient number of rooms for teaching and learning, recreation and communication
7. High-performing species-specific clinics with strong scientific focus and significant number of patients for clinical teaching and research, including a high percentage of primary and referral cases in companion and farm animals	**7.** Insufficient budget to maintain and develop unique infrastructure, as all 47 buildings were built at the same time (1995) but cannot be updated at once
8. Strong and successful cooperation to ensure that students have extended access to hands-on-clinical-training opportunities in day-to-day veterinary business (e.g. TierQuarTier Vienna, Graf Lehndorff Institute, VetFarm)	**8.** Dialogue and networking among staff members need to be further improved
9. Vet**Farm** – **F**orschung (research) / **A**usbildung (education) / **R**egional (regional) / **M**odern (modern)	**9.** Insufficient structured alumni management
10. Excellent location with a high density of leading research establishments, great research cooperation opportunities and transport infrastructure	**10.** No structured LLL programme
11. Visibility internationally, national and locally (e.g. Shanghai Ranking)	**11.** Implications of digital transformation on the occupational profile and veterinary practice
12. Short and transparent decision-making processes	**12.** Less flexible staff structure with a high number of permanent positions

Opportunities	Threats
1. Increased emphasis on recruiting students whose main interest is farm animals and food safety	**1.** Shortage of qualified applicants for high-level scientific and teaching positions
2. Improved monitoring of student progress to further develop the curricula	**2.** Big data: successful recruiting of qualified personnel and sufficient infrastructure
3. Development of recruitment policy and culture (e.g. more international recruitment), career planning to increase the potential for excellence in education, research and clinical services	**3.** Reduction in faculty commitment to interdisciplinary teaching
4. Higher visibility raises the public profile of the profession and strengthens the national and international reputation of Vetmeduni clinics and departments as centres of excellence	**4.** Off-campus locations: declining interest in being part of Vetmeduni Vienna
5. Continued funding for Messerli Research Institute and the new chair of neuroscience create new content-related perspectives for the Diploma Programme, furthering collaboration between basic and clinical research	**5.** Current campus location and facilities in urban setting make it difficult to assure high standard of animal welfare for large and farm animals
6. Greater promotion of internationalisation and international mobility (e.g. exchange programmes)	**6.** Potential for downgrading veterinary educational needs by political and financial decision makers
7. Strengthened collaboration and use of synergies with external establishments (e.g. ÖTK) and federal states in veterinary and postgraduate education and research, creating awareness of veterinary medicine in general	**7.** Veterinary core competences are transferred to other training backgrounds and establishments
8. Digital transformation in research, teaching and administration	**8.** Increasing investment in education reduces staff capacity for research and patient care, inevitably leading to competition between teaching and research in academic career planning
	9. Unpredictable budget increase and third-party funding
	10. Increasing budget required to maintain buildings and infrastructure
	11. Dependence on external facilities (e.g. slaughterhouses and farms

1.4 Quality Policy and Assurance

Description of the global policy and strategy of the Establishment for outcome assessment and Quality Assurance (QA), in order to demonstrate that the Establishment:

a) has a culture of QA and continued enhancement of quality;

Until the Austrian Higher Education Quality Assurance Act (HS-QSG) passed in March 2012, there was no legal basis for uniform QA and quality accreditation in Austrian universities. Long before it became a legal requirement, Vetmeduni Vienna began working continuously to improve quality within the organisation. The aim of the QM system is to meet statutory requirements and national[2] and international[3] standards and apply to the given context, in alignment with the Development Plan,

[2] Austrian Universities Act (UG 2002), the Higher Education Quality Assurance Act (HS-QSG).

[3] EU Directives 2005/36 and 2013/55, SOP of EAEVE, Directive (EC) 2005/36 amended by Directive (EU) 2013/55 (on the recognition of professional qualifications); Directive (EU) 2010/63 (on the protection of animals used for scientific purposes); Regulation (EC) 852/2004 (on the hygiene of foodstuffs); Regulation (EC) 853/2004 (on specific hygiene rules for food of animal origin); Regulation (EC) 854/2004 (on specific rules for the organisation of official controls on products of animal origin intended for human consumption), Regulation (EU) 2017/625 (on official controls); Regulation (EU) 1099/2009 (on the protection of animals at the time of killing) as amended by Regulation (EU) 2017/625; Regulation (EU) 2016/429 (on transmissible animal diseases and amending and repealing certain acts in the area of animal health); ESEVT Zagreb SOP 2019, European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) of the European Association for Quality Assurance in Higher Education (ENQA); Austrian Higher Education Quality Assurance Act (HS-QSG), Quality standards of the German Evaluation Society (DeGEval).

agreed objectives and Performance Agreements, and the profile of the University. Quality is understood as continuously evolving. In this light, QM at Vetmeduni Vienna is primarily seen as an ongoing process of QA and quality development, based on four major tools:

- Regular external evaluations, accreditations, audits and certification procedures (including EAEVE, research evaluation, ISO certification of clinics and institutes);
- Internal agreements on objectives, performance indicators and monitoring;
- Vetmeduni Vienna process portal;
- Vetmeduni Vienna Evaluation Cycle[4] (covering e.g. admission procedures, course evaluations, the Competence Check, alumni).

The activities of Vetmeduni Vienna are characterised by:

- A focus on QA and high quality in developing performance areas;
- Specific objectives and performance indicators at all levels and management-relevant indicators (including the Intellectual Capital Report);
- Clear allocation of tasks to members of the organisation, (e.g. organisational charts, role descriptions, agreements on objectives and performance indicators);
- Comprehensive and regular integration of existing committees and bodies into quality-relevant decisions and developments (including the Evaluation Circle, CuCo, other committees);
- Structured involvement of and provision of information to relevant internal and external stakeholders (including alumni, students, the Scientific Advisory Board);
- Transparent documentation and information as the basis for regularly evaluating and continuously improving all processes and activities (including VetEasy, committee minutes and the Vetmeduni Vienna process portal[5]).

b) operates cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;

The process portal, currently under construction at Vetmeduni Vienna, is the top-level structural framework used to describe all relevant performance activities. The process responsibilities and quality criteria mapped here are particularly significant for internal QM. In parallel, operative structures and process organisation are constantly being developed and revised. Identifying exactly where specific activities are performed ensures that responsibility for defining and monitoring quality criteria is allocated unambiguously. The requisite standard is achieved through quality milestones defined in the annual internal Performance Agreements and regular process reviews with the process owners planned for 2020 onwards. Thus two independent university-wide validation processes ensure that the quality of core activities is regularly monitored and developed with the appropriate involvement of relevant internal and external stakeholders and experts in specific spheres.

c) collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities (teaching, research, services); -) informs regularly staff, students and stakeholders and involves them in the QA processes;

Internal and external feedback is one of the most important sources for the effective management and development of the Vetmeduni Vienna and its programmes. Information about QA is delivered to all relevant stakeholders (e.g. VetEasy, VetmedOnline, Intellectual Capital Report, website, protocols, meetings and e-mails). The composition of central committees (e.g.Ethics and Animal Welfare Committee, Hygiene, Animal Diseases, Zoonoses and Biosecurity Committee, CuCo) is especially significant, as the University aims to have a broad range of diverse and relevant internal and external

[4] The Evaluation Cycle is a comprehensive instrument currently being put in place. In 2020/21, initial efforts will be made to improve the structure of data collection, by linking and merging data from numerous diverse sources more effectively. The aim is to ensure that, in future, regular evaluations of stakeholder groups can be even more reliable, at the envisaged quality levels and timely.

[5] Under development.

stakeholders represented. Another tool is the Quality Management Circle which allows QM/QA representatives of clinics, institutes and central administration to discuss current QM and QA topics and issues relevant to Vetmeduni as a whole. The circle has no constitution and can be considered as an informal QM-exchange platform. Established in 2015, it meets once a month. All protocols and documentation can be accessed by all staff members on VetEasy. Student views are central to internal and external data-gathering exercises (including course evaluations and the Competence Check), and student representation in processes and committees is highly valued (CuCo, Senate, Evaluation Circle, Appointment committees). Face-to-face discussions with groups of students or student representatives are a further important QA tool. External stakeholders are involved in regular SWOT analyses, external surveys (e.g. of alumni) and committees and boards such as the University Council or the Scientific Advisory Board foster the development of Vetmeduni Vienna. Close contact to alumni and external stakeholders, who are active in scientific and social events or give feedback to students after their external rotations, gives inspiration for future development. Continuous regular QM and QA of research is performed internally through the Innovation Vet Circle (IVC) and externally through the Vetmeduni Vienna's international scientific advisory board.
The last research evaluation, in 2017, examined the period between 2013 and 2016. External benchmarking of research activities is used, where available, for internal analysis. Research activity co-financed with competitively awarded third-party funding is normally evaluated (typically internationally) in advance, and scholarly publications are evaluated by peer review.

d) closes the loop of any QA Plan-Do-Check-Adjust (PDCA) cycles;
All input and measures to be assessed, revised and/or planned are decided in or with the relevant committees as well as internal and external stakeholders. Evaluations and standardised QM are used to check the processes and close the control circuits. Closed PDCA cycles have already been established in many areas (for overview see PDCA cycles in each SER standard), and open PDCA cycles will be closed once the Vetmeduni Vienna process portal is in place.

e) is compliant with ESG Standards.
All relevant external conditions, including national laws and regulations and ESG standards for external evaluations, are considered. The subject-specific development of the QA system within Vetmeduni Vienna is carried out in accordance with ESEVT SOP 2019.

1.5 Stakeholder information policy

Description of how the Establishment informs stakeholders and the public on:

a) its objectives, and b) its education, research and teaching activities
The mission statement and strategic principles pursued by Vetmeduni Vienna are available on the VetEasy platform and the university website. Strategic objectives are communicated and explained in a top-down process. Both the Development Plan and the Performance Agreements and indicators agreed with the BMBWF are made available to all staff through the university gazette (Mitteilungsblatt) and serve as a basis for deriving operative objectives in individual organisational units. The overall strategy is broken down into individual strategic contributions, Performance Agreements and indicators, on department and individual levels.
Staff members can access the agreements with the five departments on the university gazette. Relevant central documents are publicly available on university website. Development indicators and analyses are communicated externally in the University's Intellectual Capital Reports (published annually) and annual reports. Current developments and results are communicated to staff and students

at regular events such as C-I-C.[6] Regular meetings between student representatives and the Rectorate also foster direct exchanges. The Rectorate reports on developments to the Senate and the University Council at their regular meetings, and meets regularly with the department heads. Additionally, members of the Rectorate are invited to department staff meetings to discuss current issues. The Rector is a member of the VTH Board and is informed about current developments in the clinics at board meetings. The VRSA is an associate member of the CuCo and thus informed about current processes regarding the curriculum. Selected strategic milestones are communicated to a wide audience through various media channels (press releases, press conferences, podium discussions, VETMED Magazine, newsletters, social media, etc.).

c) employment destinations of past students d) profile of the current student population

Information about employment destinations and the current student population is collected both internally and externally (ATRACK – see Comments on Standard 1) and made available to relevant committees and individuals. Externally, such data is made available primarily to stakeholders like the BMBWF (e.g. through the Intellectual Capital Report). The annual report, the VETMED Magazine and the website inform the wider public about alumni and students through official photographs and texts of academic celebrations, roadshows and open days. Information is communicated to alumni in numerous ways such as at VetsOnTour, events in cooperation with ÖTK, Farmers Union or schools, or the Friends of Vetmeduni Vienna. In 2018/2019 Vetmeduni Vienna, with the ÖTK, Institute for Advanced Studies (IHS) and the Federal Ministry for Labour, Social Affairs, Health and Consumer Protection (BMASGK), has researched veterinary medical care in Austria in a study (see Comments on Standard 1) involving students, graduates and veterinarians.

Description of how to access to the ESEVT Establishment's status and to the last ESEVT Self Evaluation Report and Visitation Report on the Establishment's website

Notes and reports on the EAEVE accreditation process are on the website at No. 1 and No. 2

1.6 Monitoring and Review

Description of how (procedures) and by who (description of the committee structure) the strategic plan, the organisation, the activities and the QA policy are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The Development Plan is always the result of an intensive participatory discussion process (last round 2017). A shared effort that gathered input from the University Council, the Senate, all departments, the Equal Opportunities Working Party, the Arbitration Board, the Student Union and the central administration resulted in a strategic document outlining the University's future path and major goals in education, research and clinical services. The Development Plan therefore outlines the basic strategies for the BMBWF Performance Agreement. The main means of monitoring are the annual Intellectual Capital Report, accompanying discussions with the BMBWF, coordination meetings and target agreements with the departments, as well as staff appraisals.

The Rectorate is in charge of QA and quality development. Implementation, assessment and revision are supported by several internal stakeholders: administration (e.g. Quality Management, Quality Development and Evaluation [QQE]), relevant commissions (e.g. CuCo, Evaluation Circle) and appointed officers (e.g. Animal Welfare, Waste Management, Occupational Safety, Data Protection). QA policy and recent developments are communicated via VetEasy, internal protocols, and in meetings. External stakeholders can find information on the QQE website.

[6] "Connect – Interact – Celebrate", the official information event of the Rectorate, held twice a year.

Following the UG 2002, major interdepartmental organisational changes require the approval of the Senate and the University Council. They are accompanied by participative processes and professional change management. The Rectorate can make organisational changes within departments after consultation and involvement with that department and in accordance with the rules of procedure. The responsibilities for QA processes at the Vetmeduni Vienna are depicted in Fig. 1.

1.7 Measures taken / implemented since last EAEVE visitation

Date of the last ESEVT Visitation and description on how the deficiencies have been corrected and how it has been used to enhance quality

The last ESEVT Visitation took place in November 2012. For further details please see Introduction and the catalogue of measures in the appendix.

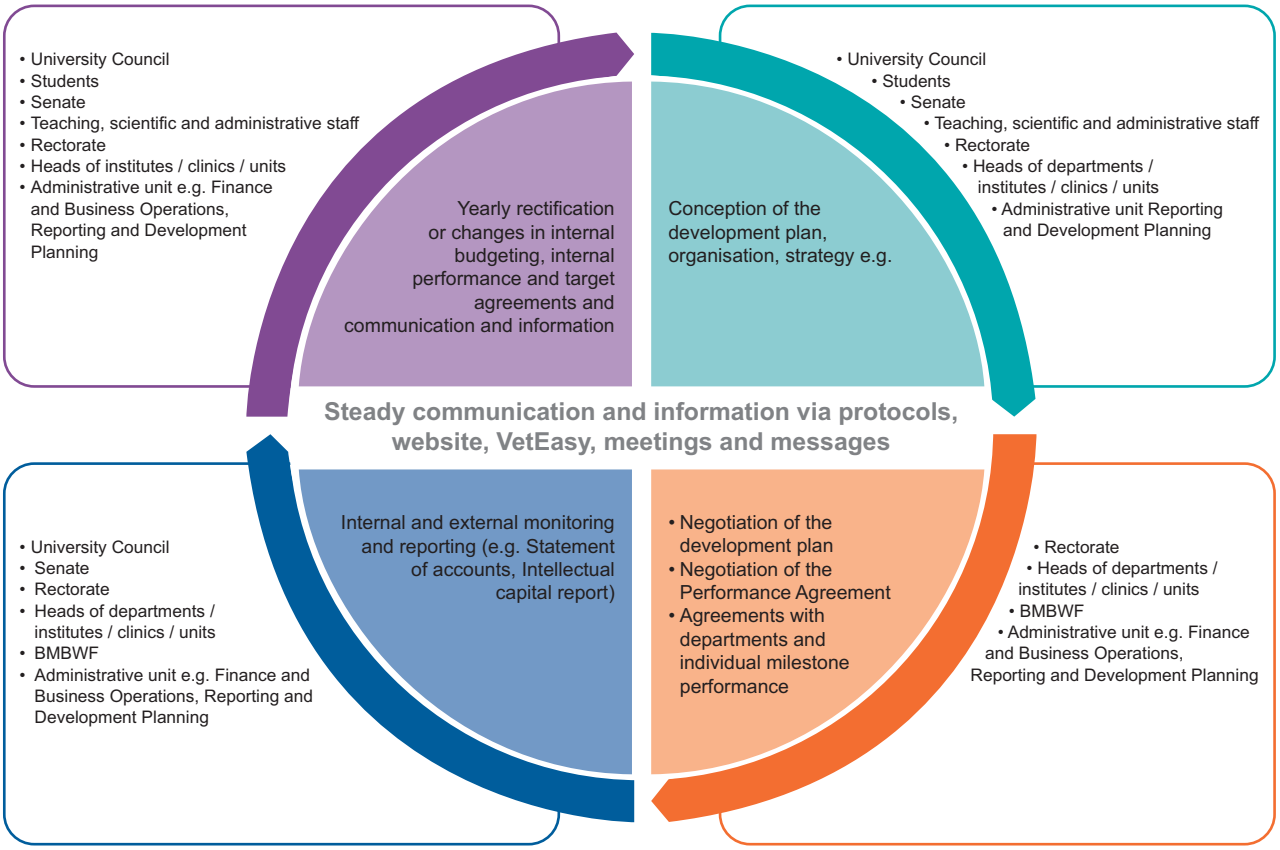

Figure 1 PDCA Cycle Strategy, Organisation, Activities and QA Policy

Comments on Standard 1

- The Vetmeduni Vienna has an important social responsibility as the only veterinary medical educational institution in Austria; one way of fulfilling this is the regionalisation initiative VetmedRegio-VetmedAustria, launched in 2018. The activities in the federal states aim to secure veterinary care in rural regions. To achieve this, in cooperation with the BMASGK and ÖTK, the IHS commissioned a study on veterinary care in Austria in July 2018 and Vetmeduni Vienna has also been engaged in an ongoing intensive dialogue with federal states and other regional stakeholders since 2018.
- The Vetmeduni Vienna is involved in two Austria-wide projects to develop and communicate facts and figures on alumni (ATRACK) and on student activities including examinations (STUDMON) across multiple universities. Both projects allow the University to gather more in-depth and precise information on these stakeholder groups and to integrate this data into curriculum and institutional development.
- Given the strong autonomy of organisational units at Vetmeduni Vienna, numerous individual QA instruments are already well-established and a small number of relatively recent structural elements link these. The structural elements already mentioned, the Evaluation Circle and a process portal are becoming increasingly effective, but will only reach their full potential when they have become more deeply anchored in a few years' time. In contrast, the broad range of QA instruments mentioned in the individual standards have been in use for years and proved effective (e.g. individual agreements on performance, indicators and milestones, the external EAEVE and research evaluations). Since the establishment of the Evaluation Circle, many evaluation procedures have been successfully launched or improved. Systems to monitor the new measures are being developed as a medium-term objective.

Suggestions for improvement on Standard 1

- Planned establishment of alumni network management for further development of the networking and communication with external stakeholders (e.g. ÖTK). Further strengthening of cooperation with ÖTK (e.g. Zukunftskongress 2019)
- Continued development of QA processes and communication of their results is envisaged.

Standard 2: Finances

Factual information

2.1 Financial process

Description of the global financial process of the Establishment

The Vetmeduni Vienna receives the main part of its budget from the federal government. The budget is negotiated every three years with the BMBWF. Starting in 2019, Austrian Universities are subject to a new system of federal funding (Unifinanzierung Neu, based on §12 UG 2002). Teaching, research and infrastructure/strategic development have become the key factors. Financial resources are assigned to teaching on the basis of the number of students actively taking examinations (at least 16 ECTS credits per academic year). Other considerations include the number of students completing their studies, the number of students actively taking examinations relating to more than 40 ECTS credits per academic year, and the implementation of quality measures in teaching. Research funds are assigned on the basis of staff numbers (measured in full-time equivalents, FTE). If the agreed objectives are not met (deviations greater than 2%), the Austrian University Financing Decree provides for repayment of the amounts. Revenue generated by research projects and the number of doctoral students employed by the University are also considered. In terms of infrastructure, rent and projects negotiated to meet requirements are considered. Other revenue comes from clinical services, research grants, industry cooperation, scientific services and other forms of fundraising.

% of margin paid as overheads to the official authority overseeing the Establishment on revenues from services and research grants

The official authority (BMBWF) does not receive any overhead margins. From external service revenue of the organisational units/departments, 20% are charged as overheads to cover for additional costs, with half of this amount being retained by the VRR for administrative costs and the other half being equally apportioned between the concerned department and the organisational unit and its subdivisions to cover any additional costs. Expenditure of income and revenue must comply with university regulations such as the directives on authorisations and procurements. Overheads on research grants depend on the regulations of the granting agency.

Annual tuition fee for national and international students

Undergraduate students with Austrian citizenship or with equal rights for access to the veterinary profession by contracts under international law are exempt from paying tuition fees (§91 UG 2002). Instead, the University receives compensation payments from the BMBWF. Undergraduate students who are not Austrian citizens or of equivalent status under international law pay a fee of €363.36 for each semester. The same applies to undergraduate students whose duration of studies exceeds the number of semesters allocated per tier by more than two semesters.

Estimation of the utilities (e.g. water, electricity, gas, fuel) and other expenditures directly paid by the official authority and not included in the expenditure tables

All utilities and maintenance costs are covered by the global budget.

2.2 Modus operandi and degree of autonomy

Description of the modus operandi for the financial management of the clinical and field services

Organisational units are financially autonomous for the core budget and income (reimbursements for overheads) to cover costs of consumables and small laboratory equipment, especially for teaching,

and they can co-invest in a special funds to acquire larger equipment, or special funds for investments ("paktierte Investitionen") on a yearly basis. Staff costs are covered by the global budget, research grants and other external funds. The core budget to cover the costs of teaching, research and basic materials (copy paper, printing, phone, etc.) is calculated based on four performance indicators (amount of teaching, FTE scientific staff, maintenance costs, third-party funding).
Organisational units may receive special endowments from the base budget for guest lecturers, excursions and clinical training in the VTH. They can generate additional funds through the intra-mural bonus system that rewards research staff performance with regard to publications and third-party funding. On department level a bonus is linked to the internal Performance Agreement, evaluated annually. Income from the VTH and institutes is considered to be part of the University income and is allocated to organisational units to cover additional costs. Hiring additional staff requires permission by the Rectorate.

Degree of autonomy of the Establishment on the financial process

Although funding is still allocated by the BMBWF based on the Performance Agreement, the state no longer influences details. This gives the Establishment a large degree of autonomy and flexibility, both operational and financial.

2.3 Resource allocation and investments, expenditure and revenue

List of the ongoing and planned major investments for developing, improving and/or refurbishing facilities and equipment, and origin of the funding

Table 2 A List of ongoing and planned major investments
Funding by the Vetmeduni Vienna if not indicated otherwise:

Equipment	Description	Euro	Year (Start)
Small Animal Clinic*	New animal hospital will be built to centralise and modernise the clinics for small animals.	11m	2019
Experimental animal facilities for rodents	A centralised facility will be newly constructed at the Vetmeduni campus to replace the existing decentralised facilities.	2m	2020
Business Intelligence Project*	Implementation of business intelligence solution.	50,000	2019
Multimedia lecture room	New modern lecture room for teaching.	510,000	2019
Central IT server station	A new central server station will be established**	800,000	2020
WLAN on campus	WLAN on campus will be established**	471,500	2019
High-speed internet	High-speed internet will be established**	2m	2020
X-ray unit for equine patients	A new x-ray unit for horses.	687,500	2020
University archive	Library archive to store valuable historic data.	654,400	2020
Photovoltaic system	Photovoltaic systems to focus on environmental sustainability.	300,000	2019

* Funded by the Federal Real Estate Company (BIG)
** Part of the digitalisation plan

Prospected expenditures and revenues for the next 3 academic years

The budget for the next three years was agreed in 2018 with an increase of 11.7% compared to the previous one. This covers the predicted increase in staff costs, rent, depreciation and energy costs,

and expenditure in the next three years. The University and the government have agreed on a task force to discuss the additional budget needs for the infrastructure of the VTH.

Description of how (procedures) and by who (description of the committee structure) expenditures, investments and revenues are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

All decisions regarding expenditure, investments and revenue are made according to an annual plan. The planning process involves bottom-up input from all organisational units and top-down input from the VRR and Head of Finance and Business Operations. The plan is then approved by the Rectorate and University Council, and an annual Statement of accounts is delivered to the BMBWF.
Variances between planned and actual revenue and costs are regularly analysed and discussed within the University, and monthly base reports are sent to the Rectorate. The statement of accounts is discussed once a year with the University Council.
Substantial capital investments in buildings, infrastructure and equipment are realised mainly through funds from the regular budget and in some special cases, federal and regional funding is available for investment and infrastructure programmes (e.g. University Clinic for Small Animals, Mouse House). All expenditure and investments are subject to a multistage approval process and monitored through cost objects in SAP.

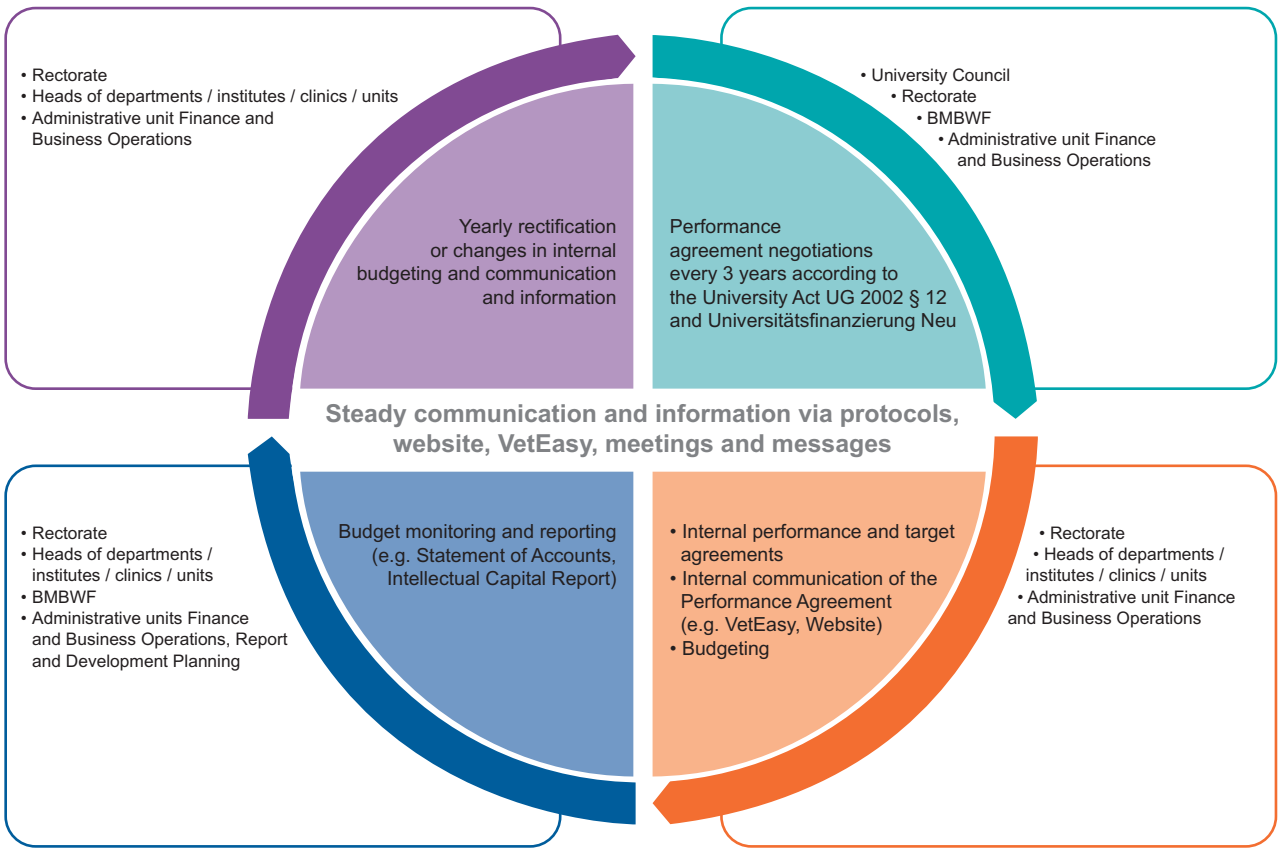

Figure 2 PDCA Cycle Expenditure, Investment and Revenue

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

Expenditure	2018	2017	2016	Mean
Staff costs	76,778,448.39	72,437,822.12	71,396,964.24	73,537,744.92
Depreciation	6,820,914.92	6,502,914.33	6,870,307.99	6,731,379.08
Rents and financing (Federal Real Estate Company)	28,466,237.90	27,614,123.92	38,831,511.59	31,637,291.14
Other operating expenses	18,801,781.49	18,614,285.88	17,522,202.35	18,312,756.57
Total	**130,867,382.70**	**125,169,146.25***	**134,620,986.17**	**130,219,171.71**

*The total in 2017 is lower due to a reduction in rent of around €11m.

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

Overall revenue	2018	2017	2016	Mean
Global budget allocation of the federal government	94,754,543.89	92,129,159.60*	101,786,195.81	96,223,299.77
Tuition fees including compensation payments by the federal government (because of the abolition of tuition fees by law in 2008)	1,569,623.09	1,569,631.34	1,582,752.39	1,574,002.27
Continuing education	267,524.40	256,341.90	321,782.62	281,882.97
Services & research (§27)	20,913,224.42	17,538,583.39	18,376,989.46	18,942,932.42
Ad personam research grants (§26)	4,955,573.72	4,269,879.43	3,931,596.88	4,385,683.34
Other types of revenue	5,398,572.83	2,662,736.58	3,093,079.28	3,718,129.56
Total	127,859,062.35	118,426,332.24	129,092,396.44	125,125,930.34

Revenue from global budget allocation by federal government	94,754,543.89	92,129,159.60	101,786,195.81	96,223,299.77

Revenue from Services & Research (§27)	2018	2017	2016	Mean
VTH	11,341,981.05	10,206,688.22	9,350,564.33	10,299,744.53
Other scientific services	1,474,642.75	1,572,806.75	1,791,214.85	1,612,888.12
Research services	5,917,632.06	3,814,679.23	5,470,607.23	5,067,639.51
Other types of §27 sector revenue	2,178,968.56	1,944,409.19	1,764,603.05	1,962,660.28
Total	20,913,224.42	17,538,583.39	18,376,989.46	18,942,932.42

* The total federal reimbursement in 2017 is lower due to a reduction in rent of around €11m.

Table 2.1.3 Annual balance between expenditure and revenue (in Euros)

Year	Total expenditure	Total revenue	Balance
2015	131,106,376.38	131,886,477.13	780,100.75
2016	134,620,986.17	129,092,396.44	-5,528,589.73
2017	125,169,146.25	118,426,332.24	-6,742,814.01
2018	130,867,382.70	127,859,062.35	-3,008,320.35

Comments on Standard 2

- The BMBWF Decree on Uniform Cost Accounting Standards at Universities took effect on 1 January 2018. The Decree compels all universities to implement a standardised cost-accounting system, which makes comparison between Austrian universities easier. Vetmeduni Vienna will adjust its cost accounting to meet the minimum standards set out in the new Decree in a timely manner by 31 December 2019.
- A substantial additional increase in revenue from clinical and diagnostic services is not considered, as the clinics and institutes are first and foremost veterinary teaching hospitals focusing on high-quality teaching.

Suggestions for improvement on Standard 2

Not applicable

Standard 3: Curriculum

Factual information

3.1 Strategy for curriculum design, resources and management

Vetmeduni Vienna is the only veterinary medicine educational establishment in Austria and offers a six-year Diploma Programme in Veterinary Medicine, which is fully compliant with the EU-Directives 2005/36 and 2013/55 as well as national laws (UG 2002 and the Veterinary Practitioner Act). Upon completion of the Diploma Programme, students are awarded the "Magister/Magistra medicinae veterinariae" degree (in German "Diplom-Tierarzt/Diplom-Tierärztin") and according to Austrian law, are eligible for the license to practice as veterinarians in Austria and the EU and to enrol in postgraduate programmes.

Description of the educational aims of the Establishment and the general strategy for the design, resources and management of the curriculum

The entire veterinary curriculum, which was implemented as a competence-based curriculum in 2014, spans six years, which is equivalent to 360 ECTS. The curriculum focuses on the acquisition of DOC with ample hands-on training and problem-based learning in a research-based environment. Students are exposed to all aspects of veterinary medicine. The broad-based coverage from the development of veterinary medical expertise to the development of personal, scientific and social skills is its primary strength.

The specialisation tracks in the final years deepen knowledge and skills regarding selected species or topics, leading to appropriate competence and problem-solving capacity in these areas and preparing students for entry into professional life.

The basic scientific skills imparted during the six-year curriculum provide graduates with a solid educational foundation to continue their education based on the latest scientific developments, follow up on the scientific literature in their respective specialisations, critically assess scientific articles and adopt new findings and techniques to augment their extant professional qualifications.

Graduates are aware of their responsibility towards patients, clients and society and are familiar with the legal framework of regulations governing their professional activities. They recognise their affiliation to the veterinary profession and commit themselves to being the public face of veterinary medicine through their professional attitude. They are aware of the limits of their knowledge and proficiency and have gained sufficient insight into the structure of the veterinary health system to take appropriate action. Furthermore, they are conscious of the interactions between humans, animals and the environment and the associated systemic effects, and they are well prepared to stand up for the well-being of animals.

The curriculum design is based on the following principles:

- Competence-based learning outcomes acquired at curriculum and course level and are defined and described in the catalogue of learning outcomes;
- Teaching, learning and examination methods are constructively aligned to learning outcomes;
- Real-life situations are simulated for training in practical, social and scientific skills throughout the entire programme;
- An interdisciplinary approach to teaching: subjects are integrated horizontally and vertically, from both non-clinical and clinical disciplines;
- Student-centred learning: students are encouraged to participate actively in their own learning, fostering transferable skills such as problem-solving, exploratory learning, critical and reflective thinking, and mature self-directed learning;
- Specialisation tracks in the final academic year provide advanced competence training.

The curriculum of the Diploma Programme in Veterinary Medicine is divided into three tiers: (1) principles in veterinary medicine, (2) general clinical training and (3) specialisation. Each tier concludes with a summative assessment (see Standard 8). A detailed description of the curriculum is published (in German only) on the university website.
Resources and management of the curriculum:
In addition to all the facilities on campus and the VTH, the following partners are being integrated into curriculum delivery: the Institute of Wildlife Ecology, VetFarm, Reproduction Center Wieselburg and Graf Lehndorff Institute in Neustadt an der Dosse (Germany), as well as other partners such as TierQuarTier Wien. Additional resources include the University Library, VetSim, numerous learning spaces and electronic resources such as Vetucation®, Vetmediathek, Q-Exam®, the case-based learning tool CASUS, VetmedOnline, VeTime.

Faculty staff are responsible for delivering and documenting the courses. Each course has a manager ("Lehrveranstaltungs-Leiter"), who is responsible for harmonising course content and teaching as well as for administration. University governing bodies (Senate, Rectorate) only get involved in curriculum administration in the event of formal or strategic problems. Students and lecturers can find information related to the curriculum on VetmedOnline.

Table 3A Overview of the curriculum

Tier	Semester	Student involvement	Description	ECTS
1	1-4	All students	A basic understanding of the living organism is the foundation for understanding the clinical basics. Regular contact with animals and patients train students in the basics of veterinary medical practice.	112.5
2	5-9	All students	Through topic-based interdisciplinary instruction and the related discussion of patient cases, students learn about the relationships between physiological and pathological processes in animal species. Veterinary skills and abilities are trained through increasing integration of the students into the daily clinical routine, ensuring continuous practical application of the theoretical knowledge acquired. Other foci include theoretical and practical training in veterinary public health, food safety and food technology, and prescription law.	136
3	10-11	All students on ST1 + ST2*	Advanced training in two chosen specialisation tracks, one of which must be a clinical specialisation track.	39
3	11	All students	Medical biometry and epidemiology, veterinary legislation and forensic medicine, basic economics, advanced science in veterinary medicine	6
3rd	12	All students	Diploma thesis	20
1-3	1-12	All students	External practical training (EPT, 26 weeks)	39
1-3	1-12	All students	Free electives	7.5

*Specialisation tracks (ST) comprise 10.8% of the total ECTS workload

Specialisation tracks:
During the specialisation tracks, intensive hands-on clinical training and problem-based learning in small groups is of utmost importance. In these courses, real and complex problems from everyday professional life are analysed. Furthermore, students are involved in seminars, work on and discuss scientific questions and make research-based decisions about further procedures. This educational method takes into account aspects of lifelong learning and students gain advanced competences in their chosen fields of expertise.
The students take two of eight specialisation tracks, one with 30 ECTS credits (specialisation track 1, ST1) and the other with 9 ECTS credits (ST2). Either ST1 or ST2 has to be a clinical specialisation track (Table 3B1). All specialisation tracks are offered as ST1 and ST2. The detailed descriptions of the specialisation tracks can be found in the curriculum. The Senate allocates the distribution of places to make sure that enough places are available for all students of the upcoming year.

Table 3B1 Description of specialisation tracks – clinical tracks

Specialisation track	Species / Disciplines	Types of training
Small Animal Medicine (SAM)	Small animals, reptiles, exotic birds and exotic animals All subdisciplines are included	• Clinical rotation • Night shifts • Training in special professional skills • Clinical case discussion and presentation focusing on diagnostic imaging and pathology
Ruminant Medicine and Bovine Herd Health Management (RM)	Ruminants, small ruminants and New World camelids Focus on • herd health management • animal health and welfare • infectious diseases and zoonoses	• Clinical rotation • Night shifts • Training in special professional skills • Clinical case discussion and presentation • Excursions
Pig and Poultry Medicine and Herd Health Management (PPM)	Pigs, poultry and fish Focus on • herd / flock health management esp. in big enterprises • animal health and welfare • infectious diseases and zoonoses	• Clinical rotation • Training in special professional skills • Clinical case discussion and presentation • Excursions • General herd / flock health management in practice
Equine Medicine (EM)	All types of horses Involvement in all areas of equine medicine incl. ethics discussions	• Clinical rotation • Night shifts • Training in special professional skills • Journal clubs • Clinical case discussion and presentation

Table 3B2 Description of specialisation tracks – non-clinical tracks

Specialisation track	Species / Disciplines	Types of training
Food Safety and Quality and Veterinary Public Health (FSQ and VPH)	Assessment (and management) of the various hazards and risks prevailing in the production chain of foods of animal origin following a longitudinal (farm-to-fork) approach Monitoring of notifiable animal diseases and foodstuffs and their epidemiological course	• National and regional legislation incl. animal welfare in transport • Monitoring, QA and risk analysis of animal diseases and foodstuffs • Ante-mortem and post-mortem inspection and hygiene • Excursions to enterprises
Zoo and Wildlife Medicine – Conservation Medicine (CM)	Zoo and wild animals Focus on the interface between humans, companion animals, and farm animals and anthropogenic factors e.g. climate change, globalised trading, habitat loss	• Clinical training on zoo and wild animals • Management of captive populations • Research in conservation medicine
Reproduction / reproductive biotechnology (Repro)	Laboratory animals, ruminants, horses, zoo and wild animals Focus on reproductive biotechnological issues including legal and ethical discussions	• Practical training on animals • Laboratory work • Journal clubs
Laboratory Animal Medicine (LAM)	Laboratory animal science Focus on breeding, housing, husbandry and health monitoring Focus on the 3R principles in biomedical research including legal and ethical discussions	• Practical training (e.g. FELASA course, EU Function A) • Excursions to biomedical research facilities • Involvement in research projects • Planning and discussion of animal experiments

In all specialisation tracks, elective subjects must be completed. More detailed information can be found in Table 3.1.4

Table 3C Specialisation tracks offered in Tier 3

Specialisation track	No. of students
Small Animal Medicine (SAM)	55
Ruminant Medicine and Herd Health Management (RM)	40
Pig and Poultry Medicine and Herd Health Management (PPM)	10
Equine Medicine (EM)	28
Food Safety and Quality and Veterinary Public Health (FSQ and VPH)	40
Zoo and Wildlife Medicine – Conservation Medicine (CM)	10
Reproduction / Reproductive Biotechnology (Repro)	10
Laboratory Animal Medicine (LAM)	12

Description of the legal constraints imposed on curriculum by national/regional legislations and the degree of autonomy that the Establishment has to change the curriculum

The study programmes offered by Vetmeduni Vienna are specified in the Performance Agreement with the BMBWF. As an autonomous university according to the UG 2002 the University is completely independent to change the curriculum. While this is a federal law, the Statutes and curricula are issued by the governing bodies of the University (Rectorate, Senate) in accordance with the provisions of §58 UG 2002. Changes to the curriculum are autonomously regulated by Vetmeduni Vienna as follows: corrections are made based on regular internal and external evaluations (e.g. course evaluations, Competence Check, graduate survey), oral or written feedback from lecturers and students, feedback from Educational Working Groups (EWG) and CuCo, as well as key figures in the Intellectual Capital Report. Currently Vetmeduni Vienna is further improving the process workflow chart of curricular development and curricula changes. New courses and changes must meet the criteria of studyability, social dimension and completion rates as well as legal requirements.

Description of how curricular overlaps, redundancies, omissions, and lack of consistency, transversality and/or integration of the curriculum are identified and corrected.

The curriculum of the Diploma Programme in Veterinary Medicine up to Semester 9 is structured in interdisciplinary teaching modules, according to organ or function groups. Most of the teaching modules, except 1 to 4, span more than one semester. Content and organisational planning, in terms of constructive alignment and implementing the evaluation and improvement measures of each teaching module, is the responsibility of one of 16 EWGs, in which experts from the respective clinical and non-clinical fields are represented. Following EWGs are established:

Table 3D EWG modules

EWG No.	Module name
1	From organism to tissue
2	From tissue to cell
3	From cell to molecule
4	From gene to population
5	Regulation and mechanism
6	Infection and immunity
7	Animal husbandry / welfare / hygiene
8	Propaedeutics / clinic
9	Breathing / blood / circulation
10	Skin and appendages
11	Digestion / metabolism / liver / kidneys / urinary tract
12	Endocrinology / reproduction / genetics
13	Neurology / sensory organs
14	Food sciences/veterinary public health / epidemiology / animal diseases
15	Musculoskeletal system
16	Economics / communication / reflection / personal and scientific education

Each EWG is made up of the respective registered members of the CuCo or their authorised representatives for organising the teaching modules and is chaired by a speaker. The EWGs report to the CuCo, which coordinates them. The definition of learning outcomes for the individual courses and cooperation in the individual EWGs focuses on the recognition of redundancies.

To deepen the acquired knowledge, however, some curricular overlaps and redundancies are deliberately introduced. Feedback regarding overlaps, redundancies and omissions from course evaluations, EWG speakers, and students (semester spokespersons) is discussed on an ongoing basis in the EWGs and CuCo. E-learning documentation, units taught jointly by non-clinical and clinical lecturers, and interdisciplinary examination all contribute significantly to the general coordination of the teaching content and to avoiding unnecessary redundancies. Another established QA instrument at Vetmeduni Vienna, the PDCA cycle (see below), is also used here.

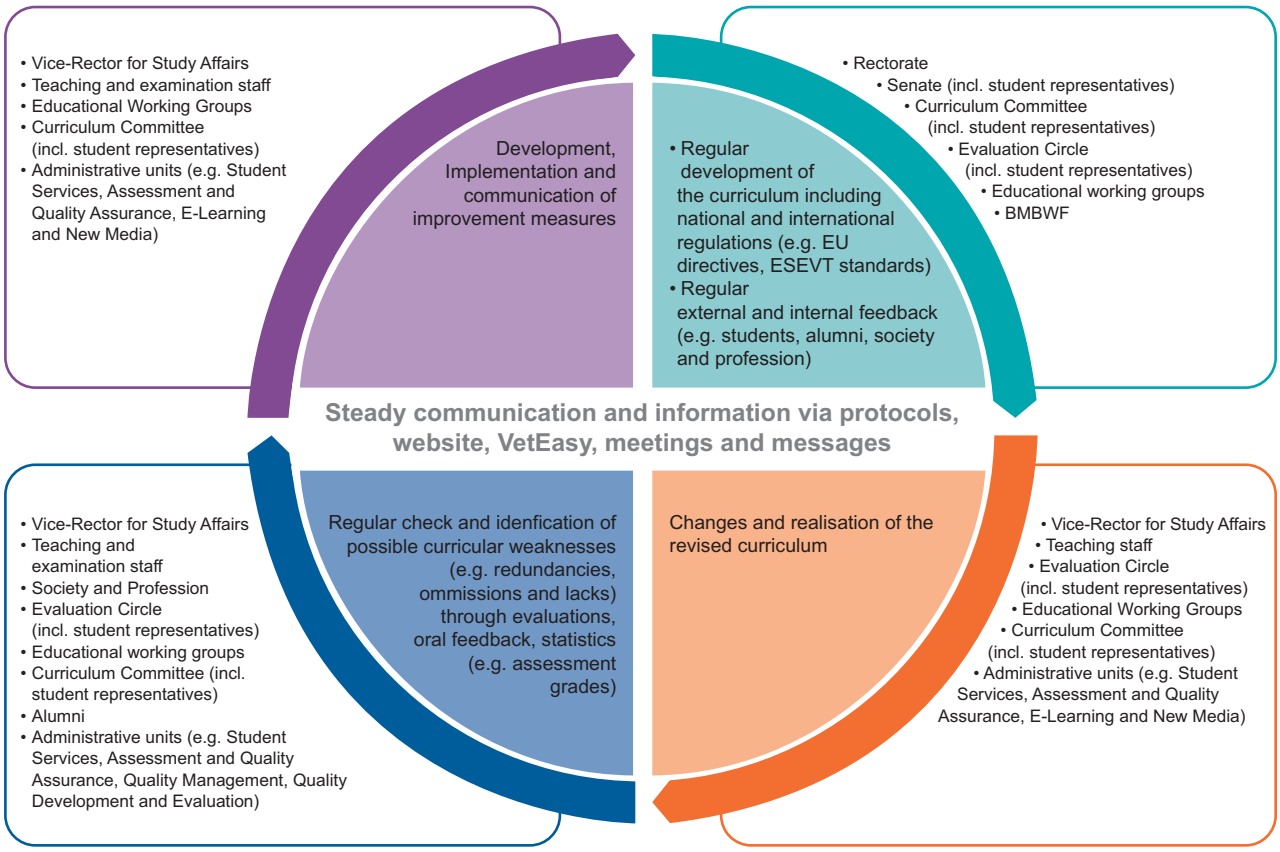

Figure 3 PDCA Cycle curricular deficiencies

Table 3.1.1 Curriculum hours in each academic year taken by each student (in course units)

Academic years	Lectures	Seminars	Supervised self learning	Laboratory and desk based work	Non-clinical animal work	Clinical animal work	Other	Total h (curriculum excl. electives)	Total h (ECTS incl. electives)
	A	B	C	D	E	F	G	H	
1	410	37	105	184	82		2	820	1500
2	366	18	101	175	43	31		734	1500
3	334	27	196	307		272		1136	1500
4	278	14	201	68	119	383		1063	1500
5					223	293		516	1200
6		20	30	30			667	747	1050
Sum of all academic years incl. specialisation tracks									
1-6 SAM[7]	1411	131	691	775	509	1793	669	5979	9000
1-6 RM	1411	131	898	784	1015	1142	669	6050	9000
1-6 PPM	1411	131	691	775	492	1758	669	5927	9000
1-6 EM	1411	131	721	775	517	1768	669	5992	9000
1-6 FSQ and VPH	1411	131	898	784	1015	1142	669	6050	9000
1-6 CM	1411	131	751	850	500	1743	684	6070	9000
1-6 Repro	1411	146	721	860	545	1643	669	5995	9000
1-6 LAM	1411	161	886	865	515	1563	669	6070	9000

Table 3.1.2 Curriculum hours taken by each student

	Lectures	Seminars	Supervised self learning	Laboratory and desk based work	Non-clinical animal work	Clinical animal work	Other	Total h (curriculum)
	A	B	C	D	E	F	G	H
Basic subjects	**100**	**4**	**87**	**57**				**248**
Medical physics	44		20	21				85
Chemistry (inorganic and organic)	4		20	22				46
Animal biology, zoology and cell biology	48		43	14				105
Feed plant biology and toxic plants			4					4
Biomedical statistics	4	4						8
Basic sciences	**771**	**102**	**187**	**601**	**119**		**669**	**2449**
Anatomy, histology and embryology	120		2	218				340
Physiology	128		29	24	30			211
Biochemistry	49		2	19				70
General and molecular genetics	21			6				27
Pharmacology, pharmacy and pharma-cotherapy	56		15	4				75
Pathology	85		11					96
Toxicology	1							1
Parasitology	45		19	32				96
Microbiology	109		33	233				375
Immunology	24			11				35
Epidemiology			28	30				58
Information literacy and data management	24	67					669	760
Professional ethics and communication	18	25	28		7			78
Animal health economics and practice management		10						10
Animal ethology	44				82			126
Animal welfare	6		6					12
Animal nutrition	41		14	24				79

[7] For abbreviations please see Table 3B1.

	Lectures	Seminars	Supervised self learning	Laboratory and desk based work	Non-clinical animal work	Clinical animal work	Other	Total h (curriculum)
	A	B	C	D	E	F	G	H
Clinical sciences	**330**		**279**	**41**	**93**	**947**		**1690**
Obstetrics, reproduction and reproductive disorders	20		11	5				36
Diagnostic pathology				31	59			90
Medicine	89		88	3	1			181
Surgery	3		13					16
Anaesthesiology	21		6					27
Clinical practical training in common animal species						825		825
Preventive medicine			8		9			17
Diagnostic imaging	29		22	2		34		87
Therapy in common animal species	103		131		24			258
Propaedeutics of common animal species	65					88		153
Animal production	**80**		**35**	**17**	**13**	**31**		**176**
Animal production, including breeding, husbandry and economics	65		17	15	13	4		114
Herd health management	15		18	2		27		62
FSQ and VPH and One Health Concept	**107**	**10**	**45**	**48**	**242**			**452**
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification		10	30	14				54
Control of food, feed and animal by-products				34	213			247
Zoonoses	58							58
Food hygiene and food microbiology	49				25			74
Food technology			15		4			19
Total	**1388**	**116**	**633**	**764**	**467**	**978**	**699**	**5015**

Table 3E Curriculum hours taken by each student in ST1 (1 ST = 30 ECTS)

	A	B	C	D	E	F	G	Gesamt
1 SAM 1					**24**	**745**		**769**
Clinical Sciences					**24**	**745**		**769**
Diagnostic pathology					12			12
Clinical practical training in common animal species						745		745
Diagnostic imaging					12			12
2 RM 1					**106,5**	**679**		**785,5**
Basic Sciences						**7,5**		**7,5**
Animal nutrition						7,5		7,5
Clinical Sciences					**57**	**634**		**691**
Obstetrics, reproduction and reproductive disorders					9			9
Clinical practical training in common animal species					7,5	634		641,5
Preventive medicine					9			9
Therapy in common animal species					31,5			31,5
Animal Production					**49,5**	**37,5**		**87**
Preventive medicine					9			9
Animal production, including breeding, husbandry and economics					7,5	15		22,5
Herd health management					33	22,5		55,5
3 PPM					**6,3**	**710**		**716,3**
Basic Sciences						**1,2**		**1,2**
Animal nutrition						1,2		1,2
Clinical Sciences						**659,75**		**659,75**
Clinical practical training in common animal species						606,65		606,65
Therapy in common animal species						53,1		53,1
Animal Production					**6,3**	**49,05**		**55,35**
Animal production, including breeding, husbandry and economics						2,4		2,4
Herd health management					6,3	46,65		52,95
4 EM1			**30**		**31,5**	**720**		**781,5**
Basic Sciences			**30**					**30**
Information literacy and data management			15					15
Professional ethics and communication			15					15
Clinical Sciences					**31,5**	**720**		**751,5**
Obstetrics, reproduction and reproductive disorders					9			9
Clinical practical training in common animal species						720		720
Therapy in common animal species					22,5			22,5

	A	B	C	D	E	F	G	Gesamt
5 FSQ AND VPH 1			**207,45**	**9**	**530**	**94,5**		**840,95**
Food Safety and Quality, Veterinary Public Health and One Health Concept			**207,45**	**9**	**530**	**94,5**		**840,95**
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification			75					75
Control of food, feed and animal by-products			75,45	9	500	91,5		675,95
Food technology			57		30	3		90
6 CM 1			**60**	**75**	**15**	**695**	**15**	**860**
Basic Sciences			**30**			**67,5**		**97,5**
Biomedical statistics			30					30
General and molecular genetics						52,5		52,5
Professional ethics and communication						15		15
Clinical Sciences			**30**	**30**	**15**	**567,5**		**642,5**
Diagnostic pathology					15	37,5		52,5
Medicine			30			15		45
Clinical practical training in common animal species				30		500		530
Zoonoses						15		15
Animal Production						**15**		**15**
Animal production, including breeding, husbandry and economics						15		15
Food Safety and Quality, Veterinary Public Health and One Health Concept				**45**		**45**	**15**	**105**
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification				45			15	60
Zoonoses						45		45
7 Repro 1		**15**	**30**	**85**	**60**	**595**		**785**
Basic Sciences		**15**						**15**
Information literacy and data management		15						15
Clinical Sciences			**15**			**500**		**515**
Obstetrics, reproduction and reproductive disorders			15					15
Clinical practical training in common animal species						500		500
Animal Production				**85**	**60**	**95**		**240**
Animal production, including breeding, husbandry and economics				85	60	95		240
Food Safety and Quality, Veterinary Public Health and One Health Concept			**15**					**15**
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification			15					15

	A	B	C	D	E	F	G	Gesamt
8 LAM 1		**30**	**195**	**90**	**30**	**515**		**860**
Basic subjects				**30**				**30**
Biomedical statistics				30				30
Basic Sciences		**30**	**90**	**30**				**150**
Anatomy, histology and embryology				30				30
General and molecular genetics		15						15
Pharmacology, pharmacy and pharmaco-therapy		15						15
Professional ethics and communication			75					75
Animal ethology			15					15
Clinical Sciences			**45**	**30**	**30**	**500**		**605**
Diagnostic pathology					30			30
Anesthesiology			30					30
Clinical practical training in common animal species						500		**500**
Preventive medicine			15					15
Diagnostic imaging				30				30
Animal Production			**45**					**45**
Animal production, including breeding, husbandry and economics			45					45
Food Safety and Quality, Veterinary Public Health and One Health Concept			**15**			**15**		**30**
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification			15			15		30

Table 3.1.3a Practical rotations under academic staff supervision: all students (excluding EPT)

Types	Species / Disciplines	Duration	Year of programme
Ambulatory Clinical	Small and companion animals Equine Ruminants Pigs Reproduction all species Diagnostic imaging all species Anaesthesiology all species	120 hours	4
Intra-mural VTH	Small and companion animals Equine Ruminants Pigs Poultry Fish Pathology	4 weeks 4 weeks 1 week 0.6 week 0.8 week 0.2 week 1 week	5
Ambulatory Clinical / HHM	Small and companion animals Pigs Ruminants	1 week 0.4 week 1 week	5
FSQ/VPH	Slaughter Parts Raw Materials I Raw Materials II Dispensing Law	11 hours 26 hours 17 hours	4

Table 3.1.3b Practical rotations under academic staff supervision: specialisation track (excluding EPT) in Year 5

Types	Species / Disciplines	Duration	Year of programme
Intra-mural	Small Animal Medicine ST1 Small Animal Medicine ST2 Equine ST1 Equine ST2 Pig and Poultry ST1 Pig and Poultry ST2 Ruminant ST1 Ruminant ST2	8.8 weeks 2-3 weeks 9 weeks 4 weeks 3.4 weeks 1.5 weeks 4 weeks 1.5 weeks	5
Ambulatory Clinical / HHM	Small Animal Medicine ST1 Small Animal Medicine ST2 Pig and Poultry ST1 Pig and Poultry ST2 Ruminant ST1 Ruminant ST2	1 week 0-1 week 2.6 weeks 1.6 weeks 0.4 week	5/6
FSQ/VPH	VPH ST1	2 weeks 75 hours	5/6
Others	Reproduction ST1 Reproduction ST2 Laboratory Animal Medicine ST1 Conservation Medicine ST1	4 weeks 1 week 1 week 3 weeks	5/6

Table 3.1.4 Curriculum hours taken as electives for each student (in ECTS)

Electives	A	B	C	E	F	G
Animal Production	1.5	4	6.5	5		
Basic Sciences	16.5	34	18	5		
Clinical Sciences	6	28.5	3	7	10	2
Food Safety and Quality, Veterinary Public Health and One Health Concept	2	12.5	11	2		
Total	**26**	**79**	**38.5**	**19**	**10**	**2**

Students take part in compulsory electives as part of their specialised training to broaden their professional horizon. The minimum amount of ECTS is defined in the curriculum for each specialisation track (Table 3E). The CuCo draws up a list of compulsory electives, which are decided on by the Senate.

Table 3F Amount of ECTS for compulsory electives in each TS

Specialisation track	ECTS for electives in ST1	ECTS for electives in ST2
Small Animal Medicine (SAM)	8	2
Ruminant Medicine and Bovine Herd Health Management (RM)	3	2
Pig and Poultry Medicine and Herd Health Management (PPM)	5	2
Equine Medicine (EM)	5.5	2
Food Safety Quality and Veterinary Public Health (FSQ and VPH)	3	2
Zoo and Wildlife Medicine – Conservation Medicine (CM)	5	2
Reproduction / Reproductive Biotechnology (Repro)	4	2
Laboratory Animal Medicine (LAM)	3	2

Table 3.1.5 Optional courses proposed to students

A minimum of 7.5 ECTS credits throughout the entire study has to be chosen as free electives.

- Lifelong learning: 2.0 ECTS credits
- Development of scientific competences: 2.5 ECTS credits
- Development of personal skills: 3 ECTS credits

Electives can be chosen from the entire range of courses and continuing education offered by all recognised domestic and foreign universities. The students are supplied with a list of keywords that help them to choose appropriate subjects.

List of the most popular electives (top 3)

Electives – development of personal skills
Veterinary Medicine Progress Test: feedback on your knowledge gain
Introduction: pre-clinical emergency management and disaster veterinary medicine
General aspects of animal husbandry in organic agriculture
Electives – development of scientific competences
Basics of wildlife biology
Viral zoonoses
Apiology, honey bee health and bee pathology
Electives – life-long learning
Emergency service in obstetrics, gynaecology and andrology
Parasitic tropical diseases
Preparation and potentiation of homeopathic medicines

Description of the core clinical exercises / practicals / seminars prior to the start of the clinical rotations

Imparting clinical knowledge, skills and competences is considered throughout the entire curriculum. All practical courses do this step by step, starting with Semester 1 (see Fig. 4).

- Students can use the skills lab (VetSim), to learn and practice, from Semester 1 onwards. In it, theoretical and hands-on training using mannequins and simulators is facilitated by tutors, peer tutors or self-learning instructions.
- Clinical training starts with the Animal Handling and Care course in Semester 1: after a theoretical introduction, students must independently complete 50 hours of animal care tasks.
- In semesters 3 and 4, general propaedeutics with theoretical and practical training on university-owned animals is carried out in small groups.
- In semesters 5 and 6, the students are involved in performing various special examination procedures (e.g. reproduction, neurology, orthopaedics, ophthalmology, anaesthesia, porcine and avian examination) in practical exercises in small groups (Special Propaedeutics I and II).

- From semesters 5 to 7, clinical lectures and clinical supervised self-learning courses are blocked according to teaching modules. Students develop clinical knowledge and thinking, from aetiology and pathogenesis via diagnosis and further examinations to treatment and accompanying measures.
- In semesters 7 and 8 students do ambulatory clinical work, inside and outside regular unit hours, under the supervision of lecturers in admissions, diagnosis, therapy and general patient care. These activities enable students to enhance their practical and clinical skills and gain their first independent clinical experience.
- From semesters 3 to 8, at two-week intervals, clinical cases are taught and discussed during the Clinical Demonstration courses.
- Further elective clinical training is offered through opportunities for voluntary engagement in the different clinics by personal agreement or for employment as tutor or study assistant, which is possible at any time.
- Communications skills are honed in semesters 3 and 6: students train in emotional conversation situations, in Conversation with animal owners – basics (Semester 3) and Conversation with animal owners and stakeholders – simulations with actors (Semester 6).
- Professional ethics training is provided during the compulsory course on Ethics in Veterinary Medicine in semesters 1-4 and on the Animal Welfare course in Semester 5.

As shown in Figure 4 students increase their responsibilities for patients, animal owners, clinical reasoning and skills continuously throughout their studies.

Description (timing, group size per teacher, ...) of the core clinical rotations and emergency services (both intra-mural VTH and ambulatory clinics) and the direct involvement of undergraduate students in it (responsibilities, hands-on versus observation, report writing, ...)

Semester 9 is reserved for Clinical Rotation I (14 weeks), offered in two blocks (see 3.1.3):

- Clinical Rotation I – Companion Animals, total nine weeks:
    - University Clinic for Small Animals (five weeks including one week at the shelter, TierQuarTier Wien)
    - Equine University Clinic (four weeks).
- Clinical Rotation I – Farm Animals, total five weeks:
    - University Clinic for Ruminants (two weeks)
    - University Clinic for Swine (one week)
    - University Clinic for Poultry and Fish (one week)
    - Institute of Pathology (one week).

Clinical rotations are done in small groups (max. eight persons), ensuring that every student receives individual feedback and that all students get hands-on experience across common domestic animal species. During the clinical rotations, under supervision, the students gain and improve their knowledge, abilities and skills in direct contact with patients (hands-on). Discussion of specific cases and clinical reasoning about case-specific backgrounds are highly valued in this context. Students are requested to be partially responsible for animal patients. The students are part of the clinical team at every stage from the medical history, via clinical examinations and results of further investigations up to treatment, including surgical procedures and postoperative treatment.

In addition, they are responsible for monitoring and treating intensive-care patients and monitoring births. Cat castration and spays are part of the gynaecology rotation. Emergency service is an integral part of the clinical rotations. Active participation in clinic rounds during teaching and night service are both integral to clinical rotations. Regarding farm animals, clinical rotations include herd/flock health visits, short-term farm visits, working at the VetFarm including the mobile clinic and special training in herd health service (herd visits, herd investigation, necropsies, diagnostic/laboratory tests and documentation). At the beginning of each rotation, students are instructed regarding biosecurity,

hygiene and their duties and rights. Assessment tools are presented (e.g. student assessment cards). Students are requested to report to the clinical services wearing the appropriate clothing. All SOPs and biosecurity measures are informed to the students the first day of their rotation. Close supervision is also provided to help them follow the hygiene/safety rules.

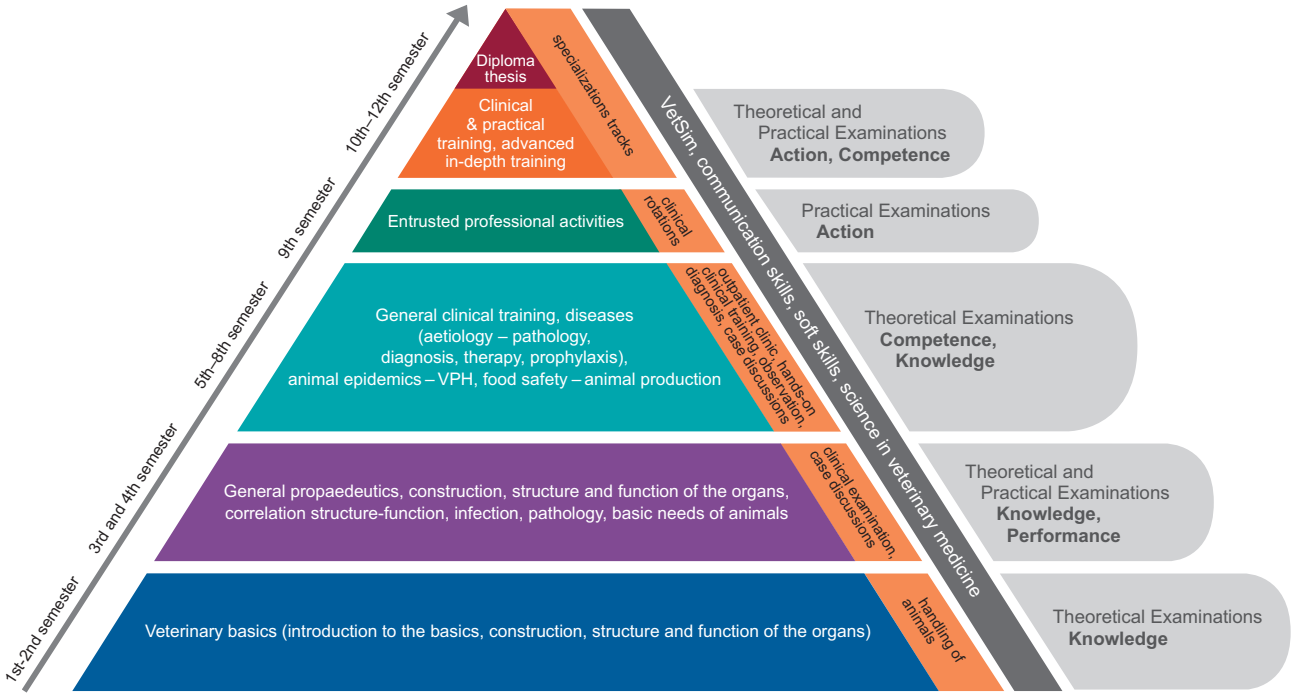

Figure 4 Curriculum Diploma Programme

Description (timing, group size per teacher, ...) of the teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Food hygiene is mainly taught by the staff of the Institute of Food Safety, Food Technology and Veterinary Public Health. The basic practical training in ante-mortem animal and post-mortem meat inspection (Semester 7) is the responsibility of the Institute's Food Hygiene and Technology Unit. Two training components need to be distinguished, the intra-mural and the extra-mural. The total student population (approximately 200, in subgroups of 40 students per teacher) is taught the essentials of meat inspection within one week. Related documentation (relevant legal texts, film and other audio-visual material) is made available for self learning via Vetucation®. Two afternoons are dedicated to topics such as 1) animal transport, 2) ante-mortem animal inspection, 3) stunning and killing pigs, 4) stunning and killing cattle, 5) good hygiene practices and 6) the major pathological and anatomical findings to be expected. The third and the fourth afternoon are dedicated to demonstrating the meat inspection procedures relying on carcasses (pigs) and/or carcass parts (pigs, cattle).

These intra-mural four-hour exercises (for two small groups of no more than ten students per tutor) are conducted in one of the institute laboratories. Ultimately, students are expected to be able to conduct a formal meat inspection on both carcasses and organs, and their individual performance is assessed and documented. This basic training increases understanding of the relevant aspects of meat hygiene as presented in lectures and seminars, as well as during an excursion to a pig or cattle slaughterhouse organised in Semester 8. During these excursions, students are also introduced to the various procedures related to processing and distribution of fresh meat in industrial practice.

The extra-mural part consists of a four-week practical training mandatory for all students, during which a public health veterinarian trains students the relevant aspects of ante-mortem animal and post-mortem meat inspection including legislative aspects, generally on a one-to-one basis supervision. In addition, the students who chose ST1 in FSQ and VPH: 1) are sent to selected EU approved

slaughterhouses with a special profile (number of slaughtered animals, various animal species etc.) for four weeks of practical training; 2) participate in several excursions to food-processing enterprises; 3) do another four weeks of food analytical practical training; and finally 4) do another ten weeks of practical training during which they are instructed by experienced veterinary professionals in risk assessment and risk management tasks associated with the production, processing, distribution, sale and consumption of foods of animal origin.

Description of the selection procedures of the Electives by the students and the degree of freedom in their choice (e.g. what happens when too many students select one specific track)

The strategy of Vetmeduni Vienna is to provide a cohesive framework for the students' future profession. Electives are an important part of this strategy as students can individually choose their preferred electives. Since electives can be done at any accredited university, there are no capacity problems.

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

Table 3G Procedures to ascertain achievement of learning outcomes

Types of training	
Pre-clinical, propaedeutics	• Attendance checks during laboratory diagnostic courses and propaedeutics exercises (signature is required) • Successful completion of the requirements of the continuous assessment courses • Opportunity to catch up missing hours
Clinical	• Daily attendance checks (signature is required) • Shifts outside regular business hours and at night must be registered in VeTime (signature is required) • Constant student-teacher interaction (questions, discussions, observation and short practical assessments) • Case presentations and discussions by students • Opportunity to catch up missing hours
Ambulatory clinical (VetFarm, TierQuarTier)	• Attendance checks during farm visits • Analysis of herd health with presentation by students
External practical training	• Evaluation report by students • Signed logbook for the 10-week EPT • Official certificates of EPT

3.2 Teaching and Learning Methodology

Description of how the Establishment:
a) ensures that the study programmes meet the objectives

In order to ensure the educational aims are met, Vetmeduni Vienna has defined learning outcomes for every teaching module based on the qualification profile and the DOCs. The learning outcomes were developed by Vetmeduni Vienna experts and practitioners, are documented in the skills and diseases list and assessed by formative and summative examinations. In order to achieve its educational aims, Vetmeduni Vienna has defined continuous review and improvement of learning and teaching outcomes based on constant feedback from internal and external stakeholders, as well as assessment results. Since 2014, the Competence Check has been compulsory in Semester 6 with feedback from the lecturers and in Semester 10 with feedback from the instructors.

b) promotes an academic environment conducive to learning

The Diploma Programme is competence-based and student-centred. The learning outcomes are relevant to the requirements of daily professional life. This results in broad, interdisciplinary teaching content, which requires a combination of individual disciplines into teaching modules. Methods like problem-based learning or small-group teaching in interdisciplinary seminars, workshops and seminars support active, networked learning. Early clinical experience in combination with research-led processing of clinical cases and presentations promotes scientific discourse and lifelong learning. The continuing professional development of lecturers and the good mentoring relationship between lecturers and students ensure mutual interaction and feedback.

c) encourages and prepares students for self learning and lifelong learning

Independent content development and problem-solving is supported in the various teaching and learning formats, especially the continuous assessment courses at Vetmeduni Vienna. Organisational integration of the students in daily routine work with scheduled time for self learning enables and promotes problem-based discussion of particular topics or patient cases. The necessary technical infrastructure such as access to the patient-specific images in the Vetmediathek image archive and the Animal Hospital Information System (AHIS), e-learning, and library promotes research-led self learning and lifelong learning.

The 40% weight given to performance in courses in the overall examination grades encourage students to study on their own and to take the opportunities available. Instruments to assess personal learning progress such as online tests, self-assessment, personal feedback, the Veterinary Medicine Progress Test (VMPT) and the Competence Check contribute significantly to the motivation and success of self learning. Compulsory personal development courses, such as ethics, communication and business management, support the development of personal responsibility, self-reflection and feedback. Even during their studies, students have the opportunity to participate in courses designed for lifelong learning and to receive recognition for this in an elective subject (e.g. “Operate a veterinary pharmacy” and “Radiation Protection Course”, CCRP Certificate, congresses, conferences and workshops) developing their theoretical knowledge and practical skills.

3.3 Learning outcomes

Description of the educational aims and strategy in order to propose a cohesive framework and to achieve the learning outcomes

The educational objectives are set in accordance with EU Directives 2005/36 and 2013/55 and national requirements. The DOC are shown in the qualification profile of the curriculum. Based on the qualification profile, common learning outcomes are defined for each teaching module in the preclinical, propaedeutics and clinical categories. The teaching and learning methods of the associated courses are constructively aligned to the learning outcomes. Examination formats and questions are aligned with the learning outcomes. The learning outcomes support the lecturers in focusing the course on outcome-based content, avoiding redundancies and showing the students what is to be achieved. The horizontal networking necessary to achieve the learning outcomes necessitates interdisciplinary involvement in the courses. To ensure that all lecturers coordinate precisely, Vetmeduni Vienna has created 16 modules (through 16 EWGs) for the Diploma Programme. Interdisciplinary harmonisation is achieved through intensive interaction between the lecturers in the organisational units involved. Comprehensive evaluation of the teaching ensures that the aims of the curriculum are achieved and that the training objectives and qualification profile can continuously be adapted to changing social requirements and to increase graduate employability. Evaluation is performed on the following three levels:

- Competence-based evaluation of courses;
- Evaluation of the curriculum based on the Competence Check, examinations, and student monitoring;
- Regular surveys and monitoring of graduates, as well as the regular involvement of stakeholders such as veterinarians, on specific occasions.

Description of how the Establishment ensures that the learning outcomes fit with the ESEVT Day One Competences

National circumstances and DOC are fully included in the curriculum redesign and the associated definition of learning outcomes and course content. Thus, passing the compulsory examinations proves that the student has the requisite knowledge and skills. Additionally, the VMPT, Competence Check and regular surveys of graduates make it possible to check whether DOC have been achieved. Furthermore, once a year CuCo and EWG members meet to examine the completeness and actuality of the EWG learning outcomes.

Description of how (procedures) and by who (description of the committee structure) the learning outcomes are decided, communicated to staff, students and stakeholders, assessed and revised

The CuCo is responsible for deciding on the teaching objectives in cooperation with the VRSA. Decisions are based on the results of the course evaluations, Competence Checks, examination results and the graduate survey. These are presented to the Evaluation Circle, which serves as an advisory body for the VRSA and consists of lecturers and students. The Evaluation Circle ensures that, within the continuous improvement process, the evaluation results are directly incorporated into improving teaching. The circle analyses and discusses results, identifies weaknesses and strengths and makes recommendations. Subsequently the CuCo, EWGs, various interest groups and VRSA coordinate regarding measures to improve the continuing professional development of lecturers, organisation, infrastructure and personnel resources, as well as the content and time schedule. The activities and decisions of the CuCo are reported to the Senate and subsequently to staff, students and stakeholders. A separate working group was responsible for defining learning outcomes for the redesigned curriculum; it consisted of the VRSA (chair), two professors, two teaching staff members, CuCo chairperson, an external consultant and an external practising veterinarian.

3.4 Curriculum decision structure

Description of how (procedures) and by who (description of the committee structure) the core curriculum is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The present curriculum is based on the concept developed from 2012-2014 by the Curricular Reform Working Group involving lecturers and students, external stakeholders and alumni. It includes EAEVE suggestions from the last visitation. All aspects of teaching, including the balance between theoretical and practical teaching, assessment methods and input of different disciplines, are discussed in the responsible EWGs and decided by the CuCo. Curriculum management, in terms of learning outcomes, courses and assessment, is the task of the CuCo in close cooperation with the EWGs. The Rectorate has oversight of financial feasibility. To gain legal validity, the decisions made by the CuCo have to be confirmed by the Senate, which also appoints CuCo members. The curriculum has to be published in the university gazette which is publicly available on the university website. Changes in the curriculum are communicated via various channels: (1) Public: newsletter via website; (2) Faculty staff: newsletter via website, VetmedOnline and VetEasy; (3) Students: newsletter via website, VetmedOnline, Vetucation®, student representatives, regular information meetings with students orga-

nised by the VRSA; (4) Stakeholders (esp. instructors): newsletter via website, Teaching Vets Symposium, VetsOnTour, VETMED Magazine.

3.5 External practical training

Description of the organisation of the EPT and how it complements (but not replaces) the academic clinical training

Compulsory EPT of 26 weeks (130 days) are foreseen in the curriculum (39 ECTS credits). The aim is to improve vocational and/or scientific education and training in the field and to gain experience of everyday professional life. EPT tests and apply acquired knowledge and skills and prepares the student for professional practice, so the requirement must be completed in one continuous period.

Table 3.5.1 Curriculum days of EPT for each student

Subjects		All students except VPH Track 1	VPH Track 1 students only	Semester
Production animals (pre-clinical)		*2 weeks agriculture	*2 weeks agriculture	Semesters 1-4
Production animals (pre-clinical) Companion animals (clinical)	No differentiation between production and companion animals	*2-4 weeks in basic science and basic subject institutes	*2-4 weeks in basic science and basic subject institutes	After Semester 4
Production animals (clinical) Companion animals (clinical)	No differentiation between production and companion animals	• *2-6 weeks veterinary practice, clinic or VTH • 4 weeks veterinary practice	*2-6 weeks veterinary practice, clinic or VTH	After Semester 4 After Semester 7
FSQ and VPH		4 weeks foodstuff monitoring slaughterhouse	• 4 weeks foodstuff monitoring in suitable premises, to be announced separately • 4 weeks ante-mortem and post-mortem inspection in slaughterhouses, to be announced separately	After Semester 8
Other (EPT during specialisation track)		10 weeks from ST1	10-week track FSQ and VPH	After Semester 9

18 weeks compulsory; * 8 weeks in the starred topics as chosen by the students

It is recommended that at least part of the EPT be carried out in a corresponding establishment outside Austria.

3.6 EPT cooperation

Description of how the EPT providers are linked to the Establishment (a copy of one of the agreements to be provided in the appendices), assess the students and provide feedback to the Establishment

Around 150 local veterinarians act as volunteer instructors (unpaid, with the exception of five paid FSQ and VPH veterinarians) of students who choose to do clinical extra-mural practical training. Veterinarians can apply to the EPT coordinator of Vetmeduni Vienna to become instructors. The ap-

plication is reviewed based on quality criteria, such as duration of practice as a veterinary practitioner, continuing professional development in the last three years, number of patients, and maintenance of an in-house dispensary. The competent department of the ÖTK must also approve the application. Instructors are appointed for three years, after which they must apply to renew their appointment. The list of instructors is on the website. Instructors have an account in Vetucation®, where they can find up-to-date information regarding their activity and give feedback on the students. Instructors are also invited to give feedback during the Competence Check. Instructors respond to the "questions on requirements for studies and profession" section in the admission procedure via online questionnaires with a response rate of 20-30%. Vetmeduni Vienna invites instructors to the annual Teaching Vets Symposium, where the Instructor of the Year prize is awarded. To strengthen the bond with the Vetmeduni Vienna, small-group events are held offering continuing professional development to instructors in the regions as part of VetsOnTour.

Name of the academic person(s) responsible for the supervision of the EPT activities
Dr. med. vet. Elfriede Kalusch (staff member, Student Services)

3.7 Student role in EPT

Description of the implications of students in the preparation, recording and assessment of their EPT
Students can find the list of instructors on the website and contact the practitioners themselves. Student Services, International Relations and the EPT coordinator support preparations for individual EPT at home and abroad and inform students about the associated forms, evidence and requirements. In order to establish contact with veterinarians from all over in Austria at an early stage, students have the opportunity to meet them on the Structural Challenges for Veterinarians in Austria course at the end of Semester 8. The completed EPT is confirmed by Student Services after presentation of an EPT confirmation by the instructor, according to the extent and the ECTS credits acquired. After the 10-week EPT, the logbook must also be submitted for approval. If students wish to complete an EPT outside Austria, this must be approved by the VRSA – delegated to International Relations – before the EPT starts. The same quality criteria apply to foreign establishments as to domestic instructors.

Description of the complaint process in place concerning EPT
Students can contact the EPT coordinator, International Relations, Student Services or the VRSA at any time. The student representatives, semester spokespersons and teaching module coordinators provide additional support should any difficulties arise. Problems are addressed on a case-by-case basis. Students also give a final report as part of their comprehensive assessment of the extra-mural practical training, which is available to other students in anonymous form via Vetucation®.

Comments on Standard 3

- The VMPT is an important tool for students to receive feedback on their individual learning progress. The VMPT, a common initiative of all German-speaking veterinary educational establishments, has been offered to students at Vetmeduni Vienna since 2013. Participation is voluntary, yet in 2018 more than 300 students participated. The VMPT refers to DOC as defined by the EAEVE and consists of 136 multiple-choice questions covering 34 undergraduate subjects. Students, who take part several times, get information about their improvement compared to previous tests.

- To evaluate the Diploma Programme in Veterinary Medicine, a Competence Check is mandatory in semesters 6 and 10. In 2018, 180 students in Semester 6 and, for the first time, 163 students in Semester 10 assessed their own competences. At the same time, the lecturers of these semesters are invited to give feedback to the students via the Competence Check. In Semester 10, instructors are invited to assess the students' competence. The students receive their individual competence assessments (without teacher assessment) by e-mail, which also allows individuals to track their progress. The Competence Checks are analysed in the Evaluation Circle, consisting of representatives of lecturers and students, and reported back to all interest groups.
- In 2016, veterinarians of the Vetmeduni Vienna, together with students, took over the medical care of the animals of the TierQuarTier Vienna. This cooperation guarantees both practice-based clinical training for students and the best possible animal care.
- Cooperation with the Graf Lehndorff Institute in Neustadt an der Dosse, Germany, offers students the opportunity to gain an initial insight into professional life. In the next few years, the institute will offer more university teaching and continuing education, and develop as a research location.
- Continuing professional development courses are offered to both lecturers and students. New developments include peer teaching observation and the Tutor Programme.
- A strategic partnership, the ERASMUS+ project, IQM-HE (Internal Quality Management: Evaluating and Improving Competence-Based Higher Education), dealt with the development, implementation and dissemination of an European toolkit for QA in competence-based higher education. In autumn 2018, the follow-up project VetNEST ERASMUS+ SOFTVETS (Pan-European soft skills curriculum for undergraduate veterinary education) was launched with the participation of Vetmeduni Vienna. Other participants include the University of Veterinary Medicine Hannover, Foundation, the University of Zagreb, the University of Ljubljana and Vienna University of Economics and Business. The aim of this project is to develop curriculum modules on a) interpersonal skills, b) entrepreneurship c) digital skills for undergraduate veterinary medicine students.
- Implementation of recommendations by the last EAEVE visitation concerning the curriculum: see appendix.

Suggestions for improvement on Standard 3

- One aim is to provide students and instructors with an additional feedback form to evaluate the extra-mural practical training, besides the logbook and confirmation of the EPT.
- Currently the initial considerations are being made about developing the logbook and student assessment cards into an app which allows lecturers/instructors and students to make sure that the necessary DOC have been achieved. Clinical Rotation I has been considered as a possible initial testing area, depending on a pending application for a third-party funded project.
- The Vetmeduni Vienna seeks to expand cooperation with the federal states to offer students further training, especially with farm animals, to ensure veterinary supply to rural regions in Austria. In the course of their everyday work, students not only experience routine cases, but also the tasks, challenges and tensions associated with veterinary professional practice.
- In order to cope with the growing complexity of the timetable and to be able to respond even better to teaching and facility requirements, the introduction of timetable software is planned. This software can be used to link nested small-group lessons with demand-based spatial planning. Through an interface to VetmedOnline, students can receive an electronic timetable.

Standard 4: Facilities and Equipment

Factual information

4.1 General information

Description of the location and organisation of the facilities used for the veterinary curriculum (surface area, distance from the main campus for extra-mural facilities, ...) (maps to be provided as appendices)

The Veterinary Medicine curriculum is delivered by five departments. Four are situated on the Floridsdorf campus (21st district, north-eastern Vienna). The campus covers 15 hectares and 47 sites, which were built in 1996. Since 2011 the interdisciplinary Messerli Research Institute, which belongs to Department 5, has been located on campus. The campus is easily accessible by public transport (e.g. U1, U6, tram lines 25 and 26 and bus 27A). Part of the fifth department is in the 16th district and includes the Research Institute of Wildlife Ecology and the Konrad Lorenz Institute of Ethology. Their spacious buildings house well-equipped units, laboratories and animal care facilities. Adjacent to them is a large forested research enclosure of 45 hectares for studying wild animals kept in close to natural conditions.

Vetmeduni Vienna also maintains specialised off-campus teaching and research infrastructure such as the central teaching and research farm in Pottenstein (VetFarm) and the Reproduction Center Wieselburg. Since 2017 the Wolf Science Center (WSC)[8] in Ernstbrunn is also part of Vetmeduni Vienna. Since 2016 the University has been a partner of the animal shelter TierQuartTier Wien.[9] responsible for the veterinary health care of animals, which enables intensive clinical training in small animals, and is very close to the campus, accessible by public transport. Another important partner and joint research institution is the Graf Lehndorff Institute in Neustadt an der Dosse.

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

The buildings of Vetmeduni Vienna are owned by the Austrian body responsible for managing public property, the Bundesimmobiliengesellschaft (BIG), and are rented by the University. The VRR is primarily responsible for maintaining and upgrading the facilities and equipment. If costs exceed normal business practice, the approval of the University Council is required. As the tenant, Vetmeduni Vienna must obtain the consent of the BIG for any changes to rooms. Nevertheless, the University seeks to maintain an adequate infrastructure that meets its operational, legislative and security needs. Equipment is maintained by the individual department or unit by qualified internal staff (e.g. technicians). Established maintenance and repair procedures ensure that all necessary equipment is in place and functional.

Regular checks and internal/external audits on facility maintenance, work safety, biosafety and environmental safety are carried out by qualified auditors. Based on that, the Rector and VRR are responsible for all decisions concerning changing and developing facilities and equipment. The VRR discusses the plans with the department heads. The VRR is also responsible for supervision and monetary monitoring based on annual reports, internal and external audits. In addition, the Rectorate reports regularly to the University Council and the Senate with regard to financial management. For new buildings, the Austrian University Property Decree determines the procedure from planning to financing to the handling of property projects and thus prevents the risk of exceeding the budget.

[8] The aim of the WSC is to experimentally investigate wolves' and dogs' cognitive and social abilities and how they organise cooperation among their kind or with humans.

[9] Animal welfare competence centre for abandoned or runaway pets.

Description of how the Establishment ensures that all physical facilities comply with all relevant legislation

Vetmeduni Vienna complies with EU and national legal regulations. The most important ones are the responsibility of the BIG. The Austrian Occupational Health and Safety Act (ASchG) sets clear workplace standards. The Austrian Workplace Decree (AStV) regulates the spatial design of workplaces. Inspections are carried out by the Labour Inspectorate. As part of EMAS (Eco-Management and Audit Scheme) certification, the University has established an environmental legal register covering all operational requirements (incl. waste, occupational safety, chemicals, and technical management). Adherence to the applicable regulations is the responsibility of the appointed spokespersons for the organisational units and the Rector, who is responsible for actively ensuring compliance. Regular inspections are carried out by the Internal Revision, Labour Inspectorate and others. Numerous committees (e.g. Occupational Health and Safety Committee, Ethics and Animal Welfare Committee, Hygiene, Animal Diseases, Zoonoses and Biosecurity Committee) bring together all relevant stakeholders, and ensure compliance with regulations and guidelines. For issues such as biosecurity and hygiene, in addition to generally applicable manuals, the respective units have their own specific procedures and regulations.

4.2 Facilities for teaching, learning and the general environment

Short description (number, size, equipment, ...) of the premises for:

a) lecturing and group work (seminars, tutorials, ...)

Vetmeduni Vienna has numerous lecture halls, laboratories, training facilities, self-learning and seminar rooms. Due to the low dropout rate some of these are actually too small, so resizing activities have already started. Rooms for small-group work and learning rooms are continuously being adapted. All employees can view room availability through VetmedOnline and request additional bookings to the Campus Management. Room assignment for large student groups' curriculum courses is done by a VRSA staff member in cooperation with Campus Management. Small-group teaching, practical work and supervised work in laboratory courses require a significant number of repetitions and a large number of spaces. All lecture halls and seminar rooms are equipped with modern technical facilities that are continuously upgraded. The library and common rooms in the individual institutes/clinics are available to students for self learning. The available equipment meets discipline requirements. A wide selection of textbooks and literature (physical and online) is available for students to download from the University Library. Presentations and documents are available at any time and anywhere in Vetucation®. The latest interactive and integrative teaching methods are used (e.g. audience response system, CASUS, picture archiving and communication system [PACS]). The Student Union makes scripts and documents available. A comprehensive skills lab (VetSim) completes the range.

Table 4A Lecture halls

Hall	HS A	HS B	HS C	HS D	HS E	HS F	HS G	HS M	Panorama Hall
Places	360	245	224*	74	164	152	164	74	50
m^2	369	274	199	106	251	217	251	106	130

* currently under construction

Table 4B Premises for self-study, teaching laboratories, training etc.

Purposes	No. of places	Purposes	No. of places
Teaching laboratories	401	Training rooms	877
Seminar rooms	459	Self / group study	444
Library	134	Computer / PC	136
Others	18		

b) practical work (laboratories, ...)

The clinics and institutes are equipped with modern diagnostics and treatment facilities. The equipment is used for both clinical services and teaching (e.g. for demonstrations, experimental laboratory work in molecular biology, biochemistry, microbiology, histology, cell biology, electrophysiology and skeletal phenotyping). Students train in different sections of the clinical units and therefore have access to all facilities and related equipment. The teaching laboratories are designed for groups ranging from 6-15 students up to 25 students.

c) skill labs (pre-clinical stimulation-based training on dummies, ...)

See Standard 6.3

Short description (number of rooms and spaces, ...) of the premises for: study and self learning; catering, canteens, ...; locker rooms; accommodation for on-call students; leisure; sanitary (toilets, washing and/or shower facilities, ...)

The University offers campus-wide individual study areas and work spaces. Besides more than 450 spaces in seminar rooms, students can choose from more than 444 additional learning places, over 130 computer spaces, over 130 spaces in the main and institute libraries and over 800 spaces in training rooms. The modern self-studying spaces between HS A and HS B are new.[10] HS C is currently being extended. Since 2018 extensive efforts (about 400.000 €) are made to upgrade major lecture halls with state of the art equipment (e.g. audio, infrastructure). The canteen (Mensa) is the central meeting place for meals and for leisure. Besides the canteen students and staff can use a cafeteria which is open from 7 am to 6 pm on working days during the semester and from 8 am to 4 pm during holidays. The buildings also have kitchens providing basic equipment such as microwaves, electric kettles, coffee and cooktops. There are sufficient lockers available across all sites. All institutes and clinics where the students must wear protective clothing provide changing rooms and lockers. Each clinic has access to bathrooms with showers and toilets, which are accessible for students while they are on duty. A wide range of sports classes and physical activities for both students and staff is available (for more information about personnel development, see Standard 9). There is also a dog park for staff and students to use.

Brief description of the staff units and research laboratories

Vetmeduni Vienna does not have a general guideline regarding basic equipment in units and laboratories. The only bases for action are the statutory requirements (e.g. the Austrian Workplace Decree) regarding surface area and structural conditions. The standard inventory includes a desk, mobile pedestal, chair and adequate storage space. Laboratory equipment depends on the planned use. Internet connection, intranet access (VetEasy), adequate basic IT equipment, unit supplies, and access to literature are also standard. The Campus Management team and the Occupational Health and Safety Committee advise on design.

See campus map in the appendix.

4.3 Livestock facilities

Description (number, size, species, ...) of the premises for housing:
Sufficient space is provided to assure that all animals included in teaching and research are adequately accommodated, in compliance with all national statutory provisions (including the Austrian Animal Husbandry Decree). Appropriate isolation and quarantine facilities are in place. Internal committees and persons (e.g. animal caretakers, Ethics and Animal Welfare Committee) ensure compliance and are available as internal experts and contact persons. The Establishment also ensures full compliance with other legal requirements such as safety regulations, the Austrian Gene Technology Act, including appointing responsible persons as units. In principle, Vetmeduni Vienna endeavours to continually adapt the premises to legal and state-of-the-art requirements. In biosecurity, animal welfare and animal testing, the necessary adaptations have high priority. Examples include poultry isolators for animal experiments in Building IA and the current construction of the new University Clinic for Small Animals. Due to this, the isolation units for small animals including those for training dogs are housed in containers. New premises were established for ornamental birds and reptiles in Building KA.

a) healthy animals
Healthy exercise animals for teaching purposes are the property of Vetmeduni Vienna. The **Small Animals** area has 91m^2 of indoor space (four indoor enclosures), five outdoor enclosures with a total of 277m^2 and four concreted outdoor areas for 12-16 dogs each, sized 93m^2. The **Obstetrics, Gynaecology and Andrology Unit and Insemination and Embryo Transfer Platform** have group stables, individual boxes and outdoor housing with covered sheds for 20 full-size horses and 20 light horses and group stables, individual cages and outdoor paddocks for eight dogs. There are seven boxes (11m^2 each) and four paddocks (460m^2) on campus for **Equine Surgery and Equine Internal Medicine.** For **pigs** there are four stables with a total area of 204m^2. For **ruminants** there are cattle stables (5m^2 per animal) and paddocks (25m^2 per animal). For sheep and goats there are a paddock and hut (50m^2 per animal). **Fish Medicine** has 52 tanks with different capacities (total 6,600 litres). Outside there are eight additional 800-litre tanks. **Poultry Medicine** has a floor pen area with a free range of 30m^2. **VetFarm** has about 2,500m^2 of loose housing with cubicles, run and grazing areas for 100 cattle. In addition, 234m^2 for 36 calves in group housing with open-air areas, and approx. 123m^2 with 16 individual igloos with open-air areas for calves in individual housing are available. For 130 sheep, 189m^2 of loose housing including open-air and grazing areas are planned. About 1,926m^2 is available for a pig farm for max. 140 breeding sows, 600 fattening and 720 rearing spaces. For 50 horses there is 474m^2 excluding grazing. The VetFarm has no hospitalisation and/or isolation premises.

b) research animals
The housing of laboratory animals depends on their species (laboratory rodents, large animals, small animals) and the research purpose (e.g. infection experiment). Therefore, rooms, cages, and boxes and, if necessary, isolation rooms or isolators are used.

c) hospitalised animals
For **small animals**, the **Intensive Care Unit (ICU)** has three larger cages for dogs, two cages for dogs and cats and two oxygen cages for dogs and cats. The **Emergency Ambulance** has two larger cages for dogs and six cages for dogs and cats. **Small Animal Surgery** has 14 dog cages (100m^2), ten cat cages (22m^2) and eight cages for rodents (20m^2). **Small Animal Internal Medicine** has two rooms with 20 cages for dogs (approx. 37m^2), one room for cats with 12 cages (23m^2). 21 isolation boxes in four different sizes (approx. 24m^2) are available for zoo birds. A total of 19 cages in various sizes (approx. 34m^2) are available for birds, including two isolation boxes. There are three wards (total 86m^2) for birds and reptiles, including washing facilities and tables. For reptiles there are 14 terrariums (approx. 28m^2) in different sizes. Bats can be accommodated in approx. 25m^2, both freely

in the room, and in boxes or terrariums. **Anaesthesiology** has modular cages in ten units and mats on the floor for one to two animals depending on the size of the patient (total 35m²) for dogs, cats and rabbits in the holding/recovery area of the preparation room. For horses there are two recovery boxes fitted with soft covered walls and an anti-slip floor (approx. 23 m²).The **Diagnostic Imaging** Unit has two wake-up boxes for dogs (1m² each). The **Obstetrics, Gynaecology and Andrology Unit and the Insemination and Embryo Transfer Platform** have 26 spaces for horses in loose boxes, which can also accommodate mares with foals, and cages for eight dogs. Furthermore, six horse boxes are adapted to accommodate cows or camelids with obstetrics problems. For small ruminants, loose boxes for three sheep or goats are available. **Equine Surgery and Equine Internal Medicine** have together 46 boxes (total 576 m²), and additional five isolation boxes. Eight specialised ICU boxes (incl. video monitoring) are available for perioperative care. In **Fish Medicine**, inpatients are only admitted in exceptional cases. The aquariums and tanks available are used for this purpose, see healthy animals above. **Poultry Medicine** is not hospitalising animals but it has seven floor pens with a surface area of approx. 126m² available for experimental trials with chicken or turkeys. The **University Clinic for Swine** has one stable with four boxes (pathology stable approx. 25m²), which is used for patients who have been referred for further diagnostic examinations. The pigs never leave this stable alive. Until the pigs' disease is diagnosed, they are transported alive to the University and without exception into the pathology stable. Minipigs are only transferred (for internal, orthopaedic or dietetic reasons) in exceptional cases and are either kept in the stables of the University Clinic for Swine (see healthy animals) or in a dog kennel (isolated stable) in the operating theatre of the University Clinic for Swine (approx. 1m², mainly micropigs) and released home after recovery. The **University Clinic for Ruminants** has stables (5-10m² per animal) separated into conventional and organic farming. There are also stables (2m² per animal) for calves and hutches (3m² per animal) for calves. Stables (2-5m² per animal) are provided for goats and sheep. Stables (2-5m² per animal) and paddocks (50m² per animal) are also available for llamas and alpacas.

Description (number, size, equipment, species, disciplines, ...) of the premises and equipment for: Description of the equipment used for clinical services (diagnostic, treatment, prevention, surgery, anaesthesia, physiotherapy, ...)

The premises of Vetmeduni Vienna have state-of-the-art equipment to enable research-based and innovative treatment, prevention and diagnostic services. Thus, the Establishment not only offers excellent diagnostic capabilities and a plethora of treatment options, but also ensures that students receive high-quality, practice-based, hands-on education. The clinics and institutes actively shape their services through their high level of innovation and specialisation, benefiting the continuing education of undergraduates and graduates.

a) clinical activities

In the University Clinic for **Small Animals**, the **ICU and emergency unit** is equipped with the following rooms: one emergency and trauma room, one ICU treatment room including patient housing, one emergency and ICU clinical lab fully equipped to perform emergency lifesaving interventions and classical ICU treatment. Equipment includes ultrasound for FAST exams, O2 cages, O2 concentrators, respiratory ventilator, warming/cooling equipment, fluid and syringe pumps, cytology and urine analysis. **Small Animal Surgery** has a total surface area of 300m² serving as the operations centre for the whole University Clinic for Small Animals. This includes four surgical suites (general and minimally invasive surgery, ophthalmology and microsurgery, orthopaedics, septic surgery), and the following: a double dentistry suite equipped with dental radiographic equipment and one room with one beam CT and one room dedicated to flexible video-endoscopy. The small animal surgery equipment includes one laparoscopy tower, one arthroscopy tower, all cutting and sealing devices for endoscopic surgery, C-arm, surgical microscope and full range of surgical instruments, orthopae-

dic and minimally invasive sets for state-of-the-art anaesthetic and monitoring equipment. Additionally, **Ophthalmology** has a full range of ophthalmology surgical instruments, slit lamps, indirect ophthalmoscopes, Tono pens, and ultrasound. There are seven consultation rooms (150m^2) for soft tissue, orthopaedics, dentistry and ophthalmology. All are equipped with a treatment table, computer, washing facilities and equipment for clinical examinations. A fully equipped **Physiotherapy and Rehabilitation Centre** includes examination rooms, motion analysis and force plate centre, underwater therapy, laser and ultrasound. **Small Animal Internal Medicine** has five consultation rooms with variable use including cardiology, neurology, dermatology, endocrinology, small mammals, gastroenterology, re-checks totalling 119m^2. The equipment includes treatment tables, desks with a computer, washing facilities and equipment for clinical examinations, ultrasound for echocardiography, and electro-diagnostic equipment. Infectious inpatients are examined separately in an additional examination room (17m^2) with appropriate material. Additional endoscopy and otoscopy equipment is available and these examinations are performed in the small animal surgery. Inpatients are examined in a large treatment room (43m^2) and the ICU premises and equipment are used for critical patients (see above). **Birds and Reptiles** have four rooms (a consultation room, treatment room, surgery room, and x-ray room), overall size approx. 61m^2. The equipment includes appropriate treatment and operating tables, washing facilities, equipment for clinical examinations, a warming cabinet, and endoscope. Additionally, there are three wards (86m^2 total) for birds and reptiles, including washing facilities and tables. **Bats** have one room (approx. 25m^2) with a washing facility and treatment table. An isolation room of about 12m^2 is reserved for bats, reptiles and birds. **Anaesthesia** has 80m^2 including one preparation room with three tables for inducing animals and preparing surgery, one recovery room and one drug preparation room for small animals. The equipment includes state-of-the-art anaesthetic and monitoring equipment in all rooms, ultrasound for nerve blocks, nerve stimulator and ToF devices. **Diagnostic Imaging** has three rooms (145m^2) with state-of-the-art equipment (e.g. a Philips HDI ultrasound machines, Siemens Axiom Iconos R200 Bucky unit, Siemens Axiom Iconos R200 stationary fluoroscopy unit and Siemens Mobilett Plus RX mobile x-ray machine) for diagnostic examinations on small animals. For large animals there are two rooms each sized 60m^2. The equipment includes one Philips 100 Super CP Bucky unit, one Siemens Mobilett Plus RX mobile x-ray machine, and Fujifilm CR and DR systems. Furthermore, there is a unit for CT and MRI studies (120m^2) including a crane for animals weighing up to 1.5 t. Equipment includes a 1.5T MR unit, Espree, Siemens and a 16-slice CT unit. Three additional rooms (46m^2) are planned as image reading rooms, equipped with appropriate computer technology. There are also three teaching rooms (85m^2) for small student groups. The equipment includes computers, access to AHIS and PACS, and projector equipment. The **Obstetrics, Gynaecology and Andrology Unit** has two treatment rooms and one surgery room meeting the requirements of veterinary work on animal reproduction in horses, small companion animals and production animals. In addition, an endocrine laboratory is equipped with automated enzyme-linked immunosorbent assay (ELISA) equipment. **Equine Surgery** has three surgical suites (general surgery, orthopaedics and minimally invasive, ophthalmology), one room for dentistry, three recovery boxes and one additional induction space. These are equipped with state-of-the-art-equipment including a laparoscopy tower, arthroscopy tower, cutting and sealing devices for endoscopic surgery, C-Arm X-ray machine, full range of surgical instruments, for osteosynthesis (4.5 and 5.5 mm AO set), arthroscopy (fluid and gas), laparoscopy, eye surgery (incl. surgical microscope), and two surgical lasers (diode and CO2). There are also two examination rooms (full set of diagnostic equipment, surgical light, three ultrasound machines, equipment for small standing surgery) and an ICU (full set of equipment for small laboratory diagnostics, preparation for medical therapies, IT for documentation). Seven standing stocks are located at different spaces within the equine hospital. Additionally, a high-speed treadmill is available. Besides the padded recovery boxes associated with the operating rooms, one padded box is equipped with a hoist capable of supporting horses in an Anderson sling. There are specific anaesthesia rooms for horses: one preparation room (5m^2), one induction area, two recovery boxes (25-35m^2) and one discussion

room. **Equine Internal Medicine** can also use two additional examination rooms, which contain three stocks and a full set of diagnostic equipment, two ultrasound machines and equipment for internal therapies. **The Insemination and Embryo Transfer Platform** has animal facilities, semen collection rooms, laboratories (e.g. reproduction, molecular biology analysis) and storage rooms meeting EU requirements for intra-community trade in horse semen and embryos (Council Directive 92/65/EEC). The unit has the national Austrian approval for cattle and small ruminants. Equipment includes computer-assisted semen analysis, computerised semen-freezing equipment, equipment for micromanipulation of embryos, in-vitro fertilisation and intracytoplasmatic sperm injection (ICSI), electrophoresis equipment, a semi-dry western blotter, cycler for gradient cycling, high-speed centrifuge and gel analysis system. **The Radiooncology and Nuclear Medicine Platform** is dedicated to treatment of cancer in small and large animals. Six rooms are dedicated to dogs, cats and small mammals in the **Oncology area** (medical and radiation): two consultation rooms, one chemotherapy room for treatment, one room for re-checks, one room for day patients and one control room including RT delivery and 3D treatment planning and verification. The following equipment is available over a 115m^2 surface area: treatment tables, desks with computers, washing facilities, anaesthesia machine with monitoring in LINAC vault and induction room, microscope, chemotherapy safety hood, chemotherapy waste system, chemotherapy spill kit, LINAC itself with positioning devices, treatment couch and portal imaging. For horses, 50m^2 is available for radiation oncology, including a LINAC vault with control room and a LINAC with positioning devices. The equine surgery table can be used instead of a standard treatment couch. **Nuclear medicine procedures (scintigraphy)** are performed in the radioprotection area. The entire unit covers 290m^2. There is a dog stable with two boxes, a cat stable for cats and small mammals with five boxes and a horse stable with four normal boxes and one recovery box. All rooms/doors are lead shielded. Equipment includes a SPECT camera (for small animals and small mammals), planar gamma camera (for small animals and horses), shielded laminar flow cabinet, shielding equipment and shielded waste containers. **Fish Medicine** has more than 100m^2 for routine diagnostics and examinations (e.g. section room, ambulatory room) as well as special laboratories (e.g. for DNA, RNA, cell culture) sized 60m^2. It also shares laboratories and rooms with **Poultry Medicine**. The laboratory equipment complies with the EN ISO/IEC 17025:2005 standards. Poultry Medicine uses 170m^2 for bacteriology, serology, parasitology and histology laboratories including a refrigerator room, incubator room and preparation rooms, fully equipped with diagnostic and research equipment. There is also 150m^2 for cell culture and molecular biology laboratories, including storage rooms and freezers. In addition, there is an approx. 85m^2 post-mortem-suite (incl. three necropsy tables, necropsy and sample collection tools) primarily used for accredited diagnostic services. There is a separate 40m^2 post-mortem suite for teaching and research activities. The equipment includes one necropsy table, necropsy and sample collection tools, cleaning and disinfection tools, personal protective devices for students and staff, and diagnostic equipment. The **University Clinic for Swine** has one operating theatre (for endoscopic examination, synovial and cerebrospinal fluid sampling, bronchioalveolar lavage [BAL], etc.) of 350m^2. The equipment includes an endoscopy tower, equipment for surgical work (castration, cryptorchidism and inguinal hernia) and for BAL. The laboratory includes a workstation for sample preparation, a sterile workbench for serological work, an ELISA robot, surgical instruments, pipettes and centrifuge, and covers 19m^2. In the four stables (see healthy animals, approx. 204m^2), transport trolleys and upper jaw slings are also provided. The **University Clinic for Ruminants** has two combined rooms for clinical examination, advanced diagnostic procedures and surgery, one room for surgical preparation, one room for laboratory work (faecal examination) and one room for clinical demonstration. A total of 100m^2 is available for clinical activities. The equipment includes a laparoscopy tower, devices for endoscopic surgery, emergency laboratory (incl. blood gas analyser, automatic analyser for clinical chemistry, point-of-care tests and faecal diagnostics), point-of-care devices, oxygen generator, anaesthetic and monitoring equipment, multiple ultrasonography units and a special chute (adjusted to forklift) for claw trimming and surgery. A Milk Laboratory (120m^2) also houses complete equipment for classical bacte-

riological examination, Agarclave and ELISA equipment. The **Herd Health Management in Ruminants Unit** uses one sample preparation room equipped with in-house haematology analysers, centrifuges, equipment for urine analysis and blood and milk sample preparation, staining equipment for blood and tissue smears, scales, microscopes, refrigerators and a freezer (-20°C and -80°C). Three cars are equipped with veterinary clinical examination and sampling devices, including mobile ultrasound, several on-farm tests (beta-carotene, BHBA, glucose, faeces, etc.), a blood gas analyser, thermography camera, equipment for barn climate evaluation (data logger, fume tests), shaker box, and laptops. The **VetFarm** has an examination room (113m^2) and a stable pharmacy (15m^2) for the cattle in Kremesberg. The associated equipment includes two fixed claw stands and one mobile claw stand, three ultrasound devices, basic surgical instruments (e.g. for caesarean section), a microscope, centrifuge and steriliser. An examination room (28m^2) and a stable pharmacy (8m^2) for pigs are at Medau. The equipment includes a pig claw stand, basic surgical instruments, ultrasound unit and microscope.

b) diagnostic services including necropsy

Routine clinical laboratory diagnostics are performed by the clinics. In diagnostic laboratories, relevant teaching is provided and students are taught the main techniques and spectrum of methods of analysis in small groups. Following some examples which may provide an overview about the variety of the diagnostic services of Vetmeduni Vienna: The **Institute of Animal Nutrition and Functional Plant Compounds** offers services concerning toxic, medicinal and spice plants, determination of problems or injuries due to nutritional causes and a sensory analysis of hay. The **Institute of Animal Breeding and Genetics** provides molecular genetic expertise in the detection of hereditary defects in companion and livestock animals, parentage analysis, individual genotyping, and DNA analysis for veterinary forensics, as well as qualitative and quantitative nucleic acid (DNA, RNA) analysis by real-time PCR and next-generation sequencing. The **Clinical Pathology Platform** provides analysis in the main areas of veterinary clinical pathology, such as haematology and clinical biochemistry, including endocrinology and cytology. It uses state-of-the-art equipment which is constantly upgraded and works based on an EN ISO 9001 approved QM system. The **Institute of Virology** offers virology, serology and molecular virology examinations for a wide range of viral infections of domestic and farm animals, including zoonoses. Appropriately equipped laboratories can be used for sterile work with cell cultures, relevant serological procedures, and molecular virology methods including sequencing and real-time PCR. The **Institute of Parasitology** is an EN ISO 9000 certified Establishment with diagnostic services including parasitology examinations, clinical parasitology, clinical trials, development of concepts and strategies for diagnostics and control of animal parasites and development of test models for parasites and disinfectants. The **Institute of Pathology** provides diagnostics (e.g. necropsy and histological tests on vertebrates excluding fish and poultry, histological examination of organs, tissue samples and biopsies, immunohistochemical examinations, electron microscopy of faecal samples and cell homogenates) as well as advice and support for forensic issues, and prepares expert reports for judicial proceedings. The **Institute of Microbiology** offers molecular detection and typing of pathogens, innovative techniques for species identification (MALDI-ToF MS) and virulence typing (microarray platform), as well as susceptibility testing. In addition, the livestock clinics have specialised laboratories: The laboratory of the **University Clinic for Swine** is certified in accordance with EN ISO 9001. Diagnostic tests are offered to detect antibodies of specific swine pathogens (ELISA) and determine the genomes of certain viral pathogens. The well-equipped diagnostic laboratory of the **University Clinic for Poultry and Fish** is accredited according to EN ISO/IEC 17025 and allocates the national reference laboratory for notifiable fish diseases. The **University Clinic for Ruminants** has specialised equipment including a blood gas analyser and PCR laboratory, serology, bacteriological milk examinations, microscopy and routine parasitology examination equipment. A comprehensive catalogue of the Establishment's laboratory services is available on the website.

c) other (specify)

Another important facility is VetCORE – Facility for Research. It consists of five subunits in the fields of tissue archiving (VetBioBank), imaging from cell to laboratory animal (VetImaging) and the "Omics" subunits Genomics, Transcriptomics and Proteomics. VetCore functions as a multi-user resource dedicated to the development and application of various higher throughput technologies to aid in the discovery of biological markers. These types of technologies are quite expensive to operate and maintain, making it difficult for individual laboratories to invest in this type of infrastructure. The aim is for VetCore to be a "one-stop shop" for these technologies providing researchers access to both the tools and our experienced staff.

Brief description of the premises (both intra-mural and extra-mural) used for the practical teaching of FSQ and VPH (slaughterhouses, foodstuff processing units, ...)

A pilot food processing plant with the essential equipment is available at the Food Hygiene and Technology Unit. The unit relies on its contacts with the food industry for acquiring carcasses and carcass parts, so as to secure suitable material for introducing students in-house to meat inspection and safety and quality control of meat (products), i.e. before students are allowed to enrol in their slaughterhouse EPT. For the intra-mural meat inspection practicals pig halves and cattle heads are presented on racks for examination in a room with a waterproof single-use carpet on the floor. Plastic boxes are placed beneath the carcasses and heads to collect drip. Pig organs (offal ranging from tongue to liver) are hung on racks in a room with a waterproof single-use carpet on the floor. Plastic boxes are placed beneath the offal to collect drip. Carcasses and organs originate from approved slaughterhouses and thus have undergone meat inspection. Upon receipt, the material is stored in a special room until use. After its use in practicals, the material is disposed through the Institute of Pathology. All students are also trained – through practicals and demonstrations – in meat technology and associated chemical analysis of meat products (ingredients, chemical composition as stipulated in the Austrian Codex Alimentarius. The following list includes the training elements such as conducted in specifically designed and suitably equipped laboratories and associated rooms. **(1) Chemical analysis:** technology and comminution laboratory, catering for sample homogenisation and packaging (two packaging machines for 99% vacuum available); chemistry laboratory with equipment for Kjeldahl analysis (N determination), drying oven for moisture determination, water baths, photometer etc. for hydroxyproline determination, distillation unit for crude fat determination, electronic balance with an accuracy of 0.01 g; chemistry laboratory dedicated to sample pre-homogenisation and with a wet chemistry measuring room containing fluorescence and absorption spectra measuring equipment, refraction measurement (Abbé type), incineration room for wet sample digestion (for N determination) and for incineration (muffle furnace) for ash determination. **(2) Packaging and labelling** (with reference to the legislation): sensory laboratory and seminar room dedicated to practical training in label inspection, monitoring declared weight (two electronic balances with an accuracy of 0.01 g). **(3) Sensory analysis** (appearance, odour, flavour) as related to consumer expectations: three cabins with standardised illumination; two field kits of pH meters plus Braunschweig devices (used to determine the water-holding capacity of meat); room for preparing standards sample and solutions for calibrating the test panel. In the research laboratory, Minolta colour analytical equipment (measuring Hunter L*, a*, and b* values), a Helium Neon laser diffraction bench (measuring sarcomere length and hence the degree of muscle contraction) and an Instron draw bench for measuring shear force (and hence meat tenderness) are available for illustrating advanced sensory analysis. **(4) Writing an expert report** (with reference to the legislation): seminar room. **(5) Actual manufacture of at least one meat product** (e.g. cooked sausage, meat loaf): technical laboratory with bowl cutter 12L capacity, meat mincer 380V, combined smoking & scalding unit (capacity of the chamber max. 100kg), three precision water baths for scalding/pasteurising; technology and comminution lab with two bowl cutters (3L capacity), meat mincer 240V; ripening chamber (temperature-moisture adjustable; capacity of the chamber max. 100kg); temperature monitoring devices including embedded thermologgers;

refrigeration room and freezing room for storing raw materials. **(6) Visiting a meat cutting room** during the pig or cattle slaughter excursion: students on the FSQ and VPH specialisation track visit EU-approved meat-processing plants, including one pet-food manufacturer and one game-carcass processing unit (seven students and one teacher per visit). Vetmeduni Vienna does not have its own slaughterhouse but students have access to three slaughterhouse facilities located 50 to 100 km outside Vienna. Each student attends one cattle slaughter (incl. ante-mortem animal inspection and post-mortem meat inspection and visiting a meat cutting room) or one pig slaughter (incl. ante-mortem inspection and post-mortem meat inspection). **(7) Bacteriological examination of meat products**; two laboratories suitable for practicals for up to six students each. Equipment consists of homogenizers (Stomacher type), various small pieces of equipment (e.g. vortex, electronic balances), incubators. **(8) Examination of pork for Trichinella sp.:** all practicals rely on the use of inactivated larvae, i.e. the material (obtained from German Federal Institute for Risk Assessment [BfR]: pork max. 50 g, max. 1.5 cm thickness) is kept deep-frozen at -21°C for a minimum of six weeks before use. Equipment consists of three complete artificial digestion units using the magnetic stirrer method (MSM). The mincers (three Moulinette type) are placed in a E2 plastic box, and each MSM unit is placed in a E2 plastic box to avoid spillage of acidic digestion fluid. Personal protection devices are available (plastic aprons, safety glasses, nitrile gloves) and material safety data sheets are in place. Pepsin and HCl are proportioned and 3L glass beakers (tall type) are used for the "1L pool of max. 50 g" scheme. This allows administration of pepsin and HCl without the risk of contamination for staff members.

4.4 Clinical teaching facilities

Description of the organisation and management of the VTH and ambulatory clinics (opening hours and days, on-duty and on-call services, general consultations, list of specialised consultations, hospitalisations, emergencies and intensive care, ...)

The species-specific university clinics in the VTH and platforms[11] are mostly referral clinics. They are open throughout the year and offer general consulting at least five days per week and a 24/7 emergency service. Hospitalisation, emergencies and ICUs are offered by all clinics except by the University Clinic for Poultry and Fish and mobile clinic.

The service portfolio of the clinics and platforms includes:

Species / clinic / platform	Services
Small animals	Surgery: Soft tissue, orthopaedics, dentistry, ophthalmology, physiotherapy Internal medicine: general internal medicine, dermatology, cardiology, neurology, endocrinology, avian and reptile medicine, small mammal internal medicine, oncology Anaesthesiology: perioperative intensive care, pain management, oncology, lymph drainage Imaging diagnostics: x-ray, ultrasound, CT, MRT, teleradiology and teleconsultation
Equine	Internal medicine: general internal medicine, dermatology, cardiology, neurology Surgery: general traumatology, orthopaedics, gait analysis, regenerative medicine, farriery, physiotherapy, ophthalmology, dentistry, soft tissue surgery, oncology
Ruminants	Internal medicine and surgery on ruminants, herd health management focusing on fertility, calf health, metabolic disorders, housing
Swine	Herd health management, advice on diagnostics, treatment and prophylaxis; keeping and feeding minipigs

[11] Radiooncology and Nuclear Medicine Platform and Artificial Insemination and Embryo Transfer Platform.

Species / clinic / platform	Services
Poultry and Fish	Commercial poultry: post-mortem examination, laboratory diagnostics, parasitology, bacteriology, histology, serology, virology and tissue culture, molecular diagnostics, post mortems Cultivated fish: post-mortem examination, water analysis, inventory management Ornamental fish: live fish examinations, dead fish examinations, treatment, water analysis, home visits Zebrafish: molecular genetic analysis
Radiooncology and nuclear medicine	Equine nuclear medicine (bone scintigraphy), small animal nuclear medicine (bone, thyroid and kidney scintigraphy) radioiodine therapy, samarium therapy, small animal radiotherapy
Diagnostic imaging	X-ray, ultrasound, CT, MRT, teleradiology and teleconsultation
Artificial insemination and embryo transfer	Gynaecology, andrology, assisted-reproductive technologies, obstetrics and neonatology
Anaesthesiology and Perioperative Intensive-Care Medicine	Anaesthesia, perioperative intensive-care medicine, pain medicine, oncology, lymph drainage

Description on how the VTH and ambulatory clinics are organised in order to maximise the hands- on training of all students

Hands-on training starts in Semester 1 (Animal Handling and Care course) and increases until Semester 9. In the specialisation tracks, specialised hands-on training is deepened and intensified. The timetables for the individual semesters are designed to enable hands-on training with a variety of animal patients as part of the various compulsory courses at all clinics. In addition, the compulsory Ambulatory Clinical course gives students in semesters 7 and 8 hands-on training with the animal patients in the clinics, also outside regular opening hours and on weekends, or in the TierQuarTier and at the VetFarm. This ensures that students have access to the patients in the VTH throughout the year and around the clock. Clinical rotations in the animal species clinics are done in blocks so that the students can accompany patients from admission to discharge. Hands-on training is conducted in small groups under supervision. Vetmeduni Vienna guarantees access to a broad range of species as well as a broad range of diagnostic and therapeutic facilities including diagnostic imaging, anaesthesia, ophthalmology, dentistry, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services, pharmacy and necropsy facilities and the central laboratory, in clinical rotations and on veterinary diagnostics courses II-VIII.

Statement that the Establishment meets the national Practice Standards

The Order of Establishment lays down general rules for running the clinical area and the university pharmacy. It pursues the following objectives: (1) promoting flourishing interdisciplinary cooperation in patient care, clinical research and teaching; (2) ensuring a sufficient number of healthy animals and patients for teaching, research and patient care; (3) the best possible cooperation with veterinarians in private practice to implement research-led teaching. Veterinary practice in Austria is regulated in the Veterinary Practitioner Act. Staff who are active in clinical curative medicine are therefore registered on the Austrian List of Veterinary Practitioners and active members of the ÖTK and thus obliged to comply with national veterinary standards. In terms of safety measures, all relevant areas meet the national safety standards. Inspections are carried out at regular intervals by the relevant external authorities (e.g. fire brigade, Labour Inspectorate). All facilities, including laboratories, dissecting and autopsy halls, are equipped with relevant safety information, escape routes and emergency exit signs, in compliance with general hygiene rules. In addition, hand washing, hand and disinfection facilities, showering facilities, first aid kits, emergency eye washing stations and fire extinguishers are standard.

4.5 Diagnostic and therapeutic facilities [12]

Laboratory analytical and diagnostic services are available through the clinical units, Clinical Pathology Platform, and a number of non-clinical institutes. A comprehensive array of services is provided by experts in haematology, clinical biochemistry, cytology, histology, immunohistochemistry, microbiology, parasitology, endocrinology, serology and post-mortem examination. Many of the laboratories offering these services are accredited or certified. In addition to being used in the diagnosis of animal patients, laboratory services are used for student education and relied upon by internal and external researchers, industry and veterinary practitioners.

Description of how all students can have access to all relevant facilities

Compulsory courses[13] are organised in centrally prepared timetables, ensuring that students have access to the relevant facilities and related training content. For self learning, students can use the VetTime student calendar to register for night and weekend services in the various facilities and units – including VetFarm and TierQuarTier. During the clinical rotations all students are registered for diagnostic imaging and are monitored by electronic dosimetry. In addition, students are welcome to volunteer after consultation with the relevant facilities.

4.6 Isolation facilities

Description (number, size, species, ...) of the premises for housing isolated animals and how these premises guarantee isolation and containment of infectious patients

The VTH has isolation facilities for all common species. According to the Notifiable Disease and Epidemic Safety Plan, animals suspected to be infected must be isolated. If a notifiable disease is suspected, the responsible public health veterinarian must be informed. The Notifiable Disease and Epidemic Safety Plan is decided by the University Council based on a proposal by the Rectorate.

Small Animal Internal Medicine has three Parvo cages (11m^2) and three distemper cages (11m^2) for dogs and five cages for non-specific cases (18m^2). For cats, eight Parvo cages (11m^2), six Rhinotrach cages (11m^2) and six cages (17m^2) are available for non-specific cases. In the nuclear medicine radiation protection area, there are four boxes (116m^2) for horses, two boxes (10m^2) for dogs and five boxes (10m^2) for cats and small mammals. For the isolation of birds, reptiles or bats there are four isolation boxes and an aquaterrarium (12m^2 in total) with seven more cages (27m^2) reserved for suspected epidemics. In **Small Animal Surgery** three cages (1m^2) are available for dog isolation, as are four cages (12m^2) for cat isolation. Generally, infectious patients are kept in isolation in small animal internal medicine. Only patients with wound infection are kept in surgery. The premises for these patients are located at a distance from the general wards. Protective clothing, disinfection and a cleaning plan guarantee containment of contamination. Treating infectious patients in the ICU is avoided; in the rare event of an infectious patient being in the ICU special hygiene rules are applied. The **Obstetrics, Gynaecology and Andrology Unit** and the **Insemination and Embryo Transfer Platform** have four isolation boxes. Isolated ruminants are placed in the University Clinic for Ruminants. Isolation facilities are not restricted to isolation and containment of infectious patients but all contact to animals outside the centre is prevented. In addition, stables for pre-entry quarantine are provided. The pre-entry quarantine stable is also used to house potentially infectious large animals. It is separated from the campus by an additional fence and is directly connected to its own animal examination room with washing and cleaning facilities, its own diagnostic equipment and protective closing. Stallions for semen collection are stabled in a closed separate compartment (different from

See also Standard 4.3.
See curriculum in appendix.

the pre-entry quarantine) which has no access/connection to other stable compartments. In obstetrics, horses with abortion are stabled in a stable compartment separated from all other horses. For **wild birds and wild animals**, there is an isolation room in the porter's lodge. **Fish Medicine** does not have any isolation facilities. Two fish rooms are available for animal experiments. Fish that require individual isolation (e.g. for parasitic or bacterial diseases), are treated in their own fish tank. Each unit has its own equipment and strict fish-care rules to prevent the transmission of potential pathogens. A separate room in the basement is available for experiments with highly infectious pathogens. All rooms with live fish can only be accessed by a defined group of suitably trained persons. Cultivated fish are only sent to diagnostics and not to the clinic. These fish are already transmitted dead and do not come into direct or indirect contact with live animals. Fish with suspected or notifiable diseases are not kept. Water from the fish tanks is disinfected using a UV system. **Poultry Medicine** has six HM1500 and six HM2500 Chicken Montair isolators (state-of-the-art complete, self-contained isolator units with electrical heating system and built in ventilation system with absolute filter – 99.99% efficiency on 0.3 microns). No living bird patients are kept or treated. For animal trials with poultry, appropriate premises and isolators are available. Access is only possible through designated entrances and with a change of shoes and clothes. Forced ventilation with filters and management according to all-in/all-out principles is in place. **Ruminants and camelids** are exclusively referral patients. In order to be accepted, these animals require confirmation that they are free from both notifiable diseases and all diseases regulated by Decrees, such as bovine viral diarrhoea (BVD). If no findings are available, the animals are accommodated in the horse isolation pens until the findings are available. For all **ruminants** the isolation boxes and clinical examination rooms are shared with **Equine Surgery and Equine Internal Medicine**. There are five separate boxes of 11m^2 each. The isolation facility is situated in a different building, with separate entrances and therefore is spatially separated from the rest of the clinic stables. In front of each box, a separate room for the individual patient's equipment is part of the isolation stable. The isolation facility is fenced in to prohibit spread through trespassing. Patients in the isolation facility are only handled by authorised personnel trained in hygiene and isolation procedures (animal caretakers, veterinarians, students). A separate treatment room was also integrated into the isolation facility for horses. Owners are not allowed inside the isolation facility. The **University Clinic for Swine** has one stable with four boxes (pathology stable, 25m^2), which is only used for patients who have been referred for diagnostic killing with further examinations. The pigs never leave this stable alive. In addition, the quarantine stable (two large compartments each approx. 18m^2 and two small compartments each approx. 12m^2) is primarily used for experiments up to a maximum of BSL2. If the quarantine stable is empty, animals can be isolated there. All pigs are transported alive to the University until a disease has been diagnosed and without exception are stalled housed in the pathology stable (four boxes, see above). **VetFarm** operates on a closed-farm principle for all animal species through restocking of animals we have bread ourselves. There are no patients at the VetFarm. If necessary, quarantine pens at Hof Haidlhof can be used (for cattle and pigs).

4.7 Ambulatory Clinical

Description of how and by who field veterinary medicine and Herd Health Management are taught to all students

Teaching aspects of herd health medicine start in the curriculum in Semester 3 with clinical demonstrations (continued to Semester 8) and integrated in the courses on Applied Reproduction and Endocrinology, Advanced Endocrinology and Reproduction and Neonatology (semesters 6 & 8). In clinical rotations, students are trained in herd health management and practical skills, e.g. transrectal palpation, pregnancy diagnosis by ultrasound, blood and milk sampling, as well as herd data analysis during their visits to the VetFarm. All students have opportunities for self learning and voluntary

work at the VetFarm. Thus, all students have a thorough knowledge at the end of Semester 8. Established in 2006, now a subunit of Herd Health Management of Ruminants, the mobile clinic for Herd Health Management in Ruminants provides on-site services to farms on a regular basis. To avoid competition and conflict with local veterinarians, the latter are partners in all visits and activities related to work with farms. The mobile clinic charges for examinations and treatments. On some cooperating dairy farms, drugs are provided by the local veterinarians. In addition to the mobile clinic, the Herd Health Management of Ruminants Unit offers consultancy to farms with herd health problems. Up to three students accompany senior scientists on these consultancy visits. Farm visits are, again, made in cooperation with the local veterinarians and regional animal health services. All visits of this unit are charged according to the national fee schedule for veterinarians. On the ruminant medicine and bovine herd health management specialisation track, the students can improve their practical skills, including data analysis and herd consultancy. This includes working at the VetFarm under the supervision of the Herd Health Management of Ruminants Unit, scheduled visits to a dairy farm and visits to problem farms that asked for consultancy. The main activities performed by students on the farms are pregnancy diagnoses by hand and by ultrasound, breeding soundness evaluations, determining body condition and/or back fat thickness by ultrasound and dehorning calves. The focus of farm visits, however, is the analysis of farm data. Herd health management for pigs, poultry and aquaculture is an essential focus in the Pig and Poultry specialisation track. Initially, students are involved in stock management on premises with large numbers of animals and demonstrated examples of best practice; stock management on farm visits is part of Clinical Rotation II. In a compulsory elective subject, students also have the opportunity to receive support from practising swine veterinarians at routine farms.

Description of the vehicles and equipment used for the ambulatory clinic
See 4.8

4.8 Transport

Brief description (number, size, equipment, ...) of the vehicles used for: transportation of students (e.g. to extra-mural facilities) and transportation of live animals and transportation of cadavers/organs
The Establishment operates more than 15 cars for student/personal transport (up to 100 seats in total) for teaching and research purposes alone. One truck is also available for animal rescue or animal transport, as are trailers for tractors (e.g. for cattle and for horses). In the small animal area (incl. fish) there are enough boxes and cages in different sizes as well as hand carts. Inventory management uses two VW Golf Combis with veterinary equipment (mobile ultrasound, several on-farm tests incl. beta-carotene, BHBA, glucose and faeces tests, blood gas analyser, thermography camera, equipment for barn climate evaluation e.g. data logger and fume tests, shaker box and laptops). The ambulatory clinic has a van with space for up to nine people.
For general administrative trips (e.g. procurement of materials, farm trips), five additional vehicles (at least 15 seats) are provided in the pool. Legal requirements for vehicles used to transport people, living animals and carcasses and for the qualifications of individual drivers are met. In general, owners are expected to arrange transport for their animals. This is particularly recommended for obstetrics cases, which are always emergencies requiring that the animal be transported without delay. For horses and small animals, commercial transport companies offer emergency transport 24 hours a day and usually provide excellent service. For cadaver transport within Vetmeduni Vienna, boxes, hand carts, golf carts, trailers, forklifts with tubs, plastic bags and barrels of various capacities are also used. In principle, cadavers are only transported out of the University and disposed by special disposal companies.

4.9 Biosecurity

Description of how (procedures) and by who (description of the committee structure) changes in facilities, equipment, biosecurity procedures (health and safety management for people and animals, including waste management) good laboratory practices and good clinical practices are decided, communicated to staff, students, stakeholders (and, if appropriate, to the public), implemented, assessed and revised

Concerning the procedure for changes and developing in facilities and equipment, see 4.1.

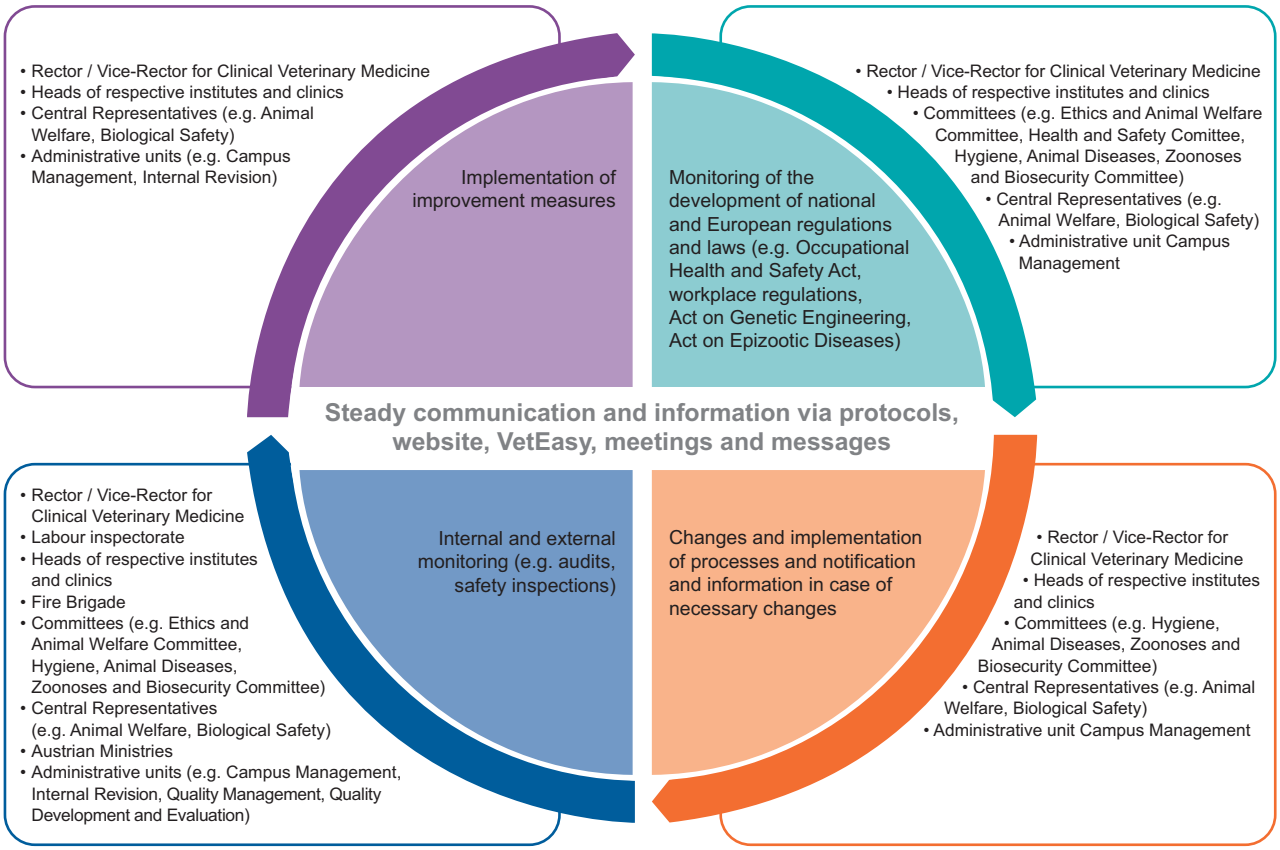

Figure 5 PDCA Cycle Biosafety and Biosecurity

The Establishment follows the strict environment, safety and biosecurity procedures and regulations required by legislation. The safety measures in all relevant areas (e.g. laboratories, dissection and post-mortem halls and isolation facilities) are in accordance with Austrian safety regulations and the Labour Inspectorate inspects them several times a year. Each department has appointed safety and environment officers[14] among the academic and technical staff. All relevant safety protocols are posted in the relevant facilities, and students receive instruction in the safety procedures prior to working in such areas. All employees have to take part in yearly compulsory occupational health and safety training (including fire safety, protective clothing [PSA], high-risk persons). The prevention forces hold the training personally, and the training material is available as e-tutorials. For 2019/20 regular training courses cover topics such as waste and poison are in development. All chemical substances used are registered in a database on VetEasy and linked to the current safety data sheets. The laboratory regulations are handed out to everyone working in a lab and have to be documented by signature. Students are instructed repeatedly (both orally and in writing) in how to handle hazardous and infectious material, including personal hygiene and handling dangerous patients. In all cases, in-

[14] See appendix.

structions are given prior to the beginning of each course. In some units, students have to sign the safety instructions. Work with GMOs (contained use) requires official approval. All project applications involving GMOs are stored centrally. The Biosafety Committee, composed of two internal members, one external member and a Biosafety Unit, advise and monitor all relevant activities. Applications for the intended use of (hazardous) biological material are stored centrally, and the occupational health practitioner is informed of all hazardous biological material used. Waste disposal is legally regulated in the Austrian Waste Management Act (AWG 2002) with its Decrees and Austrian national standards. The Campus Management Unit is responsible for the overall coordination of waste disposal. Internal waste is disposed by the staff of the respective organisation, the cleaning staff or centrally by Campus Management. The basic rules are as follows: **(1) household waste** is separated into plastic, glass, metal, paper and landfill waste; **(2) medical waste** is separated into orange hospital waste bags, yellow bins and sharps bins; **(3) infectious biological waste** is disposed of in special containers (black bin). These containers are taken to the central collection point and handed over to the external waste disposal service; **(4) GMOs** are autoclaved before disposal according to the respective SOP and then disposed of as medical waste; **(5) animal cadavers and material of animal origin** is temporarily stored in containers in cold rooms or refrigerators or immediately disposed of in the large animal carcass container in the cold store (pathology). The containers are collected weekly by the animal cadaver recovery service; **(6)** infectious (or GMO) animal materials from the **quarantine stable** (pigs) is disposed of separately from the other animal materials in a separate disposal process; **(7) emergency disposals** are carried out according to urgency by the Dangerous Goods Unit; **(8) non-hazardous and uncontaminated farmyard manure** is collected in containers, removed and reused as fertiliser in agriculture; **(9)** all **waste water** is pre-treated by the in-house wastewater treatment plant and fed into the municipal wastewater treatment plant for further processing. Waste water from medical areas that may have been contaminated with infectious material is first treated in special thermal wastewater disinfection plants and then fed into the in-house wastewater treatment plant; **(10) radioactive substances** must be stored in the decay chamber and reported to the Radiation Protection Unit; **(11) formaldehyde residues from clinical and research areas** are disposed of as medical waste or as pharmacy waste, depending on their concentration. Formaldehyde residues from anatomy (tubs) are handed over to the disposal service in waste drums; **(12) expired medication and medication residues/breaks** are disposed of as medical waste (yellow bin, smaller quantities also in sharps bins); **(13) cytostatic waste** is heat sealed and disposed of as infectious waste; **(14) chemical waste** is sorted according to the SDS and GHS labels and handed over to the disposal service. Depending on the type of waste, university disposal is performed by external disposal service providers. The **waste disposal company** is selected via the Austrian federal tender procedures of the Austrian Federal Procurement Agency (BBG), the body which checks the companies' professional competence. The Waste Officer is responsible for organising and monitoring this.

The Establishment's manual for biosecurity, good laboratory practices and good clinical practices must be provided as appendix (with a summary in English).

Comments on Standard 4

- Maintaining the infrastructure at a high and safe level will result in greater maintenance needs in the future. In the current Performance Agreement with the BMBWF, a corresponding infrastructure agreement has been concluded, which is intended to ensure appropriate financing on a sustainable basis.
- Construction of the new University Clinic for Small Animals considers the requirements of students, patient owners and staff of Vetmeduni Vienna equally. In the future, units of this clinic, which were previously distributed across multiple locations, will be able to guarantee intensive, practice-based training of students on patients and optimum, high-quality care for small animal patients in a single facility. The biosecure spatial concept of the new clinic guarantees a strict spatial separation of infectious and non-infectious patients. The guidelines for the Cat Friendly Clinic certificate were also included in the planning. A single point of entry serves not only as a central first point of contact, but also as a hub, and guarantees short distances to the remaining external clinical units. In addition to a 24/7 emergency admission, an ICU and the Ambulatory Centre are planned for the ground floor. The individual stations will be located on the upper floor, with normal inpatient and isolation areas separated. On the top will be a modern surgery centre including ste rilisation and anaesthesia centre for the entire small animal clinic.
- An expansion of EMAS activities is planned, for example for the VetFarm and the WSC. The Vetmeduni campus was already successfully certified at the beginning of 2019.

Suggestions for improvement on Standard 4

- Establishment of loose-housing systems for ruminants on campus in the near future.
- The plan is to reduce the number of horses kept on campus in order to minimise pollutant load and to provide the animals with an adequate environment. Therefore, some of the horses have already been accommodated on the VetFarm. In a four-week rotation the horses owned by the University are exchanged between campus and the VetFarm in order to keep the number of horses on campus as low as possible and to give the animals a rest.

Standard 5: Animal resources and teaching material of animal origin

Factual information

5.1 Strategy and procedure

Description of the global strategy of the Establishment about the use of animals and material of animal origin for the acquisition by each student of Day One Competences (see Annex 2)

Vetmeduni Vienna is committed to using animals for teaching and research purposes exclusively with the required special animal welfare approval and this is coordinated with the relevant internal and external regulatory authorities according to EU Directive 2010/63.

The clinics are committed to providing state-of-the-art hands-on clinical training and research-based undergraduate and postgraduate education, thus ensuring responsible care of animal patients and providing excellent emergency care around the clock. The clinics are organised by animal species, with sufficient patient numbers and resources for undergraduate and postgraduate training. This supports the strategy of teaching animal treatment and care as a whole. All patients are included in undergraduate and postgraduate teaching and in research, which is communicated to the public via the Order of Establishment. From 2018, informed consents by patient owners are documented in the AHIS to ensure that animals, cadavers and material of animal origin can be provided for student training and for research. During their clinical training, students play an active part in consultation and hospital rounds. To ensure that DOC are trained with full respect for animal welfare, Vetmeduni Vienna is constantly seeking teaching innovations. In the skills lab (VetSim) different simulators are used to develop the students' skills. Students also receive case-based and hands-on clinical training at internal (e.g. VetFarm, RWC Wieselburg) and external partner institutions (e.g. Graf Lehndorff Institute, TierQuarTier Wien), where students are guided and supervised by clinicians. Students also accompany herd health visits via the mobile clinic and the herd health management unit, and go on field visits during clinical rotation and EPT in veterinary practices. On the specialisation tracks, students expand their knowledge and DOC. To meet the increasing need for specialised large animal practitioners, the University works closely with practitioners in different regions in rural Austria. The strategic aim of Vetmeduni Vienna is that animals and animal material reflect the diversity of animal patients treated in the clinics[15] and examined in pathology. Necropsy caseload is further increased by referral cases to the Institute of Pathology.

Description of the specific strategy of the Establishment in order to ensure that each student receives the relevant core clinical training before graduation, e.g. numbers of patients examined / treated by each student, balance between species, balance between clinical disciplines, balance between first opinion and referral cases, balance between acute and chronic cases, balance between consultations (day patients in the clinic) and hospitalisations, balance between individual medicine and population medicine

To ensure adequate training in DOC, a list of skills and diseases has been developed and coordinated with all relevant units and stakeholders. The number of patients is considered sufficient for teaching and research in all clinics, taking into account a balance between complex referral and first-opinion cases. Collaboration with the above-mentioned partners significantly extends the first-opinion cases available to students. For large animals, this is also provided by cooperation with external practitioners and farms. Caseload in the different clinics is evaluated on a regular basis.[16] Room for improvement in student training is discussed with the heads of the clinical units and relevant actions are

[15] See tables 5.1.2 and 5.1.3.

[16] Check four times yearly via the AHIS system through VRR, see 5.1.4. Also numbers are collected for the Intellectual Capital Report and Annual Report.

taken. All students are trained on all relevant domestic animal species. This includes clinical cases (individual and herd health medicine) with both referral and first-opinion cases. In addition to hands-on training, the theoretical background of cases is considered and discussed. In the curriculum, clinical training is mostly part of the teaching module on Propaedeutics and Clinics, supplemented by Laboratory Diagnostics in Veterinary Medicine, and Herd Health Management and Reproduction. Clinics and institutes are responsible for providing adequate practical training which is regularly evaluated by both students and lecturers. Clinical rotations are organised in small groups of up to eight students which rotate between clinics/institutes on a fixed schedule. Within the clinics/Institute of Pathology, these may be subdivided into smaller groups, supervised by clinical lecturers.

Description of the procedures developed to ensure the welfare of animals used for educational and research activities

At Vetmeduni Vienna, all projects in which animals are used in a way that goes beyond medical treatment and care or observation are based on good scientific practice as approved by the in-house Ethics and Animal Welfare Committee (EAWC). This committee assesses the applications submitted from a legal, statistical and scientific point of view and its main role is to advise on how best to implement the 3Rs (refinement – reduction – replacement). One of the EAWC's central objectives is to promote the "4th R" (responsibility) at university level, including a "culture of care" of animals used in teaching and for scientific purposes. For this purpose, the EAWC also offers project-independent or individual consulting and information services on request. The extended EAWC performs the tasks of the Animal Welfare Committee established pursuant to §21 of the Austrian Animal Testing Act (TVG 2012). As a user, Vetmeduni Vienna places former laboratory animals, in particular practice animals, in private care after use, provided that the conditions defined in the TVG 2012 are fulfilled. The University, with the participation of the EAWC, has drawn up a handover programme including model handover contracts. In accordance with the 3R principles, researchers are continually requested to provide samples of animal materials that are no longer needed for a project to the VetBioBank to be archived and made available to interested researchers in accordance with the conditions of use of the VetBioBank Access Committee; thus they contribute to reducing the number of animals killed for research purposes.

Description of how (procedures) and by who (description of the committee structure) the number and variety of animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Based on patient numbers and spatial capacity, Vetmeduni Vienna negotiates the annual number of study places to be allocated for a three-year period with the BMBWF and provides it with the annual performance report. The institutes and clinics are responsible for the animals owned by Vetmeduni Vienna and for sufficient patient material for pre-clinical and clinical training to comply with the EAEVE guidelines. The number and type of patients or animal material as well as the financial income are regularly monitored by the Controlling unit and reported to the VRR. Deviations are analysed and discussed with the responsible clinic management or department heads, and appropriate measures are implemented (e.g. increase in personnel resources, price increases, closer communication with referring veterinarians, agreement on targets for ensuring sufficient patient numbers in the staff appraisal interview). Feedback and development also happen in direct exchanges between students and supervisors or lecturers, through course evaluations and discussions in the EWG or with the CuCo.

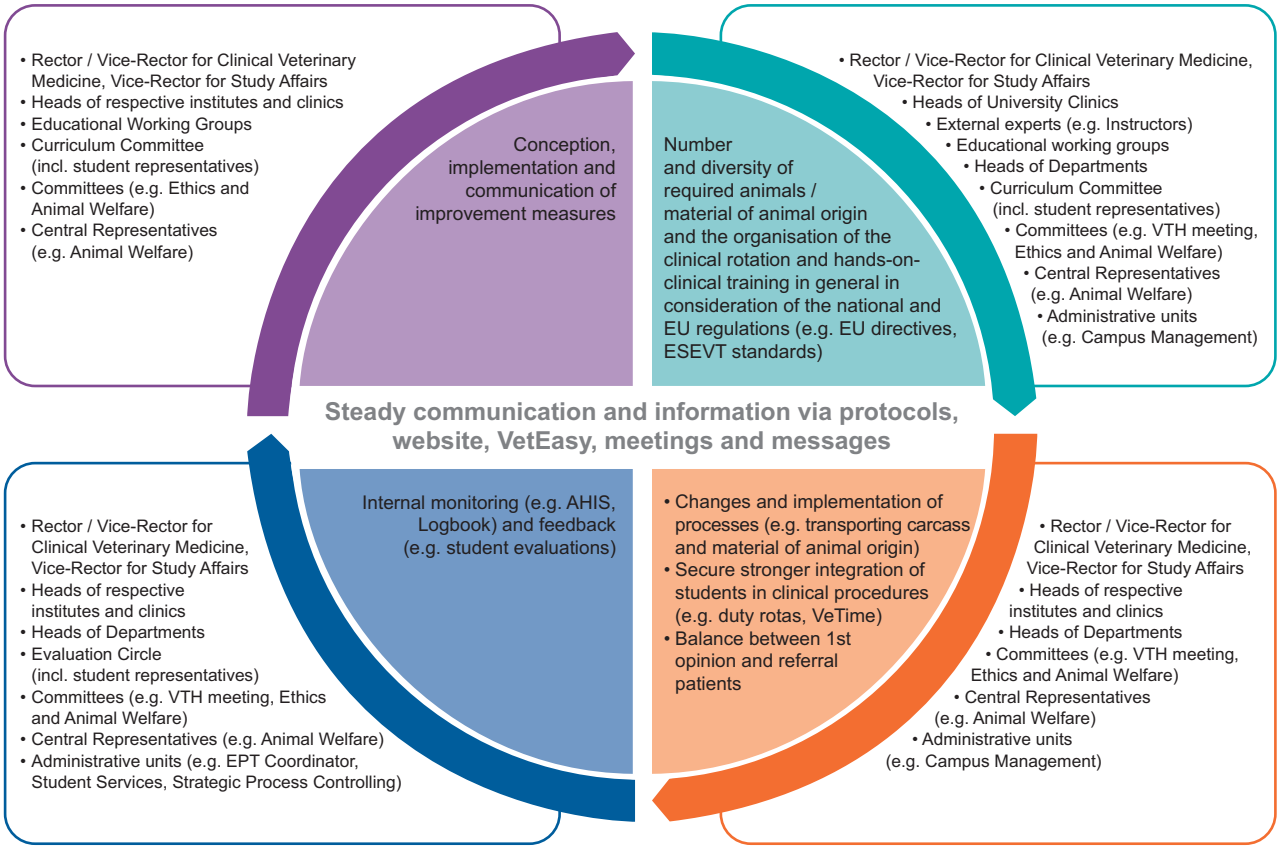

Figure 6 PDCA Cycle Number and variety of animals and material of animal origin for pre-clinical and clinical training

Description of how the cadavers and material of animal origin for training in anatomy and pathology are obtained, stored and destroyed

Anatomy: The Establishment obtains its cadavers and material of animal origin for training mainly from internal sources. Companion animals are purchased through the University Clinic for Small Animals, other animal species or body parts (including horses, cattle, pigs, sheep, goats and poultry) through the Institute of Pathology. Rather seldom purchasing is done via the VetFarm (ruminants), the University Clinic for Swine, the Institute of Parasitology or externally for sheep and chickens. Laboratory rats and mice are purchased from Institutes of the Vetmeduni Vienna that breed these animals. Small animals are initially stored in the clinic itself and then transferred promptly to Anatomy. Storage is in formaldehyde or frozen. Formaldehyde-poor teaching must be ensured by 2024. Initial deliberations regarding implementation are currently underway. The Institute of Pathology is responsible for disposal.

Pathology: Most of the material used for teaching (e.g. organs or tissue samples) originates from the VTH. Materials are also accepted from external partners (veterinary practices or private individuals). The carcasses are stored from arrival to post-mortem examination in a refrigeration room dedicated to this purpose. Organ parts intended for exercises to be done days later are stored in this refrigeration room as well. Some of the animal carcasses delivered from external sources (in cases when, on consultation with the senders, timely diagnosis is not required) are kept in freezers so that sufficient material is available at all times for section exercises. Disease-proof disposal is done by an external company, ebswien tierservice. The animal carcasses and body parts are deposited in containers provided by the company, which are collected regularly. Alternatively, after autopsy, if explicitly requested by the owner, small animal carcasses are handed over to an animal burial or cremation company. In certain cases, organs or body parts of necropsy cases are also handed over the Institute of Topographic Anatomy or other clinics or institutes of the Vetmeduni for teaching and research purposes. Carcasses and body parts are never returned to private persons.

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

Species	2018	2017	2016	Mean	Further remarks
Cattle	2	6	6	4.7	Calves
Small ruminants	1	1	1	1	1 goat, 1 sheep
Pigs	6	6	6	6	
Companion animals	36	30	32	32.7	dogs, cats
Equine	3	3	3	3	
Poultry and rabbits	12ch/4r	6ch/4r	6ch/4r	8ch/4r	ch=chicken r=rabbits
Aquatic animals	0	0	0	0	
Exotic pets	0	0	0	0	
Other (specify)	24 mice 6 rats 2 hamsters 4 guinea pigs	4 mice 6 rats 4 hamsters 4 guinea pigs	4 mice 6 rats 4 hamsters 4 guinea pigs	10.7 mice 6 rats 3.3 hamsters 4 guinea pigs	
Other materials and other media used in practical anatomy training					
Live animals	5	5	5	5	horses, cows
Organs or animal parts of horse, ruminants, pigs, dogs, cats and chicken	standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students	standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students	standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students		e.g. hearts, intestines, brains, forelimbs, hindlimbs, joints, embalmed material, PEG-impregnated material or plastinates, frozen and thawed material, teeth including sections of teeth
Bones and skeletons					
Whole skeletons	2 horses 2 dogs 1 pig 1 cow 1 sheep 3 chickens	2 horses 2 dogs 1 pig 1 cow 1 sheep 3 chickens	2 horses 2 dogs 1 pig 1 cow 1 sheep 3 chickens	2 horses 2 dogs 1 pig 1 cow 1 sheep 3 chickens	
Whole forelimb skeletons	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students		
Whole hindlimb skeletons	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students	horses, dogs, small ruminants, pigs: 1 per 6 students cows: 1 per 50 students		

Species	2018	2017	2016	Mean	Further remarks
Single bones and mounted bone specimens (e.g. carpus/tarsus, spine)	horses, dogs, cats, large and small ruminants, pigs, chickens: standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students	horses, dogs, cats, large and small ruminants, pigs, chickens: standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students	horses, dogs, cats, large and small ruminants, pigs, chickens: standard 1 per 6 students, in some cases 1 per 12 students or 1 per 3 students		
Anatomical sections (plastinates or PEG-impregnated specimens)	30	30	30	30	
Casts and corrosion casts (e.g. diverticulum tubae auditivae, arteries, articular cavities)	20	20	20	20	
Models bought or home-made models of organs or animals	10	10	10	10	e.g. ear, whole animals with removable inner organs
Models mounted into real anatomical specimens (e.g. model of brain sinuses mounted in skull)	10	10	10	10	
Rubber or plastic models moulded from real specimens (e.g. brain, brain stem)	15	15	15	15	
Radiographs	100	100	100	100	
Anatomical plates	approx. 150	approx. 150	approx. 150	150	
Ultrasound machine	1	0	0	0.3	
Electronic resources					
Interactive e-learning programmes (CASUS cases, interactive atlases)	3	approx. 20	approx. 20	14.3	
Videos (made at Vetmeduni and by colleagues from other faculties of veterinary medicine)	7	approx. 50	approx. 20	25.7	
Plus provision of handouts, texts, additional images and similar material, etc.					

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

Species	2018	2017	2016	Mean
Cattle	106	106	106	106
Small ruminants (incl. calves, sheep)	126	126	126	126
Pigs (incl. sows)	195	228	296	240
Companion animals (dogs)	18	18	18	18
Equine	66	62	63	63
Poultry & rabbits	50	45	31	42
Exotic pets (reptiles)	4	4	4	4
Others:				
Fish	201	168	79	149
Birds	57	67	67	64
Bulls Ruminant Medicine Track	90	90	90	90
Boars	200	200	200	200
Sows obstetrics, and Insemination and Embryo Transfer Platform	500	500	500	500

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

Species	2018	2017	2016	Mean
Cattle	502	524	466	497
Small ruminants	157	170	141	156
Pigs	203	197	159	186
Companion animals	37,966	39,245	40,821	39,344
Equine	4,865	5,158	4,859	4,960
Poultry & rabbits	845	1,030	945	940
Exotic pets	879	844	938	887
Others				
Birds	2,389	2,932	2,412	2,577
Alpaca	1	6	2	3,00
Camelids	178	135	125	146
Camels	0	1	0	0,33
Llamas	2	1		1,5
Fur-bearing / wild animals	197	271	350	273

The number of patients listed in tables 5.1.3 and 5.1.4 reflect the total number of animals treated in the clinics or present on visited premises. It includes all cases of ambulatory and inpatient services provided by at least one clinical unit during the selected period. If services have been entered for a case by several clinical units, this case is counted several times as a patient contact, namely for each clinical unit that entered services for the case, such as medication or prescription. Not all of these patients can be individually examined and treated by a student.

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

Species	2018	2017	2016	Mean
Cattle	199	221	215	212
Small ruminants	70	105	145	107
Pigs	684	877	800	78
Companion animals	2,233	2,315	1,920	2,156
Equine[20]	0	0	0	0
Poultry & rabbits	0	0	0	0
Exotic pets	0	0	0	0
Others (specify)				
Wild birds	0	1	0	0.33
Fur-bearing / wild animals	3	5	6	5
Rodents	289	353	168	270

Only numbers from the VetFarm and TierQuarTier are taken into account.

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

Species	2018	2017	2016	Mean
Cattle	9	5	8	7
Small ruminants	60	50	33	48
Pigs	24	22	18	21
Companion animals	67	68	71	69
Equine	46	42	46	45
Rabbits	76	77	82	78
Exotic pets	74	73	81	76
Others				
Birds	96	93	94	94
Alpaca	100	33	50	61
Camelids	43	40	36	40
Llamas	50	100		75
Fur-bearing / wild animals	93	94	95	94

All animals in the TierQuarTier Vienna come either via the animal rescue and / or the municipal / public health veterinarian – therefore 100% first-opinion is assumed and the VetFarm ambulatory clinic takes 100% first-opinion patients. There are no first-opinion poultry patients, therefore only rabbits are included

[20] All treated internally at the Equine University Clinic, see Table 5.1.3.

Table 5.1.6. Cadavers used in necropsy

Species	2018	2017	2016	Mean
Cattle	135	162	136	144
Small ruminants	66	90	54	70
Pigs	185	143	141	156
Companion animals	380	426	413	406
Equine	157	178	151	162
Poultry and rabbits	53	80	55	63
Aquatic animals*	201	168	79	149
Exotic pets	128	139	146	138
Wild ruminants	285	242	241	256
Hares	225	360	166	250
Foxes	241	108	87	145
Wild boars	103	134	76	104
Wild birds	284	193	126	201
Other wild animals	241	214	314	256
Zoo animals (mammals)	83	59	93	78
Zoo animals (birds)	139	69	56	88
Zoo animals (reptiles)	35	22	34	30
Zoo animals (amphibians)	15	24	59	33

*Rainbow trout and carp

Table 5.1.7. Number of visits to herds/flocks/units for training in animal production and herd health management

Species	2018	2017	2016	Mean
Cattle*	190	190	190	190
Small ruminants	5-10	5-10	5-10	5-10
Pigs	48	42	43	44
Poultry	47	51	69	56
Rabbits	0	0	0	0
Aquatic animals	0	0	0	0
Other:				
Cattle specialisation tracks	106	106	106	106
Cattle skills lab	28	28	28	28

* Excluding specialisation track

Table 5.1.8. Number of visits to slaughterhouses and related premises for training in FSQ[21]

Species	2018	2017	2016	Mean
Ruminant slaughterhouses	26	25	25	25
Pig slaughterhouses	20	24	24	23
Poultry slaughterhouses		1		1
Related premises*	7	8	5	7
Other (specify)**	5	4	5	5

*Premises for the production, processing and distribution or consumption of food of animal origin.
** Premises for the production, processing and distribution or consumption of food of plant origin or animal feed.

[21] For visits to slaughterhouses during Tier 1, seven students and one teacher per visit.

5.2 External training sites

Description of the organisation and management of the external sites (teaching farms, ...) and the involvement of students in their running (e.g. births, milking, feeding, ...)

Vetmeduni Vienna operates the VetFarm teaching and research facility. The VetFarm consists of the main site at Kremesberg (dairy cattle), the Medau farm (piglet production, pig and sheep breeding), the Haidlhof farm (research projects of the Equine Clinic, the Messerli Research Institute and the University of Vienna: horses, birds, pigs) and the Rehgras farm (calf rearing).

VetFarm has around 260 hectares of arable and grassland. Training horses which are not needed on the Vetmeduni Vienna campus are temporarily accommodated on VetFarm farms. All facilities provide enough space for students and supervisors to work in groups. Beside common veterinary equipment such as ultrasound, dairy and pig barns are equipped with precision livestock farming technologies, such as accelerometer systems and video cameras, which are demonstrated to the students. The Medau, Kremesberg and Haidlhof farms have a comprehensive technical research infrastructure, in particular a single feed line with 20 feeding spaces for cattle and a single feed line for 72 fattening pigs in the test stable at Medau. VetFarm is a national pioneer in smart farming. The cattle and part of the pig herd are equipped with state-of-the-art sensor technology for recording biometric data. The existing IT systems (herd management, feeding, performance monitoring, fertility management, etc.) are used to present future-oriented technologies to the students. Academic supervisors from several clinical units and institutes come to the VetFarm to offer students practical training, including animal genetics and husbandry, housing techniques, animal health, animal welfare, animal feeding and animal hygiene. The Herd Health Management for Ruminants Unit is permanently located at the VetFarm. Two veterinarians are assigned to this unit, the VetFarm, and the University Clinic for Swine, respectively, and are involved in clinical teaching and interdisciplinary coordination of teaching activities. Besides the practical training in handling and managing farm animals, all students are involved in the routine work and their running (e.g. disbudding, milking techniques, feeding and data analysis).

5.3 Nursing and clinical training involvement of students

Description of how and by who the nursing care skills are implemented and taught to undergraduate students

Initial skills are trained in the Animal Handling and Care course during semesters 1 and 2 in cooperation with lecturers from the Institute of Animal Welfare Science and clinical academic staff. It contains special exercises to get experience in handling of treatments, care and monitoring of patients. Students gain and improve nursing skills on later courses such as Ambulatory Clinical I and II as well as on clinical rotation. These skills are mainly trained under supervision of clinicians on duty. In addition, there is an elective course in which students from earlier years of the curriculum can get involved in clinical work during night and weekend shifts. Before students start working in the clinics, they attend introductory events with guided tours (rooms, work instructions, safety measures, fixation of animals, hygiene) given by the responsible lecturers. Students are inducted in handling both healthy and sick animals appropriately.

Description of the group size for the different types of clinical training (both intra-murally and extra- murally) to guarantee hands-on training of all students

The group size on courses takes into account the requirements of the individual disciplines and spatial conditions. The aim is to create a timetable that does not overlap. In semesters 1 to 7, the minimum small-group size is five persons; in Semester 8 a small group consists of a minimum of ten students.

Table 5A Types and group sizes clinical training

Types of clinical training	Group sizes
General Propaedeutics	5 students
Special Propaedeutics	5-20 depending on field
Clinical Rotation I/II	2 students in the ICU / Emergency Ambulatory Clinic or night service Otherwise 4-8 students
Ambulatory Clinical I/II	2 students
Internships	1-3 students
Extra-mural practical training	3-8 students

Description of the hands-on involvement of students in clinical procedures in the different species, i.e. clinical examination, diagnostic tests, blood sampling, treatment, nursing and critical care, anaesthesia, routine surgery, euthanasia, necropsy, report writing, client communication, biosecurity procedures, ... (both intra-murally and extra-murally)

Intra-mural

At the beginning of clinical training, students are introduced to the code of conduct. This includes protective clothing, biosecurity procedures and specific organisation of the respective clinic/institute. This information is available in written form on Vetucation®. Where appropriate (e.g. during on farm visits, when entering or leaving isolation facilities, necropsy rooms), specific biosecurity procedures have to be performed according to the instructions of the Notifiable Disease and Epidemic Safety Plan. After initial training of clinical skills on simulators in the skills lab, VetSim (e.g. endotracheal intubation, intravenous catheterisation, suturing techniques, blood sampling, setting up anaesthetic machine, use of anaesthesia monitoring equipment, aseptic preparation and scrubbing), students are integrated in the routine clinical work and are required to carry out all hands-on procedures under the guidance and supervision of clinical lecturers. Student groups are assigned to the different services and become involved in daily medical care including surgery, intensive care, anaesthesia, reproductive procedures, the management of emergency cases and hospitalised patients. They get involved in client communication, reviewing the medical history, writing case reports, clinical examination, diagnostic and therapeutic procedures, developing diagnostic plans, treatment plans and documentation. Students are trained in reproductive and obstetrics treatments, including caesarean sections and castrations. Eventually, students take part in decision-making and carrying out euthanasia where necessary. In the farm animal clinics (ruminants, pigs, poultry), students are involved in farm visits, the herd health service and herd investigation including necropsies, diagnostic and laboratory tests. Students participate in several farm visits during their clinical rotation and on a weekly basis during their specialisation track within the farm animal sector (RM, PPM) and veterinary public health (FSQ and VPH). As far as pathology is concerned, the students first learn and practice the technique of animal necropsy and the basics of organ evaluation. They are then able to interpret post-mortem findings and bring them into line with the preliminary clinical report. Finally, the students participate in everyday diagnostic pathology for one week in small groups, conducting necropsies independently (under supervision), collecting macroscopic and histological findings, interpreting them and summarising them in a report.

Extra-mural

Extra-mural training (EPT) in various compulsory courses is always supervised by a teacher from Vetmeduni Vienna. Therefore, student involvement is the same as in intra-mural training. Only veterinary practitioners or university-approved instructors are allowed to offer extra-mural practical training in Austria. To ensure that all such training qualifies, the Vetmeduni Vienna offers specific guidelines that list and explain all hands-on learning targets of the ESEVT. For the 10-week EPT, a

logbook has to be filled in by the extra-mural supervisor. From summer 2019, student evaluation of the practical period of EPT is compulsory. Hands-on goals include specific examination techniques and injections, orthopaedics, cardiology, skin diseases, gastrointestinal diseases, communication with the owners, and nursing.

Description of the procedures used to allow all students to spend extended periods in discussion, thinking and reading to deepen their understanding of the clinical case and its management

Students deepen their critical thinking and understanding of case management in several problem-based learning courses that include training in the skills lab, VetSim, clinical rotation, clinical demonstrations, seminars and other lectures, as well as the specialisation tracks. This is extended by case presentations and the discussion of relevant scientific publications in journal clubs. These courses are supervised by clinicians with the respective qualifications. Students are thus involved in clinical rounds and participate in the internal discussion of cases in the various clinical units. Special e-learning tools (e.g. CASUS), interdisciplinary courses and courses in communication skills complete the learning programme. During clinical training, students are made responsible for specific cases which they have to present to other students and clinicians. These presentations emphasise diagnostic strategies, differential diagnosis, pathogenesis, prophylaxis and treatment of the relevant case. In addition, students get access to specimens and diagnostic findings from pathology and different laboratories, which they have to discuss with clinical lecturers. They discuss their own reports with their peer group and supervisor, to encourage critical clinical thinking. All relevant literature on special diseases, management, nutrition and hygiene, is available via the University Library.

5.4 Medical record system

Description of the patient record system, its completion, its availability to staff and students and how it is used to efficiently support the teaching, research, and service programmes of the Establishment

Since 2001 all patient files have been administered in an electronic data system, called AHIS[22]. The software, ORBIS VetWare, is based on technology by ORBIS® (Agfa Healthcare). The system is used to register and retrieve patient records and handle sample administration for the diagnostic facilities. AHIS is used in all university clinics except the Clinic for Poultry and Fish. For poultry a lab information system, LDB, is used. For fish, parts of the data are covered by AHIS, while parts are collected in an Excel file and related protocols. All patient data is available at about 600 PCs on the campus. During clinical training, students have access to AHIS with student accounts. This makes it possible to check the list of appointments with patients, prepare students for cases either before they get in contact with a specific animals or as interesting examples to fill up their case logs. Concerning inpatient management, administration of stables and wards, AHIS provides precise, up-to-date information concerning the admitted patients and easy access to their medical records. Patient records encompass all kinds of documentation, including registration, case history, daily findings, diagnosis, prescriptions, laboratory, surgical and treatment reports, as well as data sheets for specific examinations. During their clinical rounds with clinicians, students examine patients and record this in AHIS. The data entered is verified and discussed, requests are sent to care providers as soon as the requested examination has been carried out, the validated result is sent back and of course authorised students have immediate access to those results. Diagnostic images are archived in PACS, which is linked to the electronic patient records. A new interface between AHIS and the veterinary multimedia database, Vetmediathek, was established in 2018, giving students access to additional patient content (especially

[22] The German designation is “TIS” and stands for Tierspitalsinformationssystem.

pathology images). Moreover, AHIS facilitates the registration of services and financial processing. Whenever possible the system generates the assigned services automatically by opening an examination protocol and choosing specific entries. Services and medicines can also be chosen from the appropriate catalogue, from which students learn about the costs. Various other medical and administrative reports can be generated in AHIS and developed in house when needed. Before using these reports, students learn to reflect on the questions they are interested in and the specific results they are looking for. Searching for specific diagnoses may deliver different outcomes than when searching for other parameters. Reports are an important not only in problem-based learning, but also for providing data to our students and scientists for different research activities.

Comments on Standard 5

- The number of animals and materials of animal origin is sufficient for pre-clinical and clinical training. Vetmeduni Vienna strives to maintain these numbers and continuously checks if the number and variety of cases are still sufficient and appropriate for teaching purposes.
- Animal welfare is a major concern. Therefore, the University aims to keep the number of animals used in initial skills training to the necessary minimum and increase the use of e-learning and lab dummies. Vetmeduni Vienna therefore endeavours to constantly involve students from the various semesters in the clinical routine of the VTH throughout the year.

Suggestions for improvement on Standard 5

- Vetmeduni Vienna is continuously improving AHIS, particularly for recording the number of patients seen and treated by students. The aim is to provide more accurate statistics.
- The use of formaldehyde in teaching needs to be improved. Legal foundations regarding the use of formaldehyde have been changed. Formaldehyde has to be eliminated as far as possible from processes at the Vetmeduni Vienna. The Establishment has already agreed to a catalogue of mea sures to become formaldehyde-poor until 2024.

Standard 6: Learning resources

Factual information

6.1 Strategy and procedure

Description of the general strategy of the Establishment on learning resources

The University's strategic objective is to ensure that learning resources (physical and virtual) offer excellent education and research opportunities for students and employees. These resources include library services, IT provision and teaching rooms. A well-stocked university library, an extensive eduroam Wi-Fi network, wide-ranging e-learning provision (including CASUS, Vetucation®, and an audience response system, KLICKER), comprehensive IT systems including VetmedOnline and a content management system (CMS) are all in place. A university archive (currently at the planning stage) will extend this provision. The priority is to enable students to self-assess and create case-based learning materials to foster student-centred and competence-based learning. This is supported by offering student and staff access to e-learning and IT systems from on and off campus at all times.

Description of how the procedures for access to and use of learning resources are taught to staff and students

Students are offered a variety of supporting elements: a welcome package (Erstsemestrigenmappe), an administration platform (VetmedOnline), the university website including a list of all links to the information systems, several IT Services (e.g. e-mail, cloud service) e-learning courses, an e-learning website (Vetucation®), video tutorials and FAQs. Staff can regularly undertake IT and e-learning training through the Staff Development Unit. The E-Learning & New Media Unit and IT Services also assist with individual queries. At the beginning of the semester in October, students can participate in library tours, held daily. Training sessions for students and employees, and a short introduction to the search engine vetmed:seeker are offered during opening hours. Internal and external instructors offer training on specific topics throughout the year. A Long Night of Learning was organised in co-operation with the Student Union for the second time in January 2019. The curriculum for the Diploma Programme in Veterinary Medicine includes an obligatory course on research, copyright and reference management. Since 2018, this is also offered as a virtual online course.

Description of how (procedures) and by whom (description of the committee structure) the learning resources (books, periodicals, databases, e-learning, new technologies) provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Decisions on introducing major campus-wide systems and technologies are made by the Rectorate upon recommendations given by project teams, usually consisting of experts from the specialist departments involved and from IT Services. The procedure for logging new requirements is defined and explained in an internal guidance note on IT requirements management. Innovations are approved by the commissioning department or competent decision-making body (e.g. IT Steering Committee). Tutorials and user documentation are adapted in parallel with this process. Information about IT changes is disseminated via different channels in various ways (e.g. social media, direct personal e-mails, website, e-learning platform and VetEasy). Telephone helplines are installed to address questions about central e-learning and IT resources.

Stock selection and deselection in the University Library is regulated by a Collections Policy based on the current needs of researchers, teaching staff and students. All literature orders relating to print or electronic media are managed by the University Library. Library coordinators in the organisational units liaise with the University Library on acquisitions. Students and staff can submit requests to purchase new monographs online. Library specialists in the University's research areas acquire new publications. Regular updates about new acquisitions are published on the website. Nearly all the

monographs held can be borrowed. E-resources can be activated using vetmed:seeker, the e-journal library EZB or the Database Information System DBIS. Members of the University (including students) can use a dedicated remote access service (EZproxy) to access e-resources (e-journals, e-books and databases) off campus.

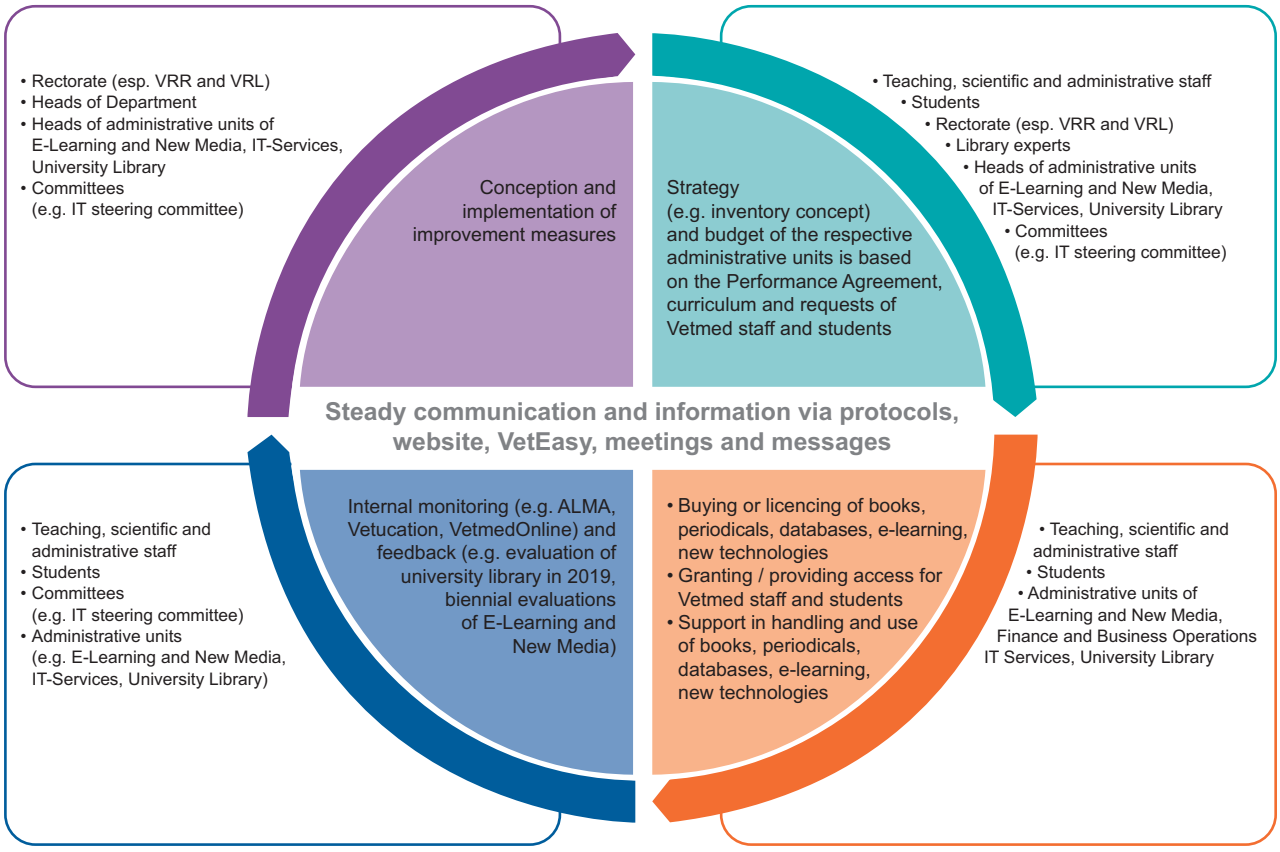

Figure 7 PDCA Cycle Learning Resources

6.2 Library and IT Services

Brief description of the main library of the Establishment / Brief description of the subsidiary libraries (if any); staff (FTE) and qualifications; opening hours and days; annual budget; facilities: location in the campus, global space, number of rooms, number of seats; equipment: number of computers, number of electrical connections for portable PC; software available for bibliographical search

The University Library is a central service provider of electronic and print media, learning facilities and modern computers. The library currently employs 14 FTE, well-trained, staff members and is managed by a head and assistant head librarian. It is the only library in Austria that collects and catalogues books, magazines and other materials specific to the field of veterinary medicine. All are listed in the library catalogue and in vetmed:seeker. The annual budget of the University Library in 2018 was €1,643,619.91. The main library is open from Monday (8:30 am to 10 pm) through to Saturday (10 am to 3 pm) during the semester. The main library also manages around 40 satellite libraries, located at different units and departments, which define their own opening times. Typically, these libraries comprise 30 m² each. The volume of those satellite libraries is about 34,000 in total.

Brief description of the IT facilities and of the e-learning platform (dedicated staff, hardware, software, available support for the development by staff and the use by students of instructional materials)

IT Services (with 23 staff, 20.95 FTE) provides comprehensive services and support to students and staff regarding e-mail, data storage, VPN and eduroam capability, and the university CMS, offering personal assistance, video tutorials, guidance notes, training, FAQs, and a help desk (open Monday–Friday, 8 am to 4 pm). IT Services also maintains VetmedOnline, as well as a local access network with more than 120 local nodes. The computers, printers and other client devices in the university network are connected to more than 4,250 active data outlets. For information on the e-learning platform see 6.3 below.

Description of the accessibility for staff and students to electronic learning resources both on and off campus (Wi-Fi coverage in the Establishment and access to resources through a hosted secured connection, e.g. Virtual Private Network (VPN))

Every enrolled student and/or staff member receives a Vetmed account which grants access to a personal mailbox, the university network and its information system and to shared resources provided by other research establishments. Mailboxes, calendars, public folders (e.g. Vetucation®) and most information systems (file servers, ASA, eduroam CAT, Shibboleth, etc.), especially those used for teaching and by students, can be reached from within the University or, given a secure connection and a web browser, from anywhere in the world. A VetCloud system allows for secure storage of files for remote access.

The library, seminar rooms and public areas like the lecture halls, library, assembly hall and cafeteria are equipped with 375 centrally managed Wi-Fi access points. Campus-wide Wi-Fi provision is currently being expanded. Web VPN and VPN services for staff facilitate access to resources from outside the campus, and a dedicated remote access service (EZproxy) allows staff and students to connect to the library resources.

6.3 Learning resources

a) Brief description of: the number of veterinary books and periodicals; the number of veterinary e-books and e-periodicals; the number of other (e)books and (e)periodicals

The library holds 220,000 monographs, subscribes to around 200 journals and offers access to approx. 5,2345,000 licensed, completely accessible e-journals, of which 20% cover veterinary medicine. Further on additional 70 e-journals covering veterinary medicine are available. It also provides access to approximately 1,000 e-books, 185 of which are about veterinary medicine; the remaining cover other aspects of life sciences. The large body of scientific information available at the Vetmeduni Vienna strongly supports the ideal of lifelong learning. In addition to veterinary medical literature, the library also holds books on agriculture as well as on general academic topics such as thesis writing or time management. In 2018 it held 7,384 textbooks. In addition, sources not directly accessible at the Vetmeduni but at other university or public libraries in Austria can be obtained through the interlibrary loan services.

b) the available learning resources to students, including electronic information and e-learning courses (and their role in supporting student learning and teaching in the core curriculum)

The University invests considerably in blended/online learning formats through funding and technical support. The extensive range of learning resources in use includes various projects on the Blackboard platform (CASUS), and an audience response tool, accompanied by tutoring programmes. The E-Learning & New Media Unit (seven staff, 6.75 FTE) is the main contact point, and it provides the

primary e-learning platform, Vetucation®. Students find information about their courses there, and lecturers can create, upload, revise, extend and modify their teaching materials online. Students can read texts and download presentations, video or audio files, animations or interactive modules. They can also test their knowledge by performing self-assessments or in game-based formats. A studio with professional hardware and software and expert tutoring is available for producing high-quality multimedia content. Round-the-clock access to different learning resources is provided using web-based technology. Diagnostic images (x-ray, CT, MRT, ultrasound, enDOCcopy, etc.) which are also used for teaching are archived in the PACS (see 4.2), which is linked to the electronic patient record system AHIS. All patient data is available at about 600 PCs on the campus.

c) the organisation and supervision of the skill labs

Students can train their skills in veterinary medicine in a realistic setting in VetSim, a large skills lab developed from 2012 with more than 100 clinical stations spread over 180m^2. Students have free access to a variety of animal dummies and can practice clinical procedures and simulate everyday situations in veterinary practice in obligatory courses and practice sessions. Additionally, VetSim has an operating theatre with anaesthesia equipment, a laboratory equipped for standard laboratory procedures, a veterinary practice software package for data entry, and assorted mannequins that students can use to practice important clinical techniques. The adjoining consultation room has a video camera installed so students can video tape and observe themselves in specific situations, such as simulated consultations with owners. The gynaecology dummy station is located at the Insemination and Embryo Transfer Platform. Students are supervised by staff during examination preparation and compulsory courses and can additionally practice under the supervision by senior students. Each station is equipped with a written guide to the relevant procedures and techniques. In 2018, about 700 students visited the laboratory within the framework of courses and about 1,170 students visited the skills lab outside of lectures.

Comments on Standard 6

- With financial support from foundations, Vetmeduni Vienna is able to promote the 3R animal welfare principles in initial skills training taught in the skills lab and put a strong focus on Refinement and Replacement, minimising or entirely avoiding harm or distress to animals used in teaching.

Suggestions for improvement on Standard 6

- Vetmeduni Vienna aims to encourage greater use of e-learning resources and lifelong learning by introducing inverted classrooms or similar projects. Therefore once a year Vetmeduni Vienna - grants the Vetucation® Awards in separate categories for outstanding projects which are in existence and in development.
- Further expansion of VetSim is planned, both in terms of physical space and through undergraduate and doctoral research projects.
- A new IT strategy is currently being developed with external consultants. This is closely linked to the University's current digitalisation strategy.

Standard 7: Student admission, progression and welfare

Factual information

7.1 Stakeholder information

Description of how the educational programmes, learning outcomes, admission procedures and requirements for national and foreign students, progression and certification, tuition fees, academic calendar, collaborations with other establishments, etc. are advertised to prospective students

Vetmeduni Vienna advertises the study programme through various channels: (1) Detailed information on the university website and internet portals like Studieren in Österreich ("Studying in Austria"); (2) Campus Feeling: Guided tours in a relaxed atmosphere for anyone interested in studying veterinary medicine including information about the admission procedure; (3) Specific information material (e.g. folders); (4) YouTube; (5) Career fairs and events like the BeSt job, training and education fairs in Vienna, Klagenfurt, and Innsbruck and Master & More in Vienna; (6) An Open Day every two years for visitors to discover the facilities and learn about studying and working at Vetmeduni Vienna; (7) Kinderuni: Vetmeduni Vienna has participated in the children's university (for children aged 7-12) every year since 2012; (8) Roadshows: information on the curriculum and veterinary career options is presented at national student trade fairs and school visits, especially to agricultural high schools like Gumpenstein, St. Florian, Elmberg and Ursprung. Tours of Vetmeduni Vienna, featuring presentations on admissions and jobs at the Establishment are organised for senior students at agricultural schools; (9) Science Camp: interested young people can gain insights into the campus (esp. farm animals and VPH), university life and the veterinary profession during these annual one-week events. (10) Information on the curriculum including admission requirements and procedure can be found on the website as well, and in the academic calendar and prospectus. In terms of collaboration with other establishments, extensive information is listed on the public sites of the International Relations Unit. (11) Students can view their progress via VetmedOnline.

7.2 Numbers and figures

Table 7.2.1 Number of new veterinary students admitted by the Establishment

Type of students	2018	2017	2016	Mean
Standard students	207	204	200	204
Full fee students	-	-	-	-
Total	**207**	**204**	**200**	**204**

Table 7.2.2 Number of veterinary undergraduate students registered at the Establishment

Year	2018	2017	2016	Mean
First year	226	228	211	222
Second year	278	313	326	306
Third year	182	163	200	182
Fourth year	189	215	183	196
Fifth year	262	251	267	260
Sixth year	318	285	258	287
Total	**1455**	**1455**	**1445**	**1452**

Table 7.2.3 Number of veterinary students graduating annually

Type of students	2017/18	2016/17	2015/16	Mean
Standard students	166	156	158	160
Full fee students	-	-	-	-
Total	**166**	**156**	**158**	**160**

Table 7.2.4 Average duration of veterinary studies

Duration	< 5.5 yrs	5.5 + 0 yrs	5.5 + 1 yrs	5.5 + 2 yrs	5.5 + 3 yrs	5.5 + >3 yrs
% of students	1.9	1.9	56.0	18.9	7.5	13.8

Table 7.2.5 Number of postgraduate students registered at the Establishment

Type of students	2018	2017	2016	Mean
Interns	13	17	19	16
Residents	20	20	22	21
PhD students*	130	140	141	137
Total	**163**	**177**	**182**	**174**

*only employed PhD students

7.3 Admission process and criteria

Since 2005 an objective and quality-based admission procedure has been established because of the limited number of study places.

Description of the admission procedures for standard students:

General and specific university entrance qualifications are defined by the UG 2002. The secondary-school completion certificate entitles students to admission to the universities. Alternatively, applicants without a secondary-school certificate who have completed an apprenticeship or training and passed a special examination, can apply for admission to medical and veterinary schools. An additional legal requirement is a sufficient command of the German language.

a) selection criteria

As student numbers are limited, care is taken to ensure that the admission procedure is objective and transparent. In accordance with statutory requirements (§63 UG 2002 and §71c), applications are assessed on performance criteria linked to the demands of the relevant course. The Rectorate, in consultation with the Senate and the University Council, issues a decree regarding the admission restrictions to be applied to the programmes offered for a particular academic year. For participation in the admission procedure, no proof of general university entrance qualification is required. This must first be provided within the scope of admission to the degree programme. Vetmeduni Vienna takes particular care to ensure that no applicants encounter any form of discrimination based on their gender or social background and that the procedure is accessible to applicants with non-traditional educational backgrounds. The design of the admission procedure and the aptitude test reflect lessons

learned from earlier procedures. Admissions begin with an application for a study place, restricted to one application per applicant. Students may apply online between May and June for the academic year beginning in October. After applying online and paying an application fee (€50) all applicants must pass an aptitude test, which consists of two parts. Part I deals with academic and professional requirements for veterinary medicine and the personal aptitude of each applicant. Part II is a multiple-choice examination (single best answer) consisting of 80 questions in the fields of biology, chemistry and physics, starting with knowledge expected of school pupils (Grade 9). For the allocation of points, the certificate of general university entrance qualification according to §64 UG 2002 is additionally used. If the documents required for the allocation of grades are not submitted, the admission procedure can nevertheless be completed. In this case, only the points in the aptitude test are taken into account for the ranking. Applicants can achieve a maximum of 32 points for Part I and 80 points for Part II. The highest ranked receive a study place. The applicant must accept the place personally and formally within a determined period. Otherwise, the place can be given to the next in line. The formal act of accepting the place is called admission. For this, all formal requirements and documents mentioned above have to be verified.

b) policy for disable and ill students

No extra spaces are reserved. All prospective students can access study places equitably. There is no specific policy: solutions are sought and applicants counselled on a case-by-case basis.

c) composition and training of the selection committee

As there are no admission interviews no specific selection committee is necessary. The multiple-choice questions for the admission test are developed according to Standard 8.

d) appeal process

Pursuant to §65b par. 1 UG 2002, applicants may view Part II of the aptitude test and their overall scores within a statutory period of three months of receiving the results, and may appeal within the admission period. To do so, they must submit a written application for admittance. The evidence is then scrutinised by VRSA and a decision communicated to the applicant in writing. The applicant may submit a written statement to the VRSA within two weeks of being notified of this decision. The Rectorate then decides, pursuant to §60 ff UG 2002, to accept or reject the application.

e) advertisement of the criteria and transparency of the procedures

The criteria and the procedure for application are described in English and German on the website. Information on the content the aptitude test will examine is announced on the website and in the university gazette no later than four months before the test date.

Description of the admission procedures for full fee students (if different from standard students)

Full fee students have the same admission procedures as standard students. Statutory regulations determine whether students are exempt from student union membership and administrative fees as follows: The complete list of possible grounds for an exemption covers students from third countries listed as especially impoverished and EU/EEA citizens in compliance with the standard study period plus a grace semester.

Description of how the Establishment adapts the number of admitted students to the available educational resources (facilities and equipment, staff, healthy and diseased animals, material of animal origin) and the biosecurity and welfare requirements

The fixed number of study places offered by Vetmeduni Vienna is determined jointly with the BMBWF and specified in Performance Agreements. Since 2011, 203 places per year have been offered for the Diploma Programme in Veterinary Medicine (exceptionally, 220 places in 2015). The

number of places is calculated based on the specifications of EAEVE and the capacities based on teaching positions and infrastructure, a curricular norm value, and room resources – especially clinical training rooms and lecture halls – to meet biosecurity and health and safety requirements.

Description of the prospective number of new students admitted by the Establishment for the next 3 academic years

The expected number of new students admitted for the next three academic years equals 203 per year for the Diploma Programme in Veterinary Medicine, as negotiated in the 2019-2021 Performance Agreement with the BMBWF.

7.4 Disabilities and illness

Description of the policies and procedures devoted to applicants with disabilities

Vetmeduni Vienna complies with the Federal Disability Equality Act (BGStG). All applicants for places are treated equitably and can approach the Accessibility Unit for support and advice. Reasonable adjustments can be granted to applicants in justified individual cases, such as extra time for examinations. Enquiries may also be addressed to staff in the Student Services Unit. Students are supported as comprehensively as possible. This applies particularly to time management and structuring one's studies. Where possible, individual study plans are mapped out for students who become ill. Students may also be granted leave of absence. The e-learning system (Vetucation®) enables students to access learning resources at any time and from any location (see further Standard 6.2) Alternative examination formats are offered where possible, when students with disabilities cannot take part in regular examinations. The Ombudsman for Higher Education serves students who face problems in their educational establishment, offering advice and, if appropriate, mediating between them and the establishment.

7.5 Progression

Description of:

a) the progression criteria and procedures for all students

The requirements for progression are regulated in the curriculum. Failed examinations must be repeated during the following semester. The curriculum is structured in three tiers. To move up to the next tier, the preceding tier has to be completed successfully. Students will only be admitted to examinations if they can show proof of regular and successful participation in courses with continuous assessment.

b) the remediation and support for students who do not perform adequately

Student progress is generally good. Performance is verified through interactive teaching and by examinations. More than 80% of students admitted graduate. Students who do not pass Tier 1 on time (i.e. after all test repetitions offered during the current semester) can resit this examination one semester later and start Tier 2 the following summer semester. Therefore, more training places are planned for Semester 6. Flexibility in the curriculum allows transfer students to continue their studies smoothly. Students with obvious difficulties can use the psychological service of the Work Council of Vetmeduni Vienna or the consultation service of the BMBWF. Since the winter semester 2013/14, the Competence Check has been used to evaluate students in semesters 6 and 10 and to individually check and to reflect on their performance in a personal discussion with the relevant teaching staff. Students can also use the online VMPT to individually check their performance voluntarily.

c) the advertisement to students and transparency of these criteria/procedures

The criteria and procedures are specified in the curriculum and further guidelines, including the course descriptions in VetmedOnline. Students can view their study progression and current status at any time via VetmedOnline and print transcripts. Assessment modalities and criteria for courses and examinations are announced in VetmedOnline before each semester begins. First-year students undergo comprehensive induction programmes and receive guidance from tutors. Students can turn to many different places for advice (including the Student Union and the VRSA).

Description of the rate and main causes of attrition

All universities are required to report study success rates annually to the BMBWF. Vetmeduni Vienna has taken this a step further and monitors study success rates annually and overall for every offered degree programme. With an overall study success rate of 76% and a study success rate of 83% in the veterinary degree programme, the Vetmeduni Vienna is in the top five universities in Austria. Workload and student support have been found to strongly influence studyability and success rates. As a result, workload monitoring is going to be introduced in 2019/20 and student support services are constantly being refined. Most students who leave do so to change university or study programme.

Description of how (procedures) and by who (description of the committee structure) the admission procedures, the admission criteria, the number of admitted students and the services to students are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

A Decree is enacted by the Rectorate pursuant to §63 and §71c UG 2002 after the Senate has been heard and with the approval of the University Council. It is then published in the university gazette on the university website. The number of study places to be offered is determined jointly with the BMBWF and stated in Performance Agreements. Further decisions taken by the respective body are relayed back to relevant committees and organisational units, communicated directly to internal and external stakeholders (e.g. e-mail, VetEasy, reports to the University Council and the Senate, Intellectual Capital Report) and published on the university website.

7.6 Exclusion

Description of the mechanisms for the exclusion of students

Students are excluded, pursuant to §68 UG 2002, if they fail to pass courses or required examinations at the last permitted attempt. The University Statutes also provide for excluding students for a maximum period of two semesters for wilful plagiarism or in other serious cases of wilful academic misconduct involving Diploma theses.

Description of the appeal processes

If a required examination is not passed, students are excluded pursuant to §68 par. 1 No. 3 UG 2002. If a student appeals against an exclusion, a meeting by VRSA is arranged and a written statement is obtained, where possible, from the student. Evidence including written statements is gathered from all involved, and the university lawyer is consulted. Appeals against notice of exclusion must be made within a specified period. When an appeal is made, it is investigated whether measures taken were proportionate and justified. If this is not deemed to be the case, the appeal may be escalated to the next level.

7.7 Welfare programmes and support

Description of the services available for students (i.e. registration, teaching administration, mentoring and tutoring, career advice, listening and counselling, assistance in case of illness, impairment and disability, clubs and organisations, ...)

Vetmeduni Vienna provides a broad range of services: (1) The Student Services Unit is responsible for registration, teaching administration, and support in cases of illness and disability, and offers guidance to students with academic problems. Students can consult the VRSA, all professors and individual faculty members (about study or personal problems, career development and job selection). Disabled and ill students are represented and consulted by the Accessibility Unit or the head of Student Services. (2) Enquiries related to studying at Vetmeduni can be submitted to the Student Services e-mail address managed by the VRSA. These are then forwarded on to staff responsible for specific issues. (3) The International Relations Unit assists students and employees in applications for exchanges and activities (e.g. ERASMUS, CEEPUS) and provides information and assistance in dealing with local authorities. (4) At the Childcare Centre students can receive specific assistance and advice related to pregnancy and child care, and family matters. (5) Vetmeduni Vienna offers various stipends, including a stipend for students finishing their degrees, financial assistance to students facing hardship, Student of the Year awards, and travel grants for joint study programmes. (6) Students have accident insurance covering their entire course of studies. They are informed about the risk of zoonoses (e.g. in classes on microbiology, parasitology, pathology, epidemiology, clinical training and food hygiene). The Notifiable Disease and Epidemic Safety Plan for the event of an acute hazard (e.g. bird flu) also covers protecting students. Protective clothing is offered in specially designated spaces such as surgery or infectious diseases, and students are vaccinated for rabies (for free). (7) The Society of Friends of the Vetmeduni Vienna supports the advancement of veterinary science and fosters exchange of ideas and experience between academics and practitioners, for example through the Companion Animal and Farm Animal Prizes for excellent Diploma theses and on affordable housing options. Furthermore they provide scholarships for outstanding student performances. (8) Other services include: (a) an outdoor sports pitch and halls for football, gymnastics, music, drama, dance etc; (b) year-round support from experienced tutors and e-tutors; (c) extended opening hours at the library and the VetSim skills lab in cooperation with the Student Union; (d) free e-mail address; freely accessible study places, some with personal computers; (e) access to the internet for private use at a reduced rate; (f) rooms for students doing night shifts; (g) student rates for pet health care; (h) rooftop patio in the library; free parking spaces.

The students themselves also provide a broad spectrum of assistance: (1) the Student Union organises a semester spokesperson each semester and track spokespersons in the specialisation tiers; (2) students from later semesters support new students in first-semester tutoring; (3) the Student Union has administrative employees and student advisers, including five veterinary student advisers; (4) a campus shop sells scripts, specialist books, supplies for clinical work, personal items and supplies including pet food and snacks; (5) membership of the IVSA and BVVD; (6) the student magazine, RECTUM; (7) micro-loans for cases of financial hardship; (8) managing the skills lab VetSim together with the VRSA, (9) course equipment (e.g. stethoscopes), buses for rent for transport to VetFarm, the slaughterhouse or personal destinations; (10) photocopying service; (11) kennels for students' own dogs.

Description of the mechanisms for resolution of student grievances

The BMBWF offers guidance to students with grievances, but these are very few, most likely because general problems are addressed in a monthly meeting of the VRSA and student representatives. For problems such as individual appeals about the results of admissions or other tests the student can contact the VRSA personally. All students that are registered for the last possible repetition of an examination are asked to discuss the legal situation personally with the VRSA before taking it for the last time.

7.8 Student rights

Description of the mechanisms allowing students to provide their needs, complaints, comments and suggestions to the Establishment

The rights and obligations of students are set out in §3 UG 2002. Furthermore, students and representatives may contact the faculty, the Vice-Rectors and the Rector at any time to raise issues concerning education or work. This open-door policy is considered an integral part of daily quality control efforts at the University and also the beginning of networking within the veterinary profession. As students are also represented in all relevant committees, they can provide input on all relevant issues directly.

Comments on Standard 7

- Admission procedures at Vetmeduni Vienna are continually revised based on intensive monitoring and evolving statutory requirements. The annual evaluations do not show any evidence of selective bias in the procedure, especially not regarding gender.
- Questions concerning the requirements for studies and the profession in Part I of the admission procedure are formulated in close cooperation with internal and external stakeholders. The focus is on questions related to "study motivation", "programme requirements", "personal prerequisites", "realistic view of the profession" and "realistic view of the requirements of the profession". This is done online, with questions being sent to alumni, employers, teaching staff and students. In 2017, 369 veterinarians participated, of which 74% were active practitioners. This involvement ensures that Part I of the Admissions Procedure generates representative results.

Suggestions for improvement on Standard 7

- The outreach activities with the federal states in the regionalisation initiative, VetmedRegio-VetmedAustria, aim to kindle increased interest in farm practice among both female and male school pupils in rural areas. The aim is to increase applications from males in rural areas with an interest in farm animal practice.
- A working group on "The Ruminant in the Alpine Region" belonging to the University Clinic for Ruminants, with a focus on infectious diseases in ruminants, is going to be launched in autumn 2019 in the premises of AGES Innsbruck. This field office will foster the visibility of Vetmeduni Vienna, particularly in the western part of Austria.
- From 2020/21, the student monitoring system STUDMON will come on stream and be launched and used to identify factors influencing success in the programme, transfers to other programmes, and study duration. It is expected that the system will assist with the early recognition of potential drop-outs who can then be offered tailored support.
- Development of measures based on survey data from students on their socioeconomic situations is planned, as well as the development of a web-based psychological counselling for students.

Standard 8: Student assessment

Factual information

8.1 Assessment strategy and methodology

Description of the general student assessment strategy of the Establishment

Vetmeduni Vienna focuses on assessment through competence-based examinations, to determine whether students have acquired the relevant knowledge and skills (DOC) required. Examinations focus on specific learning outcomes, to which individual questions and formats are assigned, following the principle of constructive alignment. Basic guidelines for the assessment system are specified in the UG 2002, while general information is set forth in the Statutes of the University and detailed policies cover both examinations specified in the examination regulations for the curriculum and courses with continuous assessment. In its general assessment strategy, Vetmeduni Vienna envisages three categories:

- Summative assessment for examinations forming an integral part of the curriculum in veterinary medicine that are specified in the examination regulations and must adhere to a specific format (see Table 8A). The Diploma examinations always contain at least one written and one oral/practical component.
- Summative assessment in courses with continuous assessment: All courses in the Diploma Programme are continuously assessed, with the exception of lecture courses. These assessments are carried out by the individual teacher, based on the policy regarding courses with continuous assessment, which is issued by the CuCo. A binding assessment schedule is published (pursuant to §76 UG 2002) in VetmedOnline before each semester begins. The examination formats used may vary.
- Formative assessment to gauge student progress and knowledge gained in courses with continuous assessment and in the VMPT and the Competence Check.
  The performance put in by students in the summative assessment in the courses with continuous assessment is part of the final grade in the summative Diploma examinations. The weighted grades based on ECTS credits make up 40% of the final grade in the summative Diploma examination.

Table 8A Examination methods of examinations listed in the curriculum

Examination	Definition	Format
1st Diploma examination (end of Sem. 4)	1st Diploma partial examination – Morphology and Clinical Foundations – written	Written (Q-Exam); Extended Matching Questions (EMQ), Multiple Choice (MC), Short Answer Questions (SAQ)
	1st Diploma partial examination – Morphology and Clinical Foundations – oral-practical	Objective Structured Practical Examination (OSPE)
2nd Diploma examination	2nd Diploma partial examination – Diseases (end of Sem. 7)	Written (Q-Exam); EMQ, MC, SAQ, essay questions
	2nd Diploma partial examination – FSQ and VPH and One Health Concept incl. Dispensing Law (end of Sem. 8)	Written (Q-Exam); EMQ, MC, SAQ, essay questions, Key Feature Questions (KFQ)
	2nd Diploma partial examination – Clinical Examination of Farm Animals (end of Sem. 9)	Clinical Examination of Entrustable Professional Activities (KLIPP-VET Farm Animals)
	2nd Diploma partial examination – Clinical Examination of Companion Animals (end of Sem. 9)	KLIPP-VET Companion Animals
3rd Diploma examination	3rd Diploma partial examination – Specialisation track (ST1)	Structured Oral Examination (SOE)
	3rd Diploma partial examination – Veterinary legislation including official controls, regulatory veterinary services, forensic veterinary medicine and certification	Written (Q-Exam); MC, essay questions, KFQ, SAQ

In the first semester, students have to pass a module examination. This is by continuous assessment, through four partial examinations taken at different times during the first semester. An overall score of at least 60% must be achieved to pass the examination to be allowed starting the second semester.

Description of the specific methodologies for assessing the acquisition of:

The examination regulations for the curriculum list the parts of the Diploma partial examinations and specify how they are integrated into the study programme. Written examinations specified in these regulations are managed and delivered through Q-Exam. Oral/practical partial examinations specified in these regulations are conducted in three formats:

- Objective Structured Practical Examination (OSPE)
- Clinical Examination of Entrustable Professional Activities (KLIPP-VET)
- Structured Oral Examination (SOE).

The number and timing of examination dates is regulated by §76 UG 2002; at least three must be offered during the semester.

a) theoretical knowledge

Theoretical knowledge is tested by written electronic tests (Q-Exam) using various question types assessing both cognitive and procedural knowledge. KFQ and essay questions support this. Questions for written electronic tests are subject to comprehensive QA processes reaching across several stages: (pre-)review (creating the questions); examination review (compile the examinations) and post-review (after the examination).

(Pre-)review (creating the questions)

Questions for written electronic examinations are generated by experts and matched to the learning outcomes. All questions undergo a mandatory check following the "six-eyes" principle (one formal check, two content checks by experts). The case vignettes in KFQ matching one or more types of disease or animal are reviewed separately in two stages (one formal check, one content check by experts).

Examination review (creating the examination)

Examination coordinators appointed by the VRSA use the relevant blueprint for written electronic examinations to select questions. After the coordinator has selected each examination, the question authors are asked to confirm that their questions can be used for the forthcoming examination. In addition, examinations undergo a technical check.

Post-review

After each examination has been held, a post-review stage begins. It includes electronic viewing and commenting of each single examination questions by students, statements made by the question authors, and a final evaluation by the examination coordinator and/or VRSA. All steps are recorded traceably and transparently and linked to the relevant question ID and examination in Q-Exam. The post-review serves as a QA check on both examinations and questions. It ensures decisions are documented transparently and traceably (on corrections to examination results, retention of questions in the database, or exclusion of their future use). The post-review draws on a variety of sources (examination invigilators, comments made by students viewing their examinations, statistical item analyses). In clear-cut cases (e.g. technically defective questions), errors are rectified immediately. In cases requiring their specific expertise, question authors are asked for statements. Based on the type of comment, the author's assent to using the question in the examination review and the author's statement, a decision is made on whether the question should be corrected in order to adjust the examination results or to retain it in the database for future use.

Theoretical knowledge in summative assessments
Q-Exam is also used for testing theoretical knowledge in courses with continuous assessment as part of the summative assessment. Other technical systems like audience response systems (clicker tests) or (self-)assessments in Vetucation® may also be deployed, or partial examinations segments can be assessed orally.

b) pre-clinical practical skills

Pre-clinical practical skills are primarily assessed summatively in oral-practical formats. At the end of Tier 1 pre-clinical skills are assessed with the OSPE format. The examination design features 12 stations (with five minutes allocated to each) covering four fields: (**stations 1–4**: structure and function of organs; **stations 5–7**: history-taking, clinical examination, and organ diagnosis; **stations 8–10**: special examinations, specimen collection, drug administration; **stations 11–12**: laboratory, feedstuffs, pharmacology). QA for OSPE examinations specified in the examination regulations takes account of the specific features of this format. The form and content of questions selected by experts are (pre-)reviewed by members of a committee in which experts from all disciplines involved in the examination are represented (the OSPE Group appointed by the VRSA). Using a modified Angoff procedure, the OSPE Group sets the standards to determine the pass grade for each question. In the examination review, the OSPE group experts from all participating disciplines create and fine-tune the blueprint for the specific examination. In courses with continuous assessment, additional examination formats like spot examinations, experimental logs or demonstrations of skills (such as preparation techniques) are also be used to assess pre-clinical skills.

c) clinical practical skills

Clinical practical skills are assessed summatively in oral-practical formats. This is done in Tier 2 through KLIPP-VET examinations to test four core **e**ntrustable **p**rofessional **a**ctivities (EPA) used for multiple types of animals: **EPA1**: history-taking/documentation/differential diagnoses list/examination plan; **EPA2**: clinical examination/differential diagnoses list/investigation examination plan; **EPA3**: further examinations/summarising findings/diagnosis; **EPA4**: further actions/proposed treatment/feedback to animal owner. QA for these examinations currently incorporates a formal review and, in part, a content review by a team of examination coordinators appointed by the VRSA, which is also responsible for selecting the examination questions. Additionally, clinical practical skills are assessed summatively in Tier 3 in an SOE format. This is a practical examination to assess DOC, involving one or more real or simulated patients or animals kept for demonstrating clinical questions or specific veterinary skills such as injections, repositioning, or surgery. The candidate takes on the role of an assistant on his/her first day at work. QA for questions and entire examinations in the SOE format is the responsibility of the experts in the examinations committee. Clinical practical skills are also assessed summatively and formatively (through supervision and feedback) in courses with continuous assessment: Clinical Rotation I and II, Ambulatory Clinical I and II, and Propaedeutics.

d) soft skills (e.g. communication skills, team player, dealing with pressure, strong work ethic, positive mental attitude, flexibility, time management, self-confidence, dealing with criticism, ...)

Communication skills are integrated into the curriculum (Communication Skills in Veterinary Practice I; Conversation with Animal Owners and Stakeholders – Simulation). Communication skills are assessed in a station or EPA of their own in examinations specified in the examination regulations in the OSPE and KLIPP-VET formats. Other soft skills like time management, coping under pressure, and positive attitude are promoted through the examination design in both curricula examinations and courses with continuous assessment, with fixed periods of time allotted to tasks. Students learn to make decisions about how tasks should be approached and completed in the time available. As they work through the curriculum, students also take comprehensive courses, including ethics, self-reflection, feedback, soft skills, and Science in Veterinary Medicine, that involve problem-solving and presentations in teams.

8.2 Assessment criteria and procedures

Description of the processes for ensuring the advertising and transparency of the assessment criteria/procedures

Assessment criteria and procedures for examinations specified in the examination regulations are suggested by the VRSA, discussed in the CuCo, published in the curriculum and specified in the guidelines. Assessment criteria for courses with continuous assessment are developed by experts and published in VetmedOnline as described above. Other measures ensure the transparency of assessment criteria:

- Students attend information sessions about examination regulations with detailed definitions and a description of examinations that are available in VetmedOnline.
- Examination formats are introduced and discussed during the Impulsfrühstück and the information is available online.
- Lecturers can find information in VetEasy and VetmedOnline, at regular staff training workshops and occasionally through the Impulsfrühstück.

Description of the processes for awarding grades, including explicit requirements for barrier assessments

In general, the following grades and binding assessment framework are used:

Table 8B Grades framework

Grade	General definition	Framework for Diploma assessments
excellent (1)	An excellent performance	89.5% or more
good (2)	Significantly above average requirements	79.5% to 89.4%
satisfactory (3)	Satisfies the average requirements in every aspect	69.5% to 79.4%
adequate (4)	Meets the requirements despite shortcomings	60% to <69.4%
fail (5)	Does not meet the requirements due to significant shortcomings	<60% of the maximum achievable performance

Detailed rules on the maximum possible score, the specific grades that can be awarded, and the rules governing repeat examinations are set out in the individual policy documents.

For all written examinations the following applies: Examinations are divided into blocks structured by topics to ensure that as little content as possible is skipped. The pass grade is always determined both on the basis of the pass grade for each block and for the examination as a whole. In other words, 60% of the points available must be gained both in each block and for the written part of the Diploma examination as a whole.

For all oral / practical examinations specified in the examination regulations, the following applies: The overall pass grade for examinations in OSPE format is determined based on the pass grade in each thematic block. Examiners determine scores for each block based on scores for each individual station in a modified Angoff standard-setting procedure. When the pass grade has been achieved in each thematic block, the examination is passed. To pass examinations in KLIPP-VET format, students must achieve at least 60 out of 100 points. Examiners can, however, give a "red flag" (automatic fail) to candidates whose examination performances endanger the life of the patient, the candidate or other persons at the station. The specialisation track examination in SOE format requires a pass at each station for an overall pass.

Description of the processes for providing to students a feedback post-assessment and a guidance for requested improvement

Examination results (except for courses with continuous assessment) are initially released on a preliminary basis (individually by e-mail) and students are given the opportunity to electronically view the examinations in Q-Exam and make comments on each question. This is followed by post-review and, if applicable, by corrections to the examination results (see above). Results of examinations in OSPE and KLIPP-VET format are communicated individually to students. Where applicable, the type of repeat examination required is communicated. Individual appointments are made with students who wish to view their examinations. Results of examinations are communicated immediately after the examination, directly to the candidate by automated e-mail by the office of the VRSA. Before examinations specified in the examination regulations are resit for the last possible time, students are offered an appointment to discuss the situation with the VRSA. Student survey forms have been prepared to evaluate individual examinations specified in the examination regulations. Both written examinations and examinations in OSPE and KLIPP-VET format are being considered. The survey results will flow into relevant training for examiners, information provided about examinations and the organisation of examinations in future. In the context of formative examinations, Vetmeduni Vienna recommends that students take part in the Competence Check and VMPT (see Standard 3) to receive feedback on their individual learning strategies and compare their progress against that of other members of the same cohort.

The final results are then communicated (individually by e-mail, listing the block results and, if blocks have been failed, the blocks that must be repeated). The grades are recorded by Student Services and communicated to students in automated e-mails.

Description of the appeal processes against assessment outcomes

Complaints about exam procedures and grades are regulated by law (§79 UG 2002). Complaints concerning formal matters must be justified and forwarded in writing to the VRSA within two weeks of the results being published. If the complaint exposes formal legal flaws, the VRSA can decide to revoke the examination.

Pursuant to §77 UG 2002, failed examinations can be repeated three times. Additional resits are only possible in cases for which special provision has been made in the University Statutes. The following rules apply at Vetmeduni Vienna:

- three resits are possible in Tier 1
- four resits are possible in tiers 2 and 3

For the second last and final retake of oral examinations, the attendance of the chair of the respective Examination Committee or of an appointed representative is mandatory. If students request this, these regulations can also apply for the first retake. At the last permissible repetition of an examination or on student request from the second repetition of an examination onwards, the Examination Committee must involve at least three persons. (University Statutes 5, §12 (3)). At the request of the student, the examination shall be held on a commission basis from the second repetition onwards. The application must be made for a specific university examiner for the particular course of study for which the examination is to be taken (University Statutes 5, §14 (2)).

8.3 Review of assessment outcomes

Description of how (procedures) and by who (description of the committee structure) the students´ assessment strategy is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Examinations specified in the examination regulations. The examination regulations are integrated

into the curriculum pursuant to §58 UG 2002 and thus fall within the remit of the CuCo. The VRSA is responsible for organising, communicating and monitoring these examinations.

Description of the link between learning outcomes and assessment design

All examinations are competence-based and test both specialist veterinary knowledge and skills and professional attitude, to determine whether students have acquired the DOC required for further studies and for professional practice. During development of the undergraduate curriculum, the format and content of examinations were constructively aligned to predefined learning outcomes. All individual questions developed for summative assessments are mapped to specific learning outcomes.

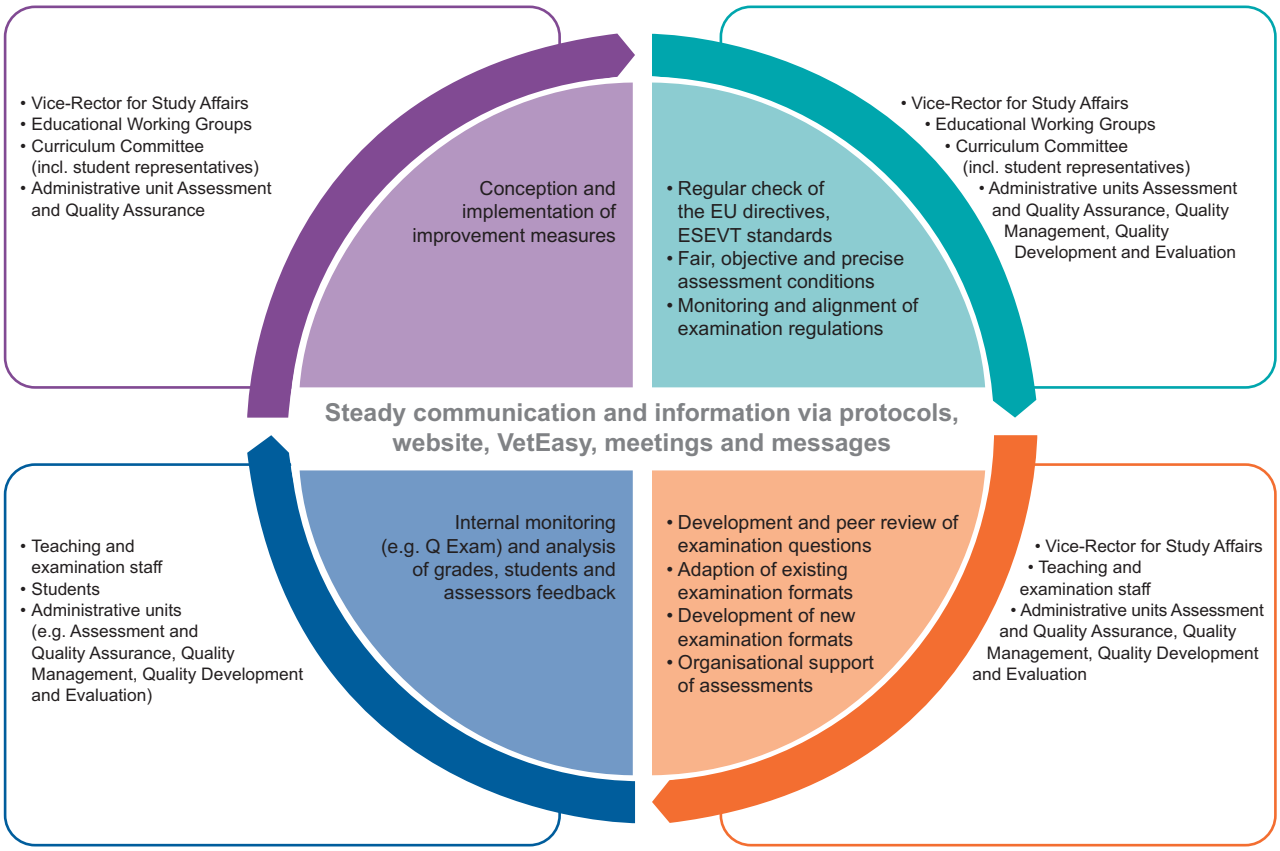

Figure 8 PDCA Cycle Assessment Strategy for Examinations

8.4 Learning outcomes

Description of the system to certify student achievement of learning outcomes in the different subjects, years of study, etc.

- The achievement of learning outcomes in courses is certified through the grades warded in courses with continuous assessment (on QA, see Standard 3 and constructive alignment of examination methods). These grades make up 40% of the result of the corresponding Diploma examination.
- The grades awarded in a Diploma partial examination certify that learning outcomes have been achieved on EWG level.
- All grades (course grades and Diploma examination grades) are entered in VetmedOnline, and students can use the platform to call up their transcripts of records themselves.

Description of the strategy to encourage students to take an active part in the learning process
Students are encouraged to play an active role in the learning process through formative assessments such as the optional VMPT and the obligatory Competence Check (see Standard 3). Both the electronic resources (CASUS, self-tests in Vetucation® provided for continuous and formative assessment and the use of VetSim, e.g. in practical preparation for OSPE examinations) strengthen students' responsibility for their own learning. On a number of courses, students are required to sign up for shifts in the student duty calendar (VeTime) and to perform services reliably; these include animal handling, ambulatory clinics and night duty.

8.5 Assessment methodology

Description of the assessment methodology to ensure that every graduate has achieved the minimum level of competence, as described in the ESEVT Day One Competences (see Annex 2)
The use of different examination formats, partially in combination, allows learning outcomes, theoretical and clinical skills and DOC to be assessed according to the level of training received. All examinations are competence-based. Courses with continuous assessment where DOC have to be demonstrated in formative and summative assessments, especially in the clinical rotation, make up 40% of the final grade. Examinations specified in the examination regulations may not be taken until specific the corresponding courses listed in the regulations have been successfully completed. Through small-group teaching, skills can be observed individually (DOC) and feedback given directly to the individual (e.g. clinical encounter cards).

Comments on Standard 8

Efforts are made to ensure that students take examinations specified in the examination regulations in a timely fashion. The students are responsible for selecting the date on which to take their examinations. Major written examination days are advertised (in information sessions, for example). Up to 250 laptops are leased three times a year on these days, and simultaneous examinations are held in Lecture Hall A and Lecture Hall B.

Suggestions for improvement on Standard 8

- A dedicated electronic examinations platform, eOSCE, is planned for managing examinations in OSPE and KLIPP-VET format. This will allow well-established procedures to be extended further to cover oral/practical examinations, and enable a standardised and documented review process. Electronic administration of examinations with automatic calculation of statistics is a more long-term goal.
- In future, feedback to the coordinators of examinations specified in the examination regulations, including feedback integrating the results of examination evaluations, ought to be communicated in standardised form by the Assessment and Quality Assurance Unit to both teachers and students. Examination evaluations serve as a tool for tracking quality and student progress.
- As the number of questions increases, especially on Q-Exam, a process for tagging, re-reviewing and confirming questions ought to be developed, implemented and established.
- Further development of regular training activities on state-of-the-art examinations.

Standard 9: Academic and support staff

Factual information

9.1 Strategy

Description of the global strategy in order to ensure that all requested competences for the veterinary programme are covered and that staff are properly qualified and prepared for their roles (e.g. good teaching and assessing practices, knowledge of up-to-date (e-)learning resources, biosecurity and QA procedures, …)

Vetmeduni Vienna has sufficient and highly-qualified staff to fulfil its current teaching and research activities. The Development Plan covers strategic planning of professorships and subject areas and the detailed planning flowing therefrom. This ensures that the core competences required for providing training in veterinary medicine can be secured in the long term. Only candidates with promising and proven teaching and research potential are considered for academic staff positions. Recruitment is largely governed by the UG 2002 and the Collective Bargaining Agreement. All staff members are encouraged to maintain and develop their qualifications and skills. Altogether, administrative units like Human Resources, Staff Development and E-Learning & New Media support individual staff development and offer extensive training programmes to all staff. Compulsory training on key topics is also provided (including safety; a biosafety training programme is planned). Employees who work in laboratories and/or clinics are also regularly instructed (on safety, hygiene etc.) by their supervisors. Teaching staff members are familiar with the DOC and learning outcomes of the Diploma Programme in Veterinary Medicine. Their performance is appraised regularly through course evaluations and the teaching evaluations within the scope of habilitation procedures. Interns and residents also undergo mandatory evaluations. All staff have mandatory annual performance reviews which serve to map out the next steps in their career development. Over and above this, internal Performance Agreements and agreed objectives (concluded with professors and managerial staff) foster the development of teaching and research profiles, of both individuals and the whole University.

9.2 Selection and recruitment of staff

Table 9.2.1 Academic staff of the veterinary programme

Type of contract	2018*	2017*	2016*	Mean
Permanent (FTE)	306.5	299.1	291.4	299
Temporary				
Interns (FTE)				
Residents (FTE)**	4.31	4.75	5.44	4.83
PhD students (FTE)**	16.14	15.7	15.8	15.88
Residents + PhD students (combined programme)**	1	0.25	0.25	0.50
Practitioners (FTE)				
Other: Postdoc Programme (FTE)	5.4	6.3	8.66	6.79
Others: service income**	5.8	2.25	1.8	3.28
Total (FTE)	**339.15**	**328.35**	**323.35**	**330.28**

*Excluding external lectors, tutors, interns, veterinary students in training as well as staff dedicated primarily to research (senior researchers, third-party funded researchers); only proportion of employment dedicated to the veterinary programme shown.
**Only those paid and trained to regularly perform structured practical and/or clinical training are shown and only shown with proportion of employment dedicated explicitly to teaching.
***Excluding PhD students paid from service income.

Table 9.2.2 Percentage of veterinarians on the academic staff

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	61%	62%	62%	62%
Temporary (FTE)	57%	55%	50%	54%

Table 9.2.3 Support staff of the veterinary programme

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	396.7	388.6	381.3	388.8
Temporary (FTE)	68.2	58.9	64	63.7
Total (FTE)	**464.9**	**447.5**	**445.3**	**452.6**

Table 9.2.4 Research staff of the Establishment

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	102.3	99	97.2	99.5
Temporary (FTE)	151.8	136.3	114.7	134.3
Total (FTE)	**254.1**	**235.3**	**211.9**	**233.8**

Prospected number of FTE academic and support staff of the veterinary programme for the next 3 academic years

Table 9A Prospected number of FTE staff 2019-2021

Type of contract	2019	2020	2021
Academic staff	353.12	359.78	364.86
Support staff	478.97	483.76	488.6

Description of the formal programme for the selection and recruitment of the teaching staff and their training to teach and assess students (including continuing education)

All posts at Vetmeduni Vienna are publicly advertised (via the university website and university gazette). All applicants must follow application procedures (defined for the respective position). To secure highly-qualified candidates, professors are appointed according to the procedure set out in the UG 2002 and the Internal Guidelines for Appointment, and the tenure-track procedure is pursuant to §99 par. 5 UG 2002.[23] Initially a Professorial Appointments Committee or qualification committee for Assistant Professorships is assembled to formulate a job description and advertisement. These documents detail the required scientific and teaching competences. For full professorships, key criteria include scientific merit, teaching, social and managerial competence. The appointments committee provides a list of the three most suitable candidates, and students are actively involved in this process. Candidates must also give a public lecture. The final appointment decision is taken by the Rectorate pursuant to §98–99 UG 2002. The basic requirement for all other academic staff is their university degree. Selection and recruitment processes vary depending on the positions (interviews

[23] See appendix.

may be conducted by selection panels or individuals). The heads of each organisational unit are responsible for filling their own approved staff positions; as specialists in their fields, they are the best judges of role requirements. All vacancies advertised must, however, list required skills and qualifications in a standardised job description format. All job postings need approval by the Equal Opportunities Working Party before publication. All documents are provided electronically in VetEasy and all involved parties have access to the documents during the selection process. Human Resources assists with administrative processes (advertising vacancies, preparing employment contracts). Once a candidate has been selected, the Equal Opportunities Working Party is requested to provide a statement to ensure equitable treatment of candidates and guard against any kind of discrimination. If appointees lack specific skills or knowledge (e.g. related to scientific technologies) the head of the organisational unit must provide training opportunities. The Staff Development Unit can assist if required.

Description of the formal programme for the selection, recruitment and training to perform their specific duties (including continuing education) of the support staff

Clinics and institutes have sufficient administrative and technical staff to ensure operational tasks smoothly. Animal caretakers, administrative and technical staff have at least an apprenticeship certificate in most instances. Support staff are selected by the organisational unit where they will work, which also defines the job description. After a vacancy is publicly advertised, the person responsible for the appointment invites applicants to interview and selects the best candidate based on the job description. As with the appointment of academic staff the Equal Opportunities Working Party is asked for a statement, while Human Resources prepare employment contracts, assist with advertising vacancies and may help with selecting candidates.

Description of the formal rules governing outside work, including consultation and private practice, by staff working at the Establishment

On the one hand, the Public Sector Employment Law, the Contractual Employee Act and the Collective Bargaining Agreement (as amended) govern outside work. On the other hand, the University has stringent directives regulating additional occupations and secondary employment. All external activities must comply with the Austrian Code of Corporate Governance (B-PCG-K). This includes consulting, excursions, private practice and lecturing. A clear distinction is drawn between services commissioned by the University or a third party. All additional or secondary work must be reported to and approved by the Rectorate. Decision criteria include possible conflicts of interest and time required. The University governs the remuneration of all additional occupations commissioned by Vetmeduni Vienna.

9.3 Support measures and programmes for teaching excellence

Description of the peculiarities of the work contract for academic staff (e.g. permanent versus temporary, balance between teaching, research and services, continuing education, ...)

A proportionate balance between fixed-term and permanent staff positions has been struck at Vetmeduni Vienna. Employment contracts are based on statutory and national frameworks and agreements. Contracts and job descriptions define the nature and distribution of staff tasks between teaching, research and administration. An internal policy determines the extent of their duties (min–max) and ensures balance. Direct supervisors must ensure that this policy is adhered to. Where not stated otherwise, all initial contracts are limited to four years. Fixed-term appointments are converted to permanent academic staff positions in a procedure following defined criteria. Professors are evaluated regularly in five-year intervals. Teaching positions are financed from the global budget of the

Establishment. Direct supervisors are responsible for ensuring continuity and stability in the teaching staff. Employees who encounter challenging or problematic situations may turn to the Staff Development Unit, Occupational safety office or Work Council for independent advice and assistance.

9.4 Personnel development

Description of the programmes devoted to academic and support staff for:
a) their professional growth and development

Professional growth and staff development are mainly the responsibility of the direct supervisors of the staff. The Staff Development Unit plays an important supporting role. Its focus is on skills development and on fostering the research and careers of up-and-coming and established scholars. The training provided is aimed at all staff and covers wide-ranging content. Regular elective seminars, workshops and training sessions are held, in both German and English: topics include teaching methodology, research and sound scholarly practice, language courses, management and leadership, health and safety in the workplace, IT skills, communication and conflict management, project management skills. Compulsory annual training is held for all staff, especially focusing on health and safety. Staff with management roles can strengthen their skills through the modular leadership programme, LeadingVet. First-day coaching, individual support, peer coaching, team coaching, Home-office and 360° feedback are also offered. Teacher training is offered by Staff Development selectively and on demand. Key elements include: (1) ongoing training for new lecturers, including training in e-learning/Vetucation® and (2) external training of lecturers. (3) In 2018, the Peer observation of teaching project was launched to enable staff to share feedback on teaching. (4) Teachers can attend a monthly Impulsfrühstück on innovative teaching and learning methods, which are also available online. (5) Regular training on state-of-the-art examinations. (6) Since 2015, the Teaching Vets Symposium (annual professional development day) has highlighted current developments in higher education[24] with a spotlight on excellent teaching. The symposium is linked with various public awards presented to teaching staff.

b) the appraisal and promotion procedures

Academic and support staff are appraised and promoted on an individual basis, with support from Human Resources and Staff Development. In annual performance reviews, current and future job requirements are defined for each individual. The employees agree on a course of action with their direct supervisors. Academic staff are encouraged and supported to complete doctorates or residency training offered by the European Colleges/American Colleges. To support the career development of female academic staff, Vetmeduni Vienna offers mentoring, coaching, and financial support to attend conferences. Early career development for junior researchers and postdocs is fostered individually by the Research Support and Innovation Unit and Staff Development (finding mentors, uncovering information on third-party funding and publication opportunities). In addition, all staff members can seek assistance with grant applications for grants supporting international mobility (conferences, training opportunities) from the International Relations Unit. The tools used for performance appraisals depend on the position of staff. In sum, the key tools are (1) Annual performance reviews: these are obligatory for all (both academic and support) staff and involve dialogue between staff and their direct supervisors; (2) Internal Performance Agreements and agreed objectives: annual, where applicable, for both academic and support staff; (3) Evaluation of senior clinical staff (Oberärzte): these must be performed every three years and involve feedback from superiors and colleagues, and self-assessment in a process moderated by Staff Development; (4) Evaluation of other academic

[24] The symposium themes were E-learning (2016), Competence-orientated teaching (2017), and Feedback (2018). The 2019 theme is Assessment.

staff: as required, typically in the context of converting fixed-term contracts to permanent positions. In addition, particularly stellar performance in individual units may attract a bonus; (5) Professors' performance is evaluated individually at five-year intervals by internal and external experts. The department and research performance of professors is also appraised by panels of external experts in five-yearly research evaluations; (6) In 360° feedback, staff simultaneously receive feedback from superiors, colleagues, employees, students, and from external stakeholders.

c) the mentoring and supporting procedures

In 2018, Vetmeduni Vienna was successfully re-certified for the second time in an external University and Family audit for its comprehensive initiatives in this area. Staff can avail of individual advice, coaching, education and training at any time with support from their direct supervisors and the Staff Development Unit. Occupational physical and mental health services are also provided. To safeguard staff well-being and provide optimal working conditions, home unit agreements and leave to care for relatives or to facilitate training or professional development can be arranged on an individual basis. Moreover, the campus has a kindergarten and provides day care for older children during school holidays. Car-parking spaces are provided at no charge, and dogs are permitted in units and on the campus. Newly appointed professors are offered dual career support and monthly, welcome events are held for all new staff. Cooperation with my Ability, a platform for job seekers with disabilities started a few years ago. Staff with a disability or chronic illness can avail of information material and consult central contacts including the university accessibility units. Required adaptations to the workplace are made.

d) their implication in the decision-making processes

All staff levels are represented by elected Work Council and by representatives in many different committees at Vetmeduni Vienna. The Rectorate works to ensure that decision-making processes are as broadly based as possible. These processes include work on the Development Plan, making and implementing decisions on large infrastructure or organisational change projects, and making and delivering curricular changes like the changes made in the 2014 curriculum. University boards such as the Scientific Advisory Board, Research Profile Board and various other committees (like the Ethics and Animal Welfare Committee or the Hygiene, Animal Diseases, Zoonoses and Biosecurity Committee) also provide robust platforms for gathering input on decisions from every level in a structured fashion.

9.5 Staff assessment

Description of the formal system in place for assessing the lecturers by the students

Teaching quality is regularly assessed on multiple levels by committees and internal and external stakeholders. Teaching staff are regularly (four-semester cycle) evaluated by students through course evaluations. Standardised questionnaires exist for different course types including lectures, exercises and seminars. Lecturers can open a course for evaluation at any time, additionally to the regular assessment. Lecturers can fill in questionnaires, which "mirror" the student questionnaires to present a complete picture. Evaluations are planned and carried out by the VRSA. Lecturers who teach a course together can decide whether their results should be made visible to students and other colleagues, but must give a reason if they decide against this. Feedback on courses or lecturers can also be communicated to the VRSA via the monthly dialogue between the VRSA and student representatives. When professorships are being appointed, the quality of their teaching must be demonstrated by means of a public lecture and students are required to draw up a didactical assessment report. Since 2019, students have also been invited to provide personal feedback in the context of 360° feedback evaluations.

Description of how (procedures) and by who (description of the committee structure) the strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The number of staff positions and their placing in the university structure is regularly assessed by the Rectorate. Permanent positions are evaluated and potentially reallocated based on the Development Plan. Units can lodge personnel planning requests in the context of annual budget negotiations. Decisions on these are made by the Rectorate following a meeting with the Finance and Staff Committees on the University Council. Cost-neutral changes in posts (replacing staff) and emergency decisions can be made by the VRR during the current year. Additional positions, in particular in research, are financed by acquired third-party funding. Units are responsible for their own recruitment and for supporting and promoting both support and academic (except professorial and tenure-track) staff. Teaching assessment is described above. Research performance is assessed as part of career planning in the annual performance reviews conducted by direct supervisors and in the course of regular external research evaluations. The performance of administrative staff is assessed through annual performance reviews as well. All available positions are publicly advertised on the university website and in the gazette and are visible to all internal and external stakeholders.

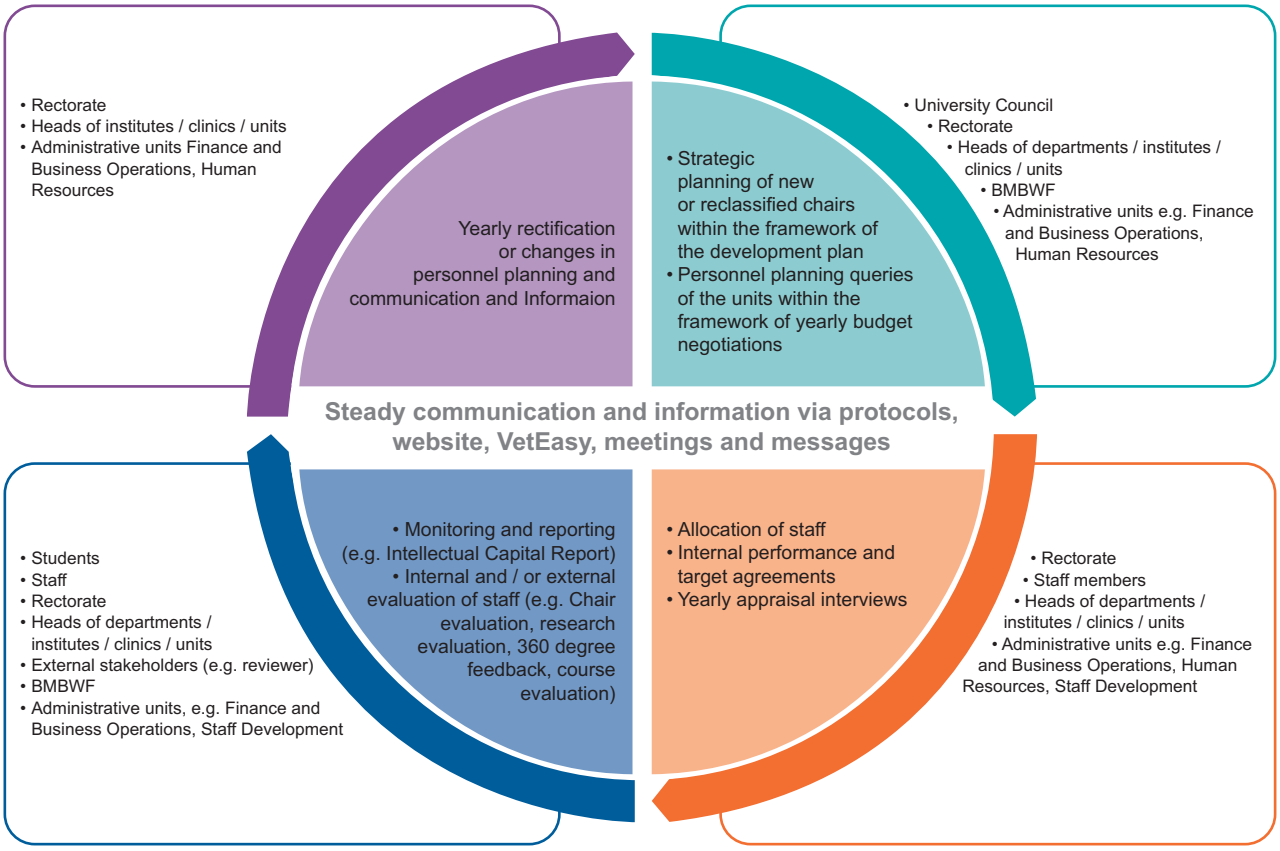

Figure 9 PDCA Cycle Strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff

Comments on Standard 9

- Undergraduate students are employed as teaching assistants, to facilitate small-group and peer teaching, and as administrative assistants, partly financed by budget for study quality.
- Fostering academic careers and particularly early career researchers is a high priority at Vetmeduni Vienna. A Postgraduate Studies Unit has already been established and a Graduate School is planned to open in the next few years. The VEmpowerment programme will focus on supporting women seeking to reconcile academic careers and their current life situations. A special mentoring programme, VetWoman, is also planned, as are tenure-track positions for high-potential candidates, the 120% model of support during parental leave, and VetKids childcare assistance, flanked by day care for babies and toddlers under the age of two.

Suggestions for improvement on Standard 9

Not applicable.

Standard 10: Research programmes, continuing and post-graduate education

Factual information

10.1 Research strategy and its contribution to research-based veterinary education

Description of how the research activities of the Establishment and the implication of most academic staff in it contribute to research-based veterinary education

Vetmeduni Vienna conducts high-quality basic research, translational and applied clinical research at an international level. This is confirmed by continuously very good international rankings (e.g. Shanghai Global Ranking of Academic Subjects, QS Ranking). The principle of research-based teaching and integration of the latest findings is central to the veterinary training programme and is consistently applied, since the academic teaching staff members also undertake high-quality research and are committed to applying scientific knowledge to their lectures. Up-to-date research is presented and discussed in seminars and journal clubs at all levels of the veterinary curriculum. By discussing the latest research with researchers, students experience the transformation of science into practice first hand. During the Science in Veterinary Medicine course, students experience research-based learning, scientific thinking, and evidence-based medical research and practice from the first semester right to the compilation of their Diploma thesis. In writing their thesis, supervised by an experienced senior researcher, students demonstrate their skills in scientific methodology and take the latest research results into account. By collaborating closely with researchers, on a specific subject, students gain in-depth knowledge and expertise in scientific work, and they can participate in research projects as study assistants. Vetmeduni Vienna also provides a number of exchange programmes for undergraduate students to experience research-based veterinary education at other universities.

Table 10.1.1 List of the major funded research programmes

The complete list of major funded research programmes can be found in the appendix. In 2018 a total of 198 research projects are listed with a total of more than €52 million. The research funding in the different research profiles (RP) was approximately: (RP1) €13.5 million; (RP2) €9.1 million; (RP3) €9.6 million; (RP4) €4.9 million; (RP5) €8.4 million. A further €6.7 million was distributed outside these specific research profiles.

10.2 Involvement and training of students in research programmes

Description of how (undergraduate) students are made aware of the importance of evidence-based medicine, scientific research and lifelong learning; -) are initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers

Topics such as good scientific practice, evidence-based medicine, decision-making and lifelong learning are fully reflected in the curriculum. Students prepare independent case reports as part of their clinical rotations. In seminars and journal clubs the students engage with ongoing research. On the compulsory course entitled Science in Veterinary Medicine, they also acquire a comprehensive portfolio of scientific competences and skills, including literature search and research methodologies. They then provide proof of this by compiling a Diploma thesis on a specific topic decided on by the student and the supervising researcher. During the above-mentioned course, students put self-management into practice and recognise the importance of continuing education, evaluation and self-reflection.

Description of how undergraduate students are offered to participate to research programmes on a non-compulsory or compulsory basis

Since 2002, a research project compiled in a written Diploma thesis has been a compulsory part of the curriculum. For this, students perform a defined research project on a non-clinical or clinical topic (e.g. experimental, prospective or retrospective study, case report or literature review) under the supervision of a senior researcher with expertise in the respective field. The compulsory Science in Veterinary Medicine course prepares the students for this task; students take compulsory courses in the theory and practice of research methodologies. Students can also become interns or assistants on clinical or non-clinical research projects to gain first-hand experience. All students can participate in the public PhD and doctoral thesis defences and lectures based on doctoral or habilitation research as well as guest lectures as part of graduate or ERASMUS programmes. International summer schools at Vetmeduni Vienna or elsewhere are advertised to students.

Description of the minimum requirements for the graduation thesis (Master dissertation), its supervision and its assessment

For the Diploma thesis, 20 ECTS credits are allocated. There are no minimum requirements. Each thesis must adhere to the requirements of good scientific practice and is evaluated by the supervisor as well as peer-reviewed by another scientist in the respective field. The primary supervisor must be on the staff of Vetmeduni Vienna and must be adequately qualified either by habilitation or equivalent qualification (nominated by the VRSA). The supervisor primarily provides guidance on thesis design and structure, approach to the relevant literature, research methodology, and data analysis, presentation and interpretation. Both student and supervisor sign a written agreement on the topic, underlying hypothesis/research question and provisional outline of the thesis, including a brief calculation of costs, and submit it to the VRSA for approval. This agreement serves as a contract on the rights and duties of the supervisor and the student regarding the thesis and the compilation and review of the thesis. Each thesis is also checked for plagiarism through Student Services. On completion of the Diploma thesis the student has gained a significant amount of scientific knowledge, scientific skills and academic competences. This includes: (1) identification of relevant scientific questions; (2) scientific literacy: putting the research question in the context of current knowledge; (3) scientific reasoning: assuming a critical stance towards current theories and methods, and discussing new findings in this context; (4) methodological competence: choosing appropriate data acquisition and analysis methods; (5) objective and critical reflection on the results obtained; (6) evidence-based reasoning: drawing conclusions substantiated by the current findings.

10.3 Lifelong learning strategy

Table 10.3.1 Number of students registered in postgraduate clinical training

Training	2018	2017	2016	Mean
Interns:				
Small Animal Medicine (rotating internship)	7	11	14	11
Equine Medicine (rotating internship)	6	6	5	6
Ruminant Medicine	-	-	-	-
Total	**13**	**17**	**19**	**17**

Training	2018	2017	2016	Mean
Residents:				
European College of Animal Reproduction (ECAR)	1	1	1	1
European College of Bovine Health Management (ECBHM)	1	1	3	2
European College of Equine Internal Medicine (ECEIM)	1	1	2	1
European College of Poultry Veterinary Science (ECPVS)	3	1	1	2
European College of Veterinary Anaesthesia and Analgesia (ECVAA)	3	2	2	2
European College of Veterinary Clinical Pathology (ECVCP)	-	1	1	1
European College of Veterinary Diagnostic Imaging (ECVDI)	1	1	1	1
European College of Veterinary Internal Medicine – Companion Animals (ECVIM-CA)	4	4	4	4
European College of Veterinary Internal Medicine – Companion Animals; Oncology (ECVIM-CA Oncology)	1	1	1	1
European College of Veterinary Ophthalmologists (ECVO)	1	1	-	1
European College of Veterinary Surgery, Large Animal Surgery (ECVS)	2	3	2	2
European College of Veterinary Surgery, Small Animal Surgery (ECVS)	2	3	4	3
Total	**20**	**20**	**22**	**21**

Numbers contain only those residents who are admitted through the Residency Advisory Board.

Table 10.3.2 Number of students registered in postgraduate research training

Degree	2018	2017	2016	Mean
PhD	130	140	141	137

Postdocs are not considered, as they are not classified as “students”; PhD numbers as of 31 December 2018.

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

Programmes	WS 2018	WS 2017	WS 2016	Mean
Master Evolutionary Systems Biology	28	10	4	14
European Master in Comparative Vertebrate Morphology*	3	5	2	3
Master Biomedicine and Biotechnology*	2	8	25	12
Master Comparative Biomedicine	35	26	14	25
Master Wildlife Ecology and Wildlife Management	205	200	206	204
Interdisciplinary Master in Human-Animal Interactions	64	68	58	63
Total	**337**	**317**	**309**	**321**

* expiring

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

LLL Category	Courses	2018	2017	2016	Mean
1	Continuing professional development for all university staff (see Standard 9)	882	723	854	820
2	PhD and Postdoc programmes	See Table 10.3.2 (for PhD students)			
3	Residency programmes	See Table 10.3.1			
4	Postgraduate Master's programmes	See Table 10.3.3			
5	Internships	See Table 10.3.1			
6	Certified Canine Rehabilitation Practitioner (CCRP)	3	17	12	11
	Applied Cynology	35	31	29	32
	Animal-assisted Therapy and Animal-assisted Supportive Measures	-	-	6	6
	Introduction to Laboratory Animal Medicine	-	17	-	17
	Veterinary Public Health	29	-	-	29
7	CPE lectures, seminars, workshops (S:S; S:P)	See appendix			

LLL Category 1: calendar year (census date: 31 December); LLL Category 5: winter semester

Prospected number of students registered at postgraduate programmes for the next 3 academic years

Postgraduate student numbers are expected to remain stable in comparison with previous years, as no major changes are planned.

Description of how the postgraduate clinical trainings of the Establishment contribute to undergraduate veterinary education and how potential conflicts in relation to case management between post- and undergraduate students are avoided

Vetmeduni Vienna strives to provide the entire academic staff with multiple options for the continuing education, internally (e.g. journal clubs, seminars) and externally (international conferences, workshops). Senior teaching staff train undergraduate and postgraduate students, and supporting the latter's clinical development through internships or residency programmes. Postgraduates are also involved in undergraduate teaching where appropriate. Vetmeduni Vienna strives to ensure sufficient and transparent distribution of patient cases and that trainees at all levels (students, interns, and residents) gain sufficient practical clinical experience at different degrees of complexity and in a team-based, collaborative manner. This is possible due to the number of cases treated at the Vetmeduni Vienna clinics: both undergraduate and postgraduate students can be confronted with cases of varying complexity and the potential for conflict over cases and patients is kept to a minimum.

Description of how the continuing education programmes provided by the Establishment are matched to the needs of the profession and the community

Due to its singular position in Veterinary Medicine in Austria, Vetmeduni Vienna sees itself as a central hub for lifelong learning for all stakeholders and is committed to the European Universities' Charter on Lifelong Learning. A Lifelong Learning School is planned for 2020, to provide QA, administrative and technical support for the development of university training courses, or continuing professional development programmes to veterinary medical graduates and interested parties with other degrees, which are subject to the same high-quality standards as regular study courses. The focus is on practice-based and visionary courses, which are continually evaluated and updated. Additionally, internship and residency programmes represent a range of comprehensive, networked and internationally recognised continuing education. The University is also an accredited Advanced Trai-

ning Facility for education and continuing education in the field of laboratory animal science, compliant with GV-SOLAS. The Establishment is well placed to serve the community and the public, through a multitude of personal and regular contacts and projects with various interest groups. A joint project between Vetmeduni Vienna, the Ministry of Social Affairs (BMASGK) and the ÖTK with the IHS was a comprehensive survey of the current state of veterinary care in Austria. The University consults closely with veterinarians in the regions, the responsible federal ministries (for Sustainability and Tourism [BMNT] and BMASGK) and interest groups regarding specific animals. This exchange enables the development of both existing and new continuing education courses, e.g. training in veterinary public health. On behalf of the Society of Friends of the Vetmeduni Vienna, Vetmeduni Vienna is offering additional courses for students, including "Operate a veterinary pharmacy" and "Radiation Protection Course".

10.4 Quality assurance in research activities

Description of the mechanism used by the Establishment to ensure that its research activities contribute to research-based education

As research-based education is a priority at Vetmeduni Vienna, several formats have been established to assure a close integration of research and teaching, including seminars and journal clubs. Besides compulsory courses, students are also encouraged to take part in symposia, summer schools and workshops as part of their elective subjects. Current and especially exceptional case studies from different clinical and non-clinical disciplines are directly implemented in teaching sessions and/or journal clubs.

Description of how (procedures) and by who (description of the committee structure) research, continuing and postgraduate education programmes organised by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Vetmeduni Vienna's research strategy and focus are defined in close collaboration and interaction between the University Council, Rectorate, Scientific Advisory Board, Research Profile Area Board and senior scientific staff. The VRRIR is responsible for the structural alignment of PhD programmes. There is also a separate CuCo for Postgraduate Studies, supported by the Postgraduate Studies Unit, which provides administrative support to PhD, doctoral students and the supervisors. The PhD and doctoral curriculum are regularly revised and developed analogously to the curriculum the Diploma Programme in Veterinary Medicine. The associated process flows and approval loops (including approval of the curriculum by the Senate) are identical. Information on these programmes is communicated within the CuCo and to internal and external stakeholders, and published in the university gazette and on the website. At Vetmeduni Vienna, residency training is accompanied by the Residency Advisory Board, which undergoes annual QA evaluation and determines the allocation of residents. The University offers its own internship training course. This limited number of training places ensures that sufficient patient cases are available for postgraduate and undergraduate training. Both programmes (internship and residency) are implemented according to the respective guidelines and statutes of the relevant European or American College programmes.

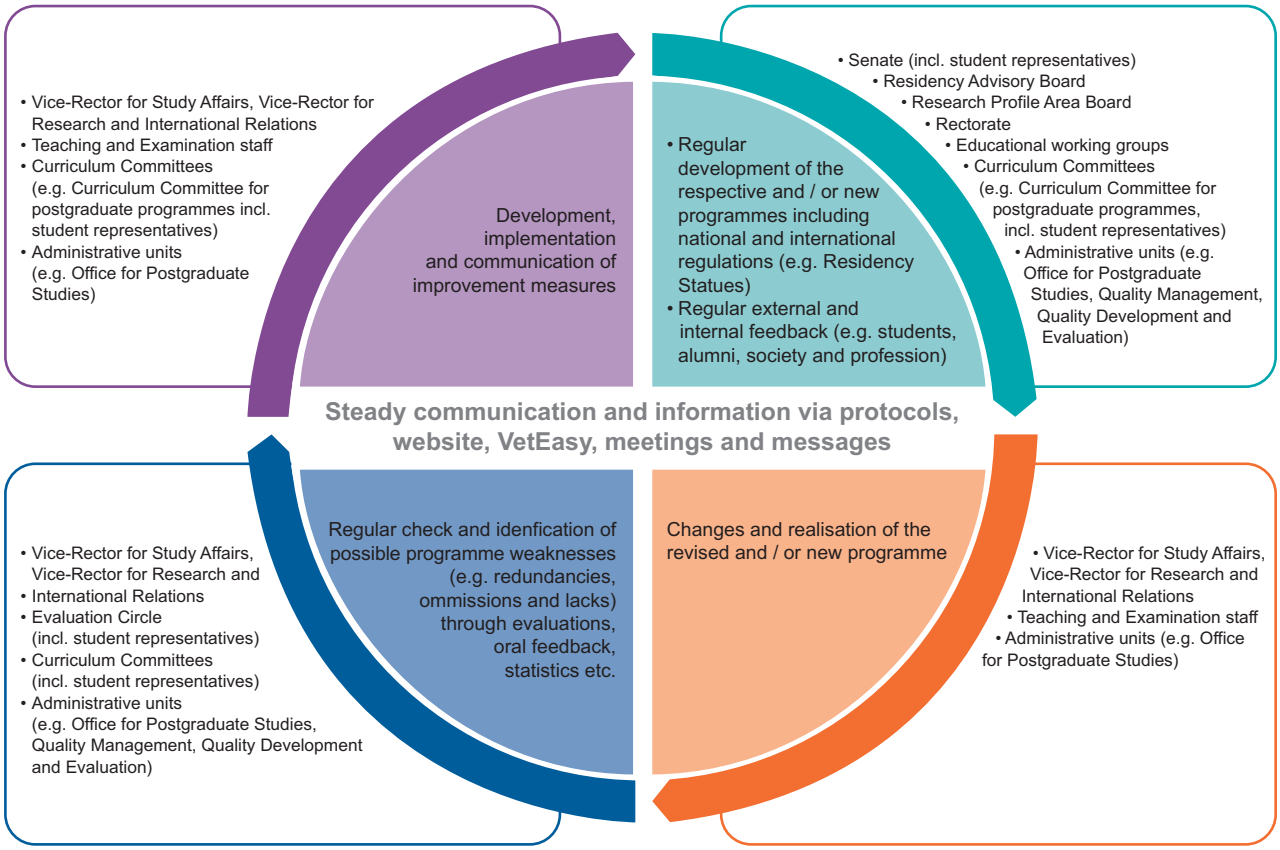

Figure 10 PDCA Cycle Research, continuing and postgraduate education programmes

Comments on Standard 10

Substantial and diverse numbers of specialisations and continuing education opportunities are provided.

Suggestions for improvement on Standard 10

- Create incentives to encourage graduates to remain in science.
- Expand the Innovation Vet Circle: in 2018, the Rectorate decided to establish the IVC as an advisory body consisting of scientists from different career levels from all areas of Vetmeduni Vienna. The committee advises the Rectorate and offers strategic support in honing and designing research profiles and foci, networking scientific disciplines, and strategic orientation of the research infrastructure, serving as a driving force for innovation at Vetmeduni Vienna.
- Establish a Top Vet Science programme: designed as a cooperation between clinical and non-clinical research, this programme is intended to highlight showcase projects with veterinary relevance that reflect the unmistakable research profile of Vetmeduni Vienna. Vetmeduni Vienna therefore sets itself the goal – depending on available budget funds – of selecting suitable projects in a transparent, competitive, internationally evaluated procedure and equipping them with appropriate resources. The goal is to position a Top Vet Science project as internationally visible and sustainable, at the latest by 2025.

ESEVT Indicators

See Excel file in the appendix.

Comments on indicators

Number of equine patients seen extra-murally: all equine patients are treated internally at the Vetmeduni Vienna Equine University Clinic. Furthermore, Vetmeduni Vienna collaborates closely in the equine sector with the Graf Lehndorff Institute.

Suggestions for improvement on indicators

Not applicable

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Abbreviations

3R	Refinement, Reduction, Replacement
AHIS	Animal Hospital Information System
ALMA	Library Information System
AOC	Austrian Ornithological Centre
ASchG	Austrian Occupational Health and Safety Act
AStV	Austrian Workplace Decree
ATRACK	Graduates Monitoring System
AWG	Austrian Waste Management Act
BAL	bronchioalveolar lavage
BBG	Austrian Federal Procurement Agency
BfR	German Federal Institute for Risk Assessment
BGStG	Federal Disability Equality Act
BHBA	Beta-Hydroxybutyrate
BIG	Bundesimmobiliengesellschaft
BMBWF	Federal Ministry of Education, Science and Research
BMASGK	Federal Ministry of Labour, Social Affairs, Health and Consumer Protection
BMNT	Federal Ministry for Sustainability and Tourism
BSL	Biosafety Level
BVD	Bovine viral diarrhoea
CASUS	See Glossary
CCRP	Certified Canine Rehabilitation Practitioner
C-I-C	Connect – Interact – Celebrate
CM	Zoo and Wildlife Medicine – Conservation Medicine
CMS	Content Management System
CPE	Continuing Professional Education
CT	Computer Tomography
CuCo	Curricular Committee
DBIS	Database Information System
DOC	Day One Competences
EAEVE	European Association of Establishments for Veterinary Education
EAWC	Ethics and Animal Welfare Committee
ECCVT	European Coordination Committee for Veterinary Training
ELISA	Enzyme-Linked Immunosorbent Assay
EM	Equine Medicine
EMAS	Eco-Management and Audit Scheme
EMQ	Extended Matching Questions
EPA	Entrustable Professional Activities
EPT	External Practical Training
ESEVT	European System of Evaluation of Veterinary Training
ESG	European Standards and Guidelines for Quality Assurance in the European Higher Education Area
EU	European Union
EWG	Educational Working Group
EZB	Electronic Journal Library
EZproxy	Dedicated remote access service (IT)
FAST Exam	Focused assessment with sonography in trauma examination
FELASA	Federation of European Laboratory Animal Science Association
FSQ and VPH	Food Safety and Quality and Veterinary Public Health

FTE	Full-Time Equivalent
GHS	Globally Harmonised System
GMO	Genetically Modified Organism
HHM	Herd Health Management
HS-QSG	Austrian Higher Education Quality Assurance Act
ICSI	Intracytoplasmic Sperm Injection
ICU	Intensive Care Unit
IFA	Department for Agrobiotechnology
IHS	Institut für höhere Studien/Institute for Advanced Studies
IQM-HE	Internal Quality Management: Evaluating and Improving Competence-Based Higher Education
IVSA	International Veterinary Students´ Association
KFQ	Key Feature Questions
KLIPP-VET	Clinical Examination of Entrustable Professional Activities
KLRVU	Decree on Uniform Cost Accounting Standards at Universities
LAM	Laboratory Animal Medicine
LDB	Laboratory Database
LLL	Life-Long Learning
MALDI-ToF MS	Matrix Assisted Laser Desorption/Ionisation – Time of Flight – Mass Spectrometry
MC	Multiple Choice
MRI	Magnetic Resonance Imaging
OSPE	Objective Structured Practical Examination
ÖTK	Austrian Chamber of Veterinarians
PACS	Picture Archiving and Communication System
PCR	Polymerase Chain Reaction
PDCA	Plan Do Check Adjust
PPM	Pig and Poultry Medicine and Herd Health Management
PSA	Personal Protective Equipment (PPE)
QA	Quality Assurance
QM	Quality Management
QQE	Quality Management, Quality Development and Evaluation
Repro	Reproduction/reproductive biotechnology
RM	Ruminant Medicine and Bovine Herd Health Management
RP	Research Profile
RT	Real Time
SAM	Small Animal Medicine
SAQ	Short Answer Questions
SDS	Safety Data Sheets
SOE	Structured Oral Exam
SOP	Standard Operating Procedures
SPECT camera	Single-Photon Emission Computed Tomography
STUDMON	Student Monitoring
SWOT	Strengths Weaknesses Opportunities Threats
TEG	Thromboelastography
TierQuarTier	See Glossary
ToF	Time of Flight
TS	Specialisation Track
TVG	Austrian Animal Testing Act
UG	Austrian University Act
University Gazette	See Glossary
US	United States
VetBioBank	See Glossary

VetEasy	See Glossary
VetFarm	See Glossary
VeTime	See Glossary
VetmedOnline	See Glossary
VetNEST	Veterinary Network of European Student and Staff Transfer
VetNEST ERASMUS + SOFTVETS	Pan-European soft skills curriculum for undergraduate veterinary education
VetSim	See Glossary
Vetucation®	See Glossary
VMPT	Veterinary Medicine Progress Test
VPN	Virtual Private Network
VRCVM	Vice-Rector for Clinical Veterinary Medicine
VRIR	Vice-Rector for Research and International Relations
VRR	Vice-Rector for Resources
VRSA	Vice-Rector for Study Affairs
VTH	Veterinary Teaching Hospital
WSC	Wolf Science Center

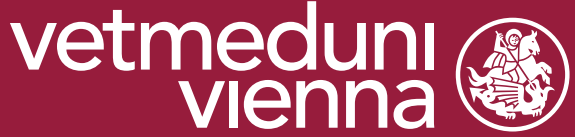
Glossary

ATRACK	Regular survey and monitoring of graduates
CASUS	Case-based learning tool
Competence Check	Evaluation of student competences
ORBIS VetWare	Software based on technology by ORBIS® (Agfa Healthcare)
Q-Exam	Examination platform
Statutes	Constitution of Vetmeduni Vienna
STUDMON	Student monitoring system
TierQuartTier	Animal welfare competence centre for abandoned or runaway pets
University Gazette	Official public document about organisational, personnel and strategic developments of the Organisation
VetBioBank	Research facility, professionally collecting biological samples and associated data of animal origin
VetDoc	Research documentation
VetEasy	Intranet (Sharepoint)
VetFarm	Teaching and research farm of Vetmeduni Vienna
VeTime	Student duty calendar
Vetmediathek	Central multimedia database
VetmedOnline	Campus management system
VetSim	Skills lab of Vetmeduni Vienna
Vetucation®	E-learning platform

Figures and tables

Figures

Tables



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