



UNIVERSITÄT
LEIPZIG



Faculty of Veterinary Medicine - VMF University of Leipzig

Self Evaluation Report
for the European Association of
Establishments for Veterinary Education
Full Visitation 15 - 19 October 2018

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INTRODUCTION

The VMF is one of five establishments for veterinary education in Germany. All buildings are situated on one campus. It is accessible by bike, foot, public transport or car. The teaching and research farm (LVG Oberholz) is approximately 10 km away. The VMF continuously works on further improving its offers, with a focus on interdisciplinary studies and research of high quality, research driven services and excellent patient care.

According to § 9 of the Saxon University Freedom Law (SächsHSFG), QA is mandatory for all universities in the Federal State of Saxony. The Dean's Office of the VMF evaluates the status quo and developments before acting within the scope of its competencies and possibilities. In doing so, it is supported by students and commissions comprised of non-academic employees. An online platform for entry of research reports is currently being developed, which also serves the evaluation of research achievements. Internal QA for the University of Leipzig's (UL) programme is in place and Evaluation Regulations have been passed. The VMF participates in the Progress Test in Veterinary Medicine (PTT), which allows students to monitor their individual learning progress throughout the programme.

The VMF has a long history of clinical studies, which are planned, documented and implemented according to QA aspects (GCP, GLP). The principles of "Good Practice" are available to students, doctoral students and employees on the VMF's homepage.

The following lists activities since the 2008 visitation.

Organisation and Infrastructure

With respect to the suggestions in the commission report of 2008, a number of measures have either already been adopted, are currently being implemented or are in preparation.

- Institute of Animal Nutrition has been relocated to the VMF campus.
- Planning of renovations for the Institute of Pathology and Parasitology, including the new Parasitology building (S2-animal housing facilities), has been completed; beginning of construction work is scheduled for 2019/2020.
- Reorganisation of the large animal clinics (Department for Horses, Department for Ruminants and Swine) has been completed.
- Veterinary Teaching Hospital (VTH) with four departments has been established.
- In the Veterinary Public Health Centre (VPH), the professorship of Epidemiology position was filled.
- The professorship of Food Hygiene and Consumer Protection was filled.
- An experimental animal facility at the LVG Oberholz has been built.
- Installation of a feed mill at the LVG Oberholz has been completed.
- Reconstruction of the LVG Oberholz into a modern teaching and research facility is currently being planned.
- Overhead from service revenues was adapted to increased expenditures by the Clinic Commission and in consultation with the Dean.
- The flow of information between institutes and clinics will be improved using VETERA®.
- Five research foci for stimulating scientific exchange have been established.
- Numerous training opportunities for junior scientists, e.g. didactics, are available at the UL.
- Residencies of European Colleges are available in different units.

Curriculum

VMF's innovative curriculum was developed before the 2008 site visit and at that point had been partially implemented; at the time, it had exhausted the options given by the 2006 TAppV to reach maximum flexibility while fulfilling the conditions of legislation (TAppV). The experience gained since then has been

INTRODUCTION

incorporated in further developing the “Leipzig model”, as a result of continuous ongoing discussions and with consideration of students’ opinions. Essential developments thus far are:

- Developing catalogues summarising learning objectives and examination topics.
- Adapting the curriculum of Botany and Zoology to learning objectives of Veterinary Medicine.
- Further developing preclinical and clinical teaching in body-system-centred foci.
- OSCEs in clinical propaedeutics.
- Structured review system for MC examinations of interdisciplinary foci.
- Establishing a 5th year elective track system.
- Introducing students to research- and evidence-based work in the 5th year clinical rotation and in the form of project work.
- Encouraging independent studies, particularly in the 5th year (tracks, project).
- Establishing 5th year clinical rotations to strengthen intramural clinical practical training.
- VMF encourages student mobility (e.g. ERASMUS).

Facilities and Equipment

The VMF invests substantial funds in the preservation and improvement of its facilities, as well as in technical infrastructure. The following measures in particular are important for the quality of teaching:

- Introduction of an electronic system for examination with the Umbrella Consortium for Assessment Networks (UCAN).
- Hiring of temporary employees for the organisation of electronic examinations by the UL.
- State of the art managed integrated skills lab (PAUL) with 40 training modules.
- Core Unit Virtual Microscopy for all students and employees.
- E-learning and the learning platform Moodle are established and continuously further developed.
- E-book platform “VetCenter” for all students and employees.
- Office for the Student Council (“Fachschaftsrat”).

Other issues of relevance

Along with the named measures, other developments that are not directly connected to the curriculum are of high relevance for the VMF's sustainability and profile development in regards to training, science and publicity.

- Newsletter (“Synapse”) is publicly available.
- Student selection criteria focus on sciences such as biology and completed professional training (see www.hochschulstart.de).
- Occupational fields are explained to interested students during the “Study Information Day”.
- The establishment of a central laboratory is under discussion. Alternatively, networking among diagnostic laboratories might be beneficial.
- New valuable research equipment is available at several units.
- Establishment of methodological core units.
- The Veterinary Council of the State of Saxony recognises the diplomate status of European Colleges as equivalent to the national veterinary specialist title.
- The VMF acknowledges the relevance of the diplomate status of European or American Colleges in appointment procedures.
- Introduction of a Ph.D. degree program is under discussion at the VMF regarding effort and use.

Major problems encountered by the VMF

Prevailing problems that were noticed during the 2008 site visit are partly fundamental and not to be solved by the VMF, but would be partly solvable with considerable support from the UL and the government.

- The basic financing of the VMF is marginal.
- There is a lack of means for an attractive „research bonus system“.
- Financial means for maintenance and repairs of the modern research infrastructure are scarce.
- The existing building stock is maintenance-intensive, with a constant need for maintenance measures and investment.
- A significant number of professorship positions will have to be re-staffed within the next five years.
- There are problems with filling open professorship positions in time and with eligible candidates.
- The UL still has to approve permanent supply of personnel in order to organise student teaching and examinations.
- Changes to the structure of the curriculum must comply with the Federal Law (TAppV).
- Options for evaluation of the mandatory EPTs are generally restricted in Germany.
- The regulatory link between available teaching capacity (core-funded staff), curriculum hours and number of students (capacity guidelines) reduces the options to recruit additional staff for teaching or to change the number of incoming students.
- The European legislation on working hours in medicine challenges clinical services.
- The German national law on minimum salaries challenges the VMF finances.
- Rigid employment legislation impedes qualification perspectives of highly qualified academics.

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

The VMF is undergoing “Full Visitation”. The SER follows the requirements as set out in ESEVT Standards for Accreditation (as approved by the EAEVE General Assembly on 12 May 2016).

1 OBJECTIVES AND ORGANISATION

1.1 Factual information

1.1.1 Details of the VMF

| Details of the VMF | |
|------------------------|---|
| Name | Faculty of Veterinary Medicine, UL |
| Address | An den Tierkliniken 19, D-04103 Leipzig |
| Phone | +49 341 97 38000 |
| Fax | +49 341 97 38099 |
| Email | dekanat@vetmed.uni-leipzig.de |
| Website | http://dekanat.vetmed.uni-leipzig.de |
| VMF's Head (Dean) | Prof. Dr. med. vet. Walter Brehm |
| Vice Dean | Prof. Dr. Dr. med. vet. Thomas Vahlenkamp |
| Dean of Study Affairs | Prof. Dr. med. vet. Christoph Mülling |
| Head of Administration | Dr. rer. nat. Kathy Busse |

| Persons responsible for the professional, ethical, and academic affairs of the VTH | |
|--|--|
| Department for Birds and Reptiles | Prof. Dr. med. vet. Maria-Elisabeth Krautwald-Junghanns Dipl. ECZM, Veterinary Specialist for Birds |
| Department for Horses | Prof. Dr. med. vet. Walter Brehm Dipl. ECVS, Veterinary Specialist for Horses |
| Department for Ruminants and Swine | Prof. Dr. med. vet. Alexander Starke Dipl. ECBHM, Veterinary Specialist for Cattle |
| Department für Small Animals | Prof. Dr. med. vet. Gerhard Oechtering Veterinary Specialist for Surgery and Anaesthesia |

| Executive Board of University of Leipzig | |
|--|---|
| Rector | Magnifizienz Prof. Dr. med. Beate A. Schücking Ritterstraße 26, D-04109 Leipzig Telefon: +49 341 97-30000, Telefax: +49 341 97-30009 mailto:rektorin@uni-leipzig.de |
| Chancellor | Prof. Dr. Birgit Dräger Ritterstraße 26, D-04109 Leipzig Telefon: +49 341 97-30100, Telefax: +49 341 97-30109 mailto:kanzler@uni-leipzig.de |

| Official authority overseeing the VMF | |
|--|---|
| Saxon State Ministry for Science and Arts (SMWK) | Excellenz Minister Dr. Eva-Maria Stange Wigardstraße 17, D-01097 Dresden Telefon: 0351 564-0, Telefax: 0351 564-6025 mailto:presse@smwk.sachsen.de |

1.1.2 Summary of the VMF Strategic Plan with an updated SWOT analysis, the mission and the objectives

Mission Statement

It is the VMF's state duty to teach veterinary students, scientifically and practically according to § 1 TappV, along with further and continuing training after § 1 Federal Veterinary Code. In their daily work, our graduates ensure consumer protection, animal health and welfare, which they continuously improve by research and practical veterinary work.

Strategic Plan

The VMF is teaching- and service-oriented, with research visible both nationally and internationally, competitive but overall very diverse, according to the VMF's defined state duty. The active profile development process started in 2016 and accounts for a focus of research activities in five different areas, in order to be nationally and internationally competitive and to connect to larger research groups. The VMF faces challenges and expectations posed by the UL and society, while shaping its future actively, dynamically and in close collaboration with the UL. Recruitments that are exact, strategic and focus-oriented (content and subject wise) will be a central element in this process. Further important elements are optimising the use of resources, as well as structural optimising. The VMF formulated its strategic plan ("Zukunftskonzept") in 2016 (see appendix to 1.1.2.). This concept was approved by the Faculty Council (FR), submitted to the rectorate of the UL, while serving as a guideline for the VMF's development until 2024. The following **objectives** are central elements of the "Zukunftskonzept":

- Offering a curriculum of high quality, which is continuously reevaluated and improved.
- Striving for excellence in science and teaching, providing continuing education for the veterinary profession.
- Focusing of research activities and connecting to the fields of excellence of the UL, increasing the national and international competitiveness, along with a stronger internationalisation by connecting to large research groups.
- Expanding the support of young scientists with research funding.
- Continuing education offers for post graduates according to the "One World-One Health Initiative".
- Providing services of high quality and excellent patient care.
- Supporting further education of our staff to improve the quality of work and to improve processes and employees' motivation.
- Targeting a financial basis that is stable, predictable and sufficient.

SWOT-Analysis

Recent developments are expected to positively impact the VMF and its work:

- The UL is system-accredited and has established quality assurance processes (Quality Management, QM, Guide: <https://www.uni-leipzig.de/universitaet/profil/zentrale-organe/rektorat/prorektor-fuer-bildung-und-internationales/qualitaetsentwicklung.html>)
- The mid-term planning of the Federal State of Saxony (Hochschulentwicklungsplan (HEP) 2025) provides universities in the State of Saxony with a stable perspective regarding financial and personnel resources for the coming years.
- Deans of Study Affairs of the five German veterinary faculties have introduced regular meetings to facilitate closer cooperation in curricular matters.
- Ongoing process of developing a 10-year-plan for the infrastructure of the Faculty of Veterinary Medicine (VMF) will enable the University and state authorities to strategically plan investments and will help to further improve the quality of its key tasks.

Strengths

- Good contact to students, coherent small campus, familiar atmosphere.
- PAUL, state of the art managed integrated skills lab.

OBJECTIVES AND ORGANISATION

- Solid modular core-curriculum and broad spectrum of electives (tracks).
- E-Assessment using Umbrella Consortium for Assessment Networks (UCAN)
- Electronic Teaching and e-learning platform of UL (Moodle), many unique offers (e.g. VetAnaTube offers 120 teaching videos for anatomy).
- Incorporated feedback system (systematically utilised for written examinations).
- System-accredited UL.
- Systematic evaluation in collaboration with the UL. Quality Management (Rules of Evaluation at the VMF).
- Students are represented in every commission (incl. the professorship and other Appointment Committees) and have an essential impact (e.g. 50% students in the Committee of Study Affairs).
- Offers for the obligatory agricultural practical training (for 50% of the students) at LVG Oberholz.
- Nationally and internationally competitive research newly organised in five networks (see appendix to 10.1.1.), active involvement of all undergraduates in research.
- Great body of student assistants, who are well integrated in the procedures of institutes and clinical departments.
- The University Library provides access to print media and online service, e.g. Thiemes VetCenter (electronic library for veterinary books and magazines). Open Access publication is provided through the format "Leipziger Blaue Hefte" (LBH).
- The VMF, substantially supported by its alumni organisation ("Freundeskreis Tiermedizin", FKT), grants several awards for study and teaching performance and postdoctoral research.
- VMF has access to structured postgraduate doctoral studies at the Research Academy Leipzig (RAL).
- High visibility of the VMF by (co)organisation of nationwide accepted conferences (e.g. "Doktorandenforum" and Leipziger Tierärztekongress (LTK)).
- Core Units have been established at the UL and VMF (e.g. Biolmaging, Saxon Incubator for Clinical Research, Biomedical Centre Leipzig [BBZ]).
- Strong VTH with 4 clinical departments grants for high patient load for teaching, VTH holds very modern equipment (partly unique in diagnostic imaging), VTH has access to large scale herds of farm animals (cattle, pigs, poultry).

Weaknesses

- Coordination of interdisciplinary teaching in thematic foci is a challenge.
- Office of Study Affairs is critically understaffed, causing shortages in individual services for students and creating challenges in coordination of quality management.
- Teaching is under-financed, causing constant challenges to provide the necessary materials.
- Lack of a coordinator for the mandatory extramural practical training (EPT).
- Recruitment of new professors often takes a long time, thus creating temporary shortages in teaching, research and services.
- Problems in the recruitment of highly qualified staff on all levels (e.g. tenure track system missing). Difficulties to support dual-career options together with recruitment.
- The basic financial resources and the allocation of staff and infrastructure are partly prohibitive for competitive grant application. Number of strong and highly financed research projects is too low.
- Diversity of the institutes and clinical departments prevents thematic convergence.
- General lack of working time resources. Higher expectations for non-specific tasks are not answered by an increased personnel support.
- Difficulties in the research grant administration and insufficient support for research activities by UL.
- Shortages in technical staff for the support of patient care and research.
- Generally weaknesses in the structure of staff and building infrastructure.

Opportunities

- PAUL will be further developed and integrated in teaching and examinations providing OSCE elements.
- The curriculum will be developed towards stronger individual orientation in the clinical rotations, where an individual student will spend more time in a department of choice.
- Further development of the interdisciplinary teaching approach, completion of modular teaching, optimisation of integrated teaching and assessment.
- Cooperation with the Saxon State Teaching Farm in Köllitsch will enable the VMF to offer training in agriculture and applied training in a large scale farm setting.
- Development of research profiles leads to applications for Graduate Schools and/or Research Training Groups (German research funding agency [DFG]).
- Leipzig is a model region for research cooperations across federal state borders (e.g. nutriCARD).
- Involvement in the application for a research cluster of excellence “understanding adipositas”.
- Improved strategic recruitment of professors and networking with local research institutions.
- The UL grants Pre-Doc-Awards, and a postdoc programme has been set up (RAL).
- Improved support for grant applications and administration has been introduced by UL.
- Intensification of the collaboration with the ADTI to support research activities.
- A central system for the management of continuing education activities is being developed.
- A personnel development concept for scientific and non-scientific staff has been introduced.

Threats

- Modular curriculum (foci) is difficult to manage due to complexity and lack in personnel.
- Teaching staff tends to lose contact with students (due to modular organisation).
- Also in the future, EPT will be difficult to evaluate in a rigorous way and thus, QA in this part is challenging.
- Teaching competes with research and services in light of tight staff resources.
- Insufficient basic resources make it challenging to retain or to recruit professors and scientific staff, while limiting the opportunities for research grant applications and for realise transfer projects
- Necessity to finance research staff using income from services.
- Further reduction of staff.
- The law on minimum salaries and the law on working hours in the medical professions leads to enhanced need for financial resources to compensate for.
- No financial resources for public relations.

For a more detailed SWOT-Analysis see appendix to 1.1.2.

1.1.3 Summary of the Establishment Operating Plan with timeframe and indicators of achievement of its objectives

The strategic planning document of the VMF “Zukunftskonzept”, passed by the FR of the VMF in 2016, combines thoughts on strategic development as well as optional goals (see 1.1.2 and appendix to 1.1.2).

Within UL, the governing board (rectorate) organises commissions for structure and development, teaching affairs, research and others. Operational objectives are being set out in objective agreements with the University Executive Board (Zielvereinbarung) starting in autumn 2018, and being renewed every three years. The Dean's Office provides information on objective agreements within meetings of the FR with strategy and timeframe of implementation. After two years, the VMF must report back to the University Executive Board.

OBJECTIVES AND ORGANISATION

1.1.4 Organisational chart of the VMF

The organisational chart does not display all organisational structures in detail. Further information is displayed in the appendix to 1.1.4.

| University of Leipzig Rector, Vice Rector for Education and International Affairs, Vice Rector for Development and Transfer, Vice Rector for Research and Academic Careers, Chancellor (Head of administration) | | | | |
|---|---|-------|--|---|
| Faculty of Veterinary Medicine Dean's Office (Dean, Vice Dean, Dean for Study Affairs, Head of Administration) | | | | |
| Centre | Scientific Institutes and Departments | Prof. | Commissions, Coordinators and Representatives | FR, Employees |
| Pathology and Anatomy | Institute of Anatomy, Histology and Embryology | 2 | Dean of Study Affairs, Liaison Lecturer, Head of the Committee of Study Affairs, Editorial Team "Synapse", KELDAT, management member PAUL, Director FKT, Chair on the International Committee on Veterinary Histological Nomenclature (ICVHN) | |
| | Institute of Pathology | 2* | | |
| Veterinary Basic Sciences | Institute of Pharmacology, Pharmacy and Toxicology | 2 | Library representative, Equal opportunities officer, Representatives of animal diseases and animal production (MPI) | FR 9 professors 1 equal opportunity commissioner 3 academic staff 1 non-academic staff 3 veterinary students <i>Members of the FR are elected for 3-year terms and elect the Dean and the Vice Deans for 3-year term</i> |
| | Institute of Animal Nutrition, Nutrition Diseases and Dietetics | 1* | | |
| | Institute of Physiology | 2 | Head of the Doctoral programme Committee, Chair-person of the Examination Committee (Pre-clinical), Structure Commission of the UL, Public affairs officer | |
| | Institute of Physiological Chemistry | 2 | | |
| VPH | Institute of Food Hygiene | 2 | President (FKT), Brno-representative | Employees of the Faculty 29 professors 140 academic staff 148 non-academic staff students: 864 (WiSe 2014/15), 716 (SuSe 2015), 826 (WiSe 2015/16), 713 (SuSe 2016), 824 (WiSe 2016/17), 727 (SuSe 2017), 804 (WiSe 2017/18) |
| | Institute of Animal Hygiene and VPH | 2 | President LTK; Representatives of Animal Diseases and Animal Protection | |
| Infectious Diseases | Institute of Bacteriology and Mycology | 1 | Chairperson of the Examination Committee (clinical part), ERASMUS-representative | |
| | Institute of Immunology | 1 | Head of Research Commission of VMF, Member of Research Commission of UL, Member of Commission of Graduates of UL, Member of Commission of Large Research Machines at UL, elected member of the DFG board (Fachkollegium), head of the project homepage | |
| | Institute of Parasitology | 1 | Board of the FKT, Director ADTI, Representative for KoVet | |
| Infectious Diseases | Institute of Virology | 1 | Vice-Dean, Liaison Officer EAEVE, Head of the Commission for Budgets and Development, Board of the Veterinary Council of the State of Saxony, VMF Representative at the BTK | |

OBJECTIVES AND ORGANISATION

| University of Leipzig Rector, Vice Rector for Education and International Affairs, Vice Rector for Development and Transfer, Vice Rector for Research and Academic Careers, Chancellor (Head of administration) | | | | |
|---|---------------------------------------|-------|---|---------------|
| Faculty of Veterinary Medicine Dean's Office (Dean, Vice Dean, Dean for Study Affairs, Head of Administration) | | | | |
| Centre | Scientific Institutes and Departments | Prof. | Commissions, Coordinators and Representatives | FR, Employees |
| VTH | Department for Small Animals | 3 | Head of the Clinic Commission, Speaker of the Clinic Council, Management member PAUL, Coordinator trainee programme TFA | |
| | Department for Ruminants and Swine | 4** | Head of the commission LVG Oberholz, Cooperation with Köllitsch | |
| | Department for Horses | 2 | Dean, Director Saxonian Incubator for Clinical Translation of UL, Coordinator trainee programme animal attendants | |
| | Department for Birds and Reptiles | 1 | Vice chairperson of the Examination Committee (clinical part), IT-representative, PAUL management member | |

* currently vacant, commissarial administration

** two of four currently vacant

1.1.5 List of departments/units/clinics and councils/boards/committees with a very brief description of their composition/function/responsibilities

See 1.1.4 and appendix to 4.1.5. for further information.

1.1.6 Description of how and by whom the strategic plan and the organisation of the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

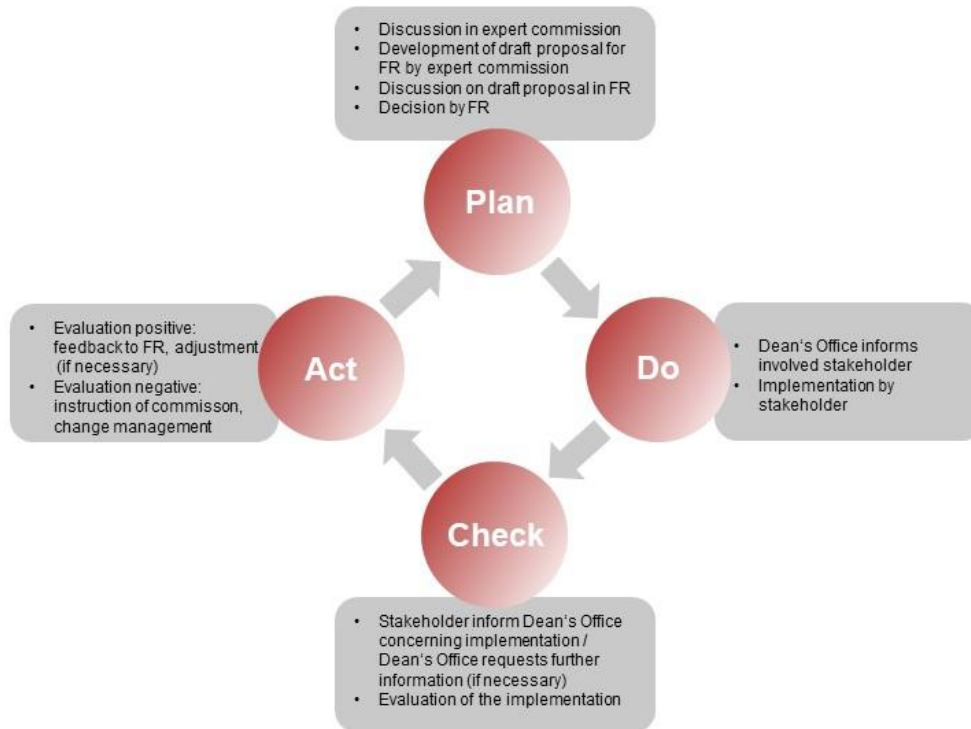
The Establishment is ruled by the SächsHSFG. In function of this law, the UL has developed a University Constitution. Teaching subjects are prescribed by Federal German Law (TAppV). Within these frames, the organisation as well as the strategic plan of the Establishment are discussed, decided, communicated, implemented and revised.

Strategic and operational goals of the VMF

Draft proposals for the FR are developed in the commissions that are responsible for the subject (see appendix to 4.1.5.). Students are set members in central commissions (Committee of Study Affairs, Research Commission, Commission for Budgets and Development [KHE]). For this matter, detailed discussions and developments of recommendations for the FR take place mostly over the course of several sessions. This recommendation is implemented in the FR meeting in the form of a draft proposal, before being discussed and finally coordinated. Decisions of the FR are binding.

Information on the decisions made, which are usually sent within three weeks after the meeting, is made available to all members of the FR and all professors and other personnel involved in teaching (lecturers). Members of the academic staff receive the FR meeting's protocol from an academic staff representative, while students receive those protocols via the student members of the FR. The Dean's Office is responsible for forwarding information to involved stakeholders, as well as of assigning the implementation of those decisions. Stakeholders are required to inform the Dean's Office and the responsible commission on the implementation of decisions. The Dean's Office and the respective commission have the right to request information from stakeholders that are not available, and to initiate a modification of grounds or a decision, if necessary. This modification can only take place through the FR.

OBJECTIVES AND ORGANISATION



PDCA cycle: Description of implementation, assessment and review of the strategic plan and organisational processes of the VMF

1.2 Comments

- The VMF has a well functioning structure of self-administration at its disposal, in the form of consulting commissions and a ruling FR. Students are permanent members of commissions and the FR, thus being involved regarding their votes on decision processes.
- Processes are often required by law. De-central QM has been operated for years. Due to scarce personnel resources, a structured and centrally coordinated QM of processes does not exist. However, the necessity for structured QM has been identified.
- Founded and recurring analyses of the VMF are necessary for sustainable strategic and operational planning. Decisions of high quality for sustainable developments can only be made on this basis. There are no staff resources for this matter at the VMF.

1.3 Suggestions for improvement

In order to establish a structured QM, adding at least one position (1,0 FTE) would be necessary. This way, the areas of monitoring and project management can be stabilised and further improved. As there is no increase in the number of available positions predicted, VMF will attempt to establish QA as far as possible. There are options to streamline processes, determine procedures and offer information events/classes for employees in key positions. The information/teaching event, offered every six months on current topics regarding the management of staff, facilities and equipment, has been well received while showing first positive results. Planning of building maintenance for 2019/2020 was supported in a particularly high intensity and level of detail, which will in turn increase the quality of facilities on campus. Further, administrative procedures can be unified.

2 FINANCES

2.1 Factual Information

2.1.1 Description of the global financial process of the VMF

The UL receives a budget from the SMWK. This considers, among others, the number of students, cost of staff, as well as adherence to target agreements. The Budget Commission of UL discusses the distribution of the budget and hands their recommendations to the rectorate.

2.1.2 Degree of autonomy of the VMF on financial processes

The VMF receives financial assignments for budgets (TG51), teaching assistants (HKM), computer work spaces (CAPVV), investive means (IM), means for the Higher Education Pact (HSP), tutor means (TM), as well as support for the financing of on-call service (BD) in clinics. TG51-means and HKM-means are allocated to the institutions in accordance with a calculation model that considers, among others, the teaching load. CAPVV-means are used based on demand and recommended by the IT representative. Distribution of IM, HSP and TM is decided based on requirements and according to the consultation of Deans. Financial support of on-call services of clinics is limited, to a third or a maximum of € 80,000 per year.

Service revenues remain in the respective institutes and clinics. They are used autonomously and preferably for financing staff, supplies and equipment. Up to 5% of all service revenues are centralised for the VMF Budget. Inter-institutional investments or investments for the whole VMF are transacted with this budget. Justification for the expenditure of centralised service revenues is given annually and in front of the clinic commission, as well as the presentation of plans for the next year. On this basis, the Clinic Commission annually decides on a limit for the centralisation of service revenues.

The alumni club FKT supports VMF in many ways; financially on a regular basis with the VMF library, PAUL, the IT of VMF, students (including by offering awards, scholarships [Deutschlandstipendium]), young talents in science (which includes start-up funding for junior scientists, congress allowances, awards) as well as public service (including VetDay, newsletters, cooperations). Table 2.1.2 includes a detailed overview of VMF's revenues.

2.1.3 Percent of overhead to be paid to the official authority overseeing the VMF on revenues from services and research grants

Service revenues fully remain with the VMF. No overhead is to be paid from this. The overhead for research projects is generally 40%.

2.1.4 Annual tuition fee for national and international students

The UL does not charge any tuition. A fee has to be paid per semester (winter semester 2017/18: € 206) and includes public transportation.

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

See table 2.1.1.

2.1.6 List of the on-going and planned major investments for developing, improving and/or refurbishing facilities and equipment, and origin of the funding

See table 2.1.1.

List of planned major investments

| Description | Estimated costs | Source of funding |
|--|-----------------|------------------------------|
| Large-scale equipment | | |
| Binocular operation microscope (plus optic tomography) (Department for Small Animals) | 500,000.00 € | Federal and state government |
| Ultracentrifuge (Institute of Virology) | 210,000.00 € | Federal and state government |
| Vehicle for transportation of live animals (Department for Ruminants and Swine) | 230,000.00 € | Federal and state government |
| Bone preparation system (Institute of Anatomy, Histology and Embryology) | 255,000.00 € | Federal and state government |
| Software VETERA® paraclinic | 10,000.00 € | Faculty |
| Building projects | | |
| Complete redevelopment of the Institute of Pathology and the Institute of Parasitology | 27,000,000.00 € | State Government |
| Redevelopment of the old boiler house | 1,500,000.00 € | State Government |
| Development of PAUL | 500,000.00 € | State Government |
| Development of locker rooms | 250,000.00 € | State Government |
| Redevelopment of the Institute of Physiology | | State Government |
| Further development of LVG Oberholz | | State Government |

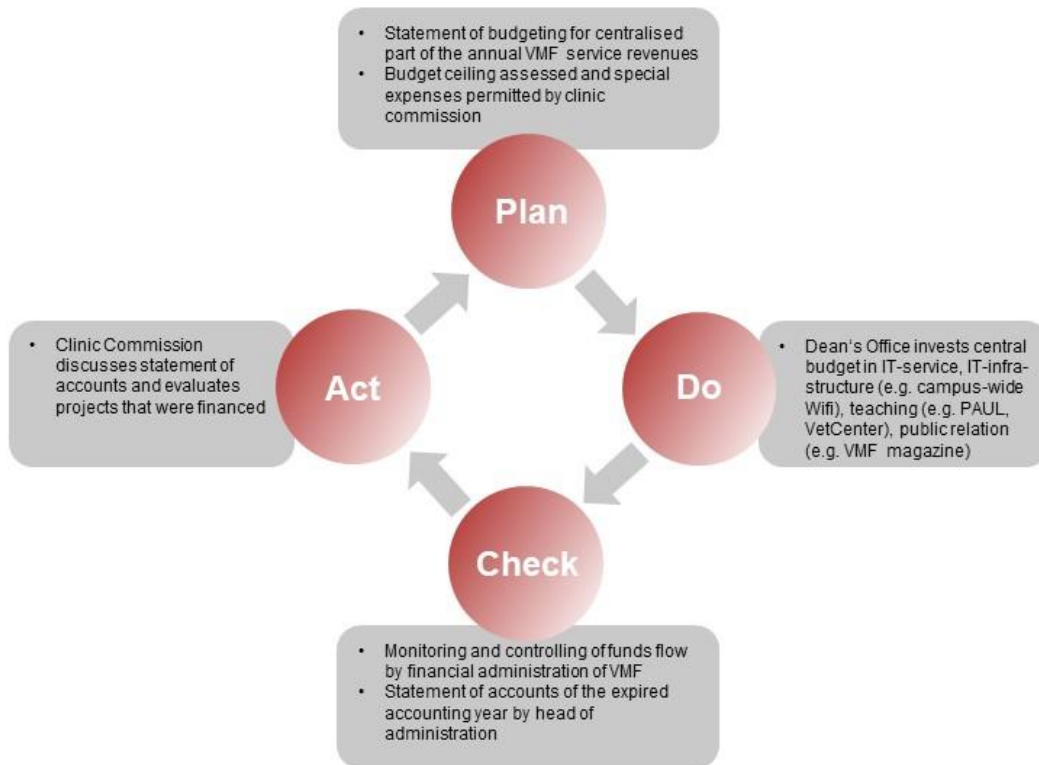
2.1.7 Prospected expenditures and revenues for the next 3 academic years

Central contributions were marginally fluctuating in the last years and will probably do so in the future. Retrospectively, the greatest change within the financial situation traces back to an increase in staff costs due to amendments (e.g. cost percentage of independently financed clinic staff compared to total expenditures of clinics were 34% in 2014 vs. 47% in 2016). Material costs during the last years were constant to slightly declining, while the service revenues were constantly increasing. In conclusion, there are no significant fluctuations in the fields of expenditures and revenues to be expected in the next three years. Due to the increase in revenue in the past years from service revenue, there is a high probability of a slight financial surplus.

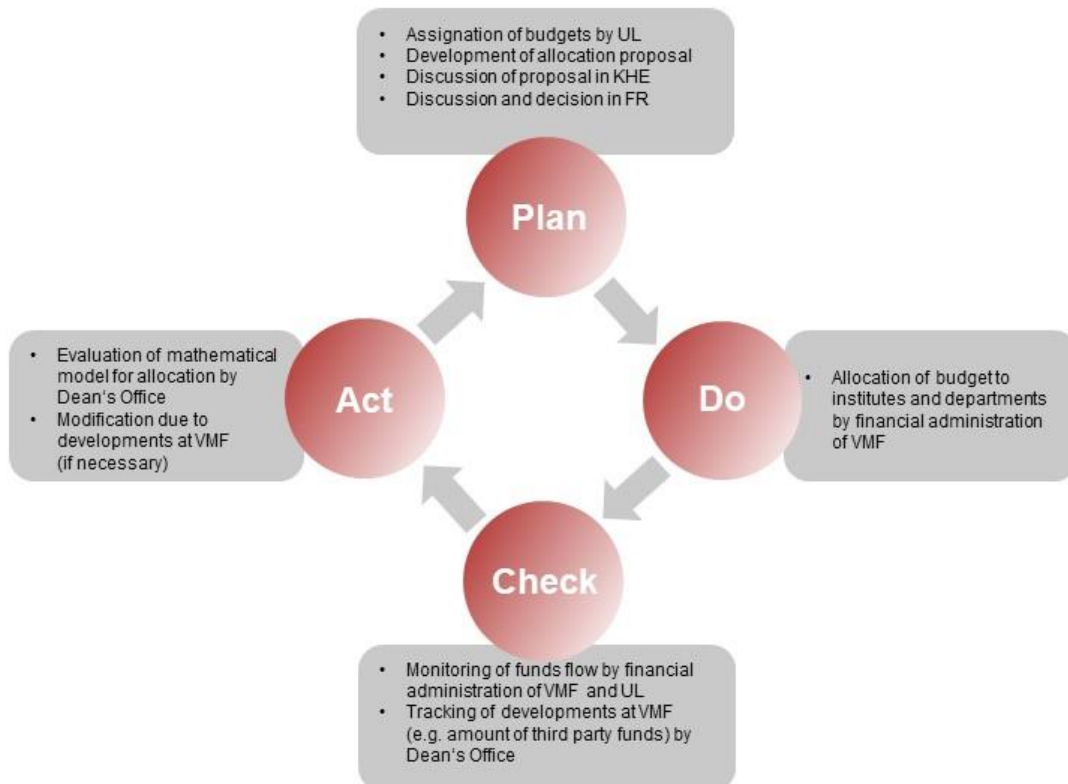
2.1.8 Description of how (procedures) and by whom (description of the committee structure) expenditures, investments and revenues are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Service revenues remain with the institutions, where they are spent independently or used for investments. The share of service revenue, annually centralised (in the past around 200,000 € each year) is used for interinstitutional matters or the whole VMF. The Dean's Office decides on the use of means. For bigger investments and expenditures, the FR is contacted. Reports of justification and planned expenditures for the next year shall be presented to the clinic commission, which is accommodating institutions with considerable service revenues. Due to relatively small budgets, strategic plans or plans for bigger investments are barely possible. For purchases that require bigger financial investments, requests for special allowances have to be made to the administration of UL.

FINANCES



PDCA cycle: Description of administration of the centralised part of service revenues



PDCA cycle: Description of administration of UL funded resources

FINANCES

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

Information based on calendar years. Information based on academic years is not possible.

| Area of expenditure | 2017 | 2016 | 2015 | Mean |
|---|------------------|-----------------|-----------------|-----------------|
| Personnel costs* (financed by the VMF) | 2,600,268.42 € | 2,523,988.90 € | 2,027,376.02 € | 2,383,877.78 € |
| Personnel costs (financed by projects) | 2,614,775.17 € | 2,159,091.87 € | 2,065,390.13 € | 2,279,752.39 € |
| Personnel costs (financed by the UL) | 17,098,542.31 € | 16,727,267.19 € | 15,660,838.00 € | 16,495,549.17 € |
| Operating costs (financed by the UL) | 2,300,000.00 €** | 2,313,709.52 € | 2,354,559.15 € | 2,322,756.22 € |
| Maintenance costs (financed by the UL) | 500,000.00 €** | 640,091.78 € | 291,930.58 € | 477,340.79 € |
| Equipment (incl. IT) | 387,248.86 € | 153,123.09 € | 27,908.36 € | 189,426.77 € |
| Other costs* (equipment, expendable materials) (financed by the VMF) | 3,579,927.82 € | 3,059,596.30 € | 2,928,523.88 € | 3,189,349.33 € |
| Total expenditure of the VMF* | 6,180,196.24 € | 5,583,585.20 € | 4,955,899.90 € | 5,573,227.11 € |

* expenditures of the VMF

**estimated value, figures not available by time of publication

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

Information based on calendar years. Information based on academic years is not possible.

| Revenue source | 2017 | 2016 | 2015 | Mean |
|---|----------------|----------------|----------------|----------------|
| Public authorities | 1,259,258.49 € | 1,010,218.18 € | 970,134.19 € | 1,079,870.29 € |
| Tuition fee | n.a. | n.a. | n.a. | n.a. |
| Clinical Service* | 5,008,862.70 € | 4,715,408.01 € | 4,027,465.80 € | 4,583,912.17 € |
| Diagnostic Service* | 832,979.13 € | 803,963.11 € | 463,076.48 € | 700,006.24 € |
| Other Services* (Core Units, VetIData) | 355,775.15 € | 407,902.74 € | 398,205.09 € | 387,294.33 € |
| Research Grants | 4,081,145.93 € | 3,629,945.64 € | 4,457,508.34 € | 4,056,199.97 € |
| Continuing Education* (LTK) | 196,645.96 € | 196,645.96 € | 171,410.09 € | 188,234.00 € |
| Donations | 27,970.00 € | 43,500.00 € | 50,755.00 € | 40,741.67 € |
| Other sources (FKT) | 48,810.00 € | 55,888.00 € | 28,329.00 € | 44,342.33 € |
| Total revenues of the VMF* | 6,394,262.94 € | 6,123,919.82 € | 5,060,157.46 € | 5.859.446,74 € |

* revenues of the VMF

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

Information based on calendar years. Information based on academic years is not possible.

| Calendar year | Total expenditures | Total revenues | Balance*** |
|---------------|--------------------|----------------|--------------|
| 2015 | 4,955,899.90 € | 5,060,157.46 € | 104,257.56 € |
| 2016 | 5,583,585.22 € | 6,123,919.82 € | 540,334.62 € |
| 2017 | 6,180,196.24 € | 6,394,262.97 € | 214,066.70 € |

*** Total revenues VMF minus total expenditures VMF

2.2 Comments

Basic financial resources are insufficient. For years, financial allotments for teaching assistants had to be subsidised by 25.000 to 40.000 € from VMF's centralised resources. Central allotments do not even cover the cost for the training. The allocation of resources for essential clinical staff financed by the UL does not allow for 24/7 service in the VTH. This is only possible by hiring personnel that is paid by service revenues. Allocating central means takes place relatively late in the calendar year (e.g. investive means); the time limit that VMF has to stick to regarding the expenditure is set to only a few weeks. Further, the amount of available means fluctuates, while the use is partially predefined by the central administration. All these points vastly complicate a qualified and expedient expenditure of these means. Strategically planning investments is almost impossible.

2.3 Suggestions for improvement

It is necessary to significantly increase the financial means allocated by the UL. These allocations should be made available at the beginning of the year and in a predictable amount. Time limits for the expenditure of means have to be extended. The expenditure should not be based on specific purposes, which gives the VMF more financial leeway for strategic plans. Another possibility of expanding financial leeway is the replacement of the current model for overhead distribution (one third project manager, two thirds central administration) with the previous model (one third project manager, one third central administration, one third VMF).

3 CURRICULUM

3.1 Factual information

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

The educational aims of the veterinary curriculum are described in the German Ordinance concerning the Certification of Veterinary Surgeons (TAppV, appendix F) and the Federal Veterinary Regulation (BTÄO) which in turn refer to the minimum requirements laid out in regulation 2005/36/EC for the training of veterinarians in Europe. The objective is to graduate scientifically and practically trained veterinarians capable of self-responsible and independent veterinary work and life-long learning. In the course of study, the basic veterinary, scientific, interdisciplinary and methodological knowledge, practical skills as well as the intellectual and ethical basis for a professional attitude committed to the well-being of humans, animals and the environment are taught. Therefore, students receive a broad and sound basic education. At the VMF, the TAppV, associated StO and PO (see appendices F, G and H) and a comprehensive catalogue summarising all subject-specific learning objectives (with references to the list of subjects and day one competencies of the EAEVE) define the organisational and content framework of the implemented curriculum in order to meet the educational objectives. With the TAppV (see appendix F), the official licensure as a veterinarian requires the completion of all state examinations.

The strategic organisation is based on the Preliminary Veterinary Examination (“tierärztliche Vorprüfung”, including the basic natural sciences and the anatomical-physiological section) and the Veterinary Examination (“tierärztliche Prüfung”) with a scientific theoretical and a practical section.

For self-evaluation of the individual learning progress throughout the curriculum, the VMF annually offers PTT to the students. This test was developed concomitantly with participation of the majority of German establishments for veterinary education as part of the “KELDAT” project. It is now implemented at the VMF for voluntary participation.

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

The TAppV as a Federal Law defines the educational goal, the teaching content, the subject-specific hours allocated to intramural and extramural training, the total duration of university studies, as well as the timing of formal examinations.

The TAppV sets a rigid framework for the curriculum:

- Total hours of training: 5,020 hours in 5.5 years (11 semesters, including final exam period).
- Intramural scientific-theoretical training: 3,850 hours (not to be exceeded) in the first 4.5 years.
- Mandatory EPT: 1,170 hours (see table 3.1.4.).
- Listed are 29 subjects with fixed curricular hours assigned to each subject area.

Any changes to the TAppV are the responsibility of the Federal Ministry of Food and Agriculture (BMEL). Requests are communicated to the ministry by stakeholders such as the Assembly of the German Veterinary Medical Education Institutions (details see appendix to 3.1.2). The ministry compiles these inputs and creates a draft legislation that must pass the German Federal Council (Bundesrat). The implementation of the TAppV in a curriculum is within the responsibility of the VMF, which imposes the StO and PO. These regulations are subject to the QA processes at UL. Deviations from the TAppV can be legally challenged.

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

Teaching plans for the semesters and time tables are prepared by the Office and Dean of Study Affairs with input and feedback from the teachers of the VMF. Changes in the curriculum are presented to and

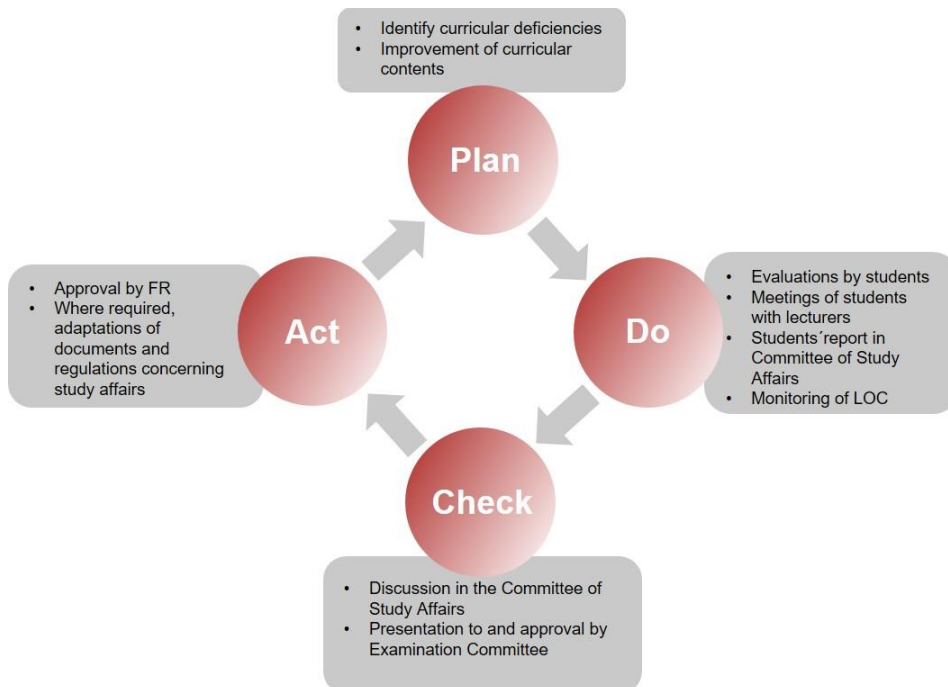
CURRICULUM

discussed and agreed upon by the Committee of Study Affairs. Subsequently, they are presented to and agreed upon by the FR and transferred to the electronic teaching learning platform "Moodle", (www.moodle2.uni-leipzig.de) and the VMF's website (www.dekanat.vetmed.uni-leipzig.de/de/Organisation.html).

Subject and focus representatives coordinate foci between the relevant subject lecturers and are the first point of contact for the Office and Dean of Study Affairs, lecturers and students. Students have the possibility to submit questions, suggestions and wishes and to participate in the improvement process in this way. In case of foci, the representatives have a fixed appointment at the end of each focus used for summarising the learning content and getting oral feedback from the students. All participating professors and lecturers are asked to attend this meeting in order to continuously improve the course content. Aim is to minimize overlaps and redundancies by concertedly given lectures of preclinical and paraclinical instructors/ academics and academic and/ or external clinicians.

The Committee of Study Affairs is responsible for improvements of the course of study, but is not responsible for the content of the curriculum. As of summer semester 2018, implementing rules of evaluation at the VMF in accordance to the evaluation regulations of the UL (see appendix D) were passed to evaluate all lectures in a structured and coordinated manner (see chapter 11). The results are to be presented to the focus representatives and Dean of Study Affairs as feedback and possible suggestions for improvement.

A newly designed, comprehensive, subject-specific learning objective catalogue is available, which, based on students' and instructors' feedback, will be updated annually. The catalogue can be accessed by all students and lecturers on the VMF website. It will help to avoid omissions and provide consistency. The development and coordination of the learning objectives catalogue is coordinated through the Dean and Office of Study Affairs. They are responsible for the communication process between the relevant coordinators for the foci and subject lecturers. Revision suggestions are presented to the curriculum committee and decided at the monthly FR meeting. Curricular deficiencies are identified as shown in the following PDCA cycle:



PDCA cycle: Process for identifying curricular deficiencies

For the Committee of Study Affairs as well as other committees, students are elected as representatives. This ensures that their needs, questions and ideas are heard and appropriately considered. In the Committee of Study Affairs, students have equal representation. Their suggestions for improvement can therefore significantly influence the improvement of the curriculum.

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

The courses of basic sciences during the first four preclinical semesters are complemented through clinicians' participation. In these combined lectures, students will be given an outlook on why preclinical basic knowledge is so important for their later studies. To assure this, clinicians highlight the clinical importance of the discussed basic science subject and interlace interesting clinical cases in order to inspire the students to translate their acquired knowledge already in their first two years of studying. Both guest lecturers from surrounding clinics and from outside the VMF are invited for selected teaching subjects to increase the academic exchange from which the students benefit to a great extent. Obligatory propedeutic courses are scheduled in the 5th semester. The third and fourth semester include a clinical rotation where students take part in the clinical routine in the VTH (40 hours). During this preclinical training, students participate twice, working 3-4 hours in the emergency service. (see table 3.1.5.).

During the time from 5th to 8th semester, students participate in more than 600 hours of clinical education. Some courses and lectures are compulsory, such as radiology and propedeutic courses. TAppV further specifies 518 hours of clinical training. This is provided by weekly interactive, small compulsory group courses with live animals and hands-on clinical case discussions ("Klinikstunde"). Here, the clinicians present selected current in-house patients to the students and together they compile differential problem lists, diagnostic plans, treatment options and discuss prognoses. Interdisciplinary course work has been implemented by introducing a "diagnostic parcours". Here, a vignette (fictitious case, in a POL-approach) is presented to students and independently worked on to find the correct diagnosis and solution for the patient.

In accordance to TAppV, core clinical subjects in the 3rd and 4th year of study are diseases of small and large animals (420h), poultry (28h), reptiles, amphibian and fish (28h) as well as a 4-week EPT (150h) in a veterinary practice. Furthermore, paraclinical education such as pathology (182h), food hygiene including meat, milk and slaughter hygiene (252h), pharmacology and toxicology (126h) and infectiology (266h) are most complementary and teaching-intensive subjects (see appendix B).

The Curriculum Committee together with the students have built the clinical skills lab PAUL over the past years. PAUL has been initiated by a small group of professors supported by the Dean's Office and now has an important and integrative part in teaching at the VMF. In PAUL, a variety of essential skills such as suturing, intubating, palpation or different examination techniques can be trained (catalogue of PAUL training stations, see appendix to 3.1.4.). This self-directed learning is accompanied by available protocols, videos and supervision through a more experienced student as tutorial guidance. The VTH has implemented PAUL in their obligatory courses. Especially for preparing exams being conducted as OSCE's, several stations are available to train for this format. PAUL is managed by a graduate student and additionally supported by undergraduate students. The aim of PAUL is to further develop practical clinical training guided by newest educational research. First experiences and evaluating studies show, that PAUL gives our students the chance to develop and strengthen their practical and Day One Competences using the provided models and training stations with standard operating protocols, which have been developed in cooperation between students and instructors (PAUL education concept, see appendix to 3.1.4.). Prerequisite for participation in the clinical rotation during the 5th year of study is regular and successful participation in the required course work and EPT of the pre-clinical and clinical part of the curriculum.

3.1.5 Description of the core clinical rotations and emergency services and the direct involvement of undergraduate students in it

All 5th year students rotate in small groups through all departments of the VTH as well as pathology and meat hygiene (a total of 11 weeks, for details see table 3.1.5). During rotation, students participate in regular clinical duties including night and weekend services, are actively involved in in-patient and ambulatory clinical work, attend seminars and exercises on practice-relevant topics and are encouraged to write case reports. The aim is that the students apply their acquired knowledge in a problem-based

approach and practise recognising clinical problems, developing a diagnostic and therapeutic plan as well as practice relevant hands-on skills.

Each student is required to accompany patients during the complete ambulant and stationary stay to practice their role as primarily responsible veterinarian. Students are always supported by veterinarians in charge when taking care of their cases. Accompanying includes ownership communication, billing and discharge of patients. During the five-week clinical rotation in the Department for Small Animals, students accompany two services on a week day (from 3:30 pm to 8:00 am of the next day) and participate in 24 hours emergency service during the weekend. Students in the Department for Horses as well as Ruminants and Swine participate in emergency services in a similar way.

3.1.6 Description of teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Intramurally, students receive lectures as well as practical courses on food, milk and meat hygiene. The content of the curriculum corresponds with the teaching catalogue in Food-, Meat- and Dairy Hygiene in Germany, Austria and Switzerland and now also to the first European Teaching Catalogue (DVG, work group "Teaching in food hygiene related subjects of German countries", www.dvg.net/index.php?id=1382). Within the framework of lectures, seminars, practical courses and occasional visits to nearby food producing establishments in elective VPH Tracks (see chapter 3.1.7), topics such as food law, food microbiology, sensory evaluation, HACCP and product specific processes control is taught. The practical training and final examinations in the eleventh semester are carried out in the course rooms of the Institute of Food Hygiene as well as in the facilities for slaughtering, meat processing and milk technology (described in chapter 4.1.4). The theoretical knowledge is tested in a written PC-based examination.

The practical training in meat inspection and hygiene (total: 28h) serves for demonstration of the slaughtering process as pertaining to technology, hygiene, animal welfare and for the demonstration of official veterinarian ante and post mortem inspection of slaughter animals (pigs, cattle and others). The majority of courses (about 78%) takes place in the slaughter facility, where students are taught in small groups of about seven to ten students per tutor/carcass. In the institute's course room further practical courses in meat hygiene (such as bacteriological examinations) are carried out.

Furthermore, slaughtering in our meat technological facilities is performed as a service for the VTH or other institutions of the UL, in particular for research purposes. On these occasions, students are invited (in small groups), in order to demonstrate technology and hygiene of the slaughtering process and to introduce research as performed at the VMF.

In addition to the intramural teaching on meat inspection and hygiene, nearby abattoirs for pigs, cattle and poultry, all in a distance of approx. 50 km, are visited (excursions, small groups). Further, ante and post mortem inspection of game animals can be demonstrated in the LVG Oberholz where a herd of fallow deer is kept in an enclosure of about 15 hectares.

For practical courses in food (total: 34 h) and milk hygiene (total: 12 h) students must prepare themselves with the help of the interactive learning programme (Moodle), while scripting takes place in the course room. Students have courses on basic meat technology and hygienic manufacturing of special meat products. The facility for Milk Technology is used for the demonstration of milk processing (e.g. pasteuriser and chiller), the production of special milk products, their chemical-physical analyses as well as hygienic manufacturing of fermented products.

3.1.7 Description of the selection procedures of the Electives by the students and the degree of freedom in their choice (table 3.1.3.)

1st – 4th Semester (preclinical section)

Students must attend at least 84 hours of elective coursework in the preclinical part. Students select a track out of four: macroscopic anatomy, neuroanatomy/histology, pathophysiology/biochemistry, exotic animals (total 56h). Every year, there are enough tracks and spaces available for all students. Students pick a first, second and third choice. This is obligatory. In addition to the obligatory electives, students

are free to pick additional courses from all other electives on offer. Aside from the track courses, VMF offers a wide range of approximately 40 elective courses per year (approximately 20 per semester) with sufficient number of places available (see table of available elective courses in appendix B).

Within the framework of these events, internal and external lecturers cover topics outside the regular curriculum and not subject of examination, as well as intersections on ongoing research projects. In the majority, registration is managed via the learning platform Moodle. Distribution takes place in two allocation rounds from two to three weeks before the start of classes.

5th - 11th Semester (clinical section)

The total number of elective course hours in clinical education is 224 h. Students select obligatory three tracks (farming livestock, equine medicine, pets and small animal medicine, VPH or paraclinical diagnostics) in which they have to complete at least 126 h (see table of elective course in appendix B). Every year, there is a sufficient number of tracks and spaces available for all students. Students pick a first, second and third choice. Due to resource limitations in the individual institutes, numbers of participants must be limited in the elective tracks. As some subjects are more popular than others, it is decided by random selection if there are too many applicants. The remaining 98 h were integrated into the mandatory project work. The subject of the project can be chosen from an official list in the Dean's Office or via personal communication with a scientist at the VMF. (for details, see chapter 10). Some inter-semester courses can be attended by all students (e.g. professional veterinary communication, BA for vets as online course).

3.1.8 Description of the organisation, selection procedures and supervision of the EPT

The content and duration of the EPT (table 3.1.4.) as well as prerequisites for training institutions are provided in the TAppV. During the EPT, students are required to spend 320 hours of practical non-clinical training and 850 hours of clinical training. Students organise these EPTs individually. There are no contractual agreements between the external training facilities and German veterinary faculties. The faculties therefore have no possibility to directly influence the content and quality of EPT (see statement of German establishments for veterinary education in appendix to 3.1.8 a and b). However, the bpt search tool (www.tieraerzverband.de/bpt/Studenten/ausbildungspraxis/03-index.php) for EPT as well as the recommendations of the DVG are linked on the VMF's website as a service to the students.

Further practical training on meat and food hygiene as well as public veterinary services is carried out in accordance with TAppV. The students are obliged to take a three-week (100 h) extramural practical course in an EU-certified abattoir. In addition, a two-week (75 h) practical training in each a veterinary administration office and in a food hygiene surveillance section under supervision of an official veterinarian and the respective veterinary office has to be completed (see table 3.1.4).

All clinical and VPH EPT is evaluated by the students with evaluation forms provided by the Office of Study Affairs. Evaluations are collected and summaries are presented to the senior specialist representatives (VPH, Meat hygiene, Animal hygiene) and the Dean of Study Affairs.

3.1.9 Description of the procedures used to ascertain the achievement of each core practical/clinical activity by each student

Attendance of students in all preclinical and clinical practical training modules is documented through attendance lists, and successful completion of each module is certified by the responsible instructor. Completion of all intramural practical training modules is a prerequisite for admission to the 5th year. In addition, students have to complete a range of laboratory, dissection and autopsy reports and clinical case reports.

During rotation in the clinical practical year, students are assigned to a veterinarian in the supervision of their cases. The veterinarian in charge gives feedback, leads and involves students in working with their patients. Students are motivated by the opportunity to practice the role of a primarily responsible veterinarian. Supervised training includes training in communication with the client, discharge of patients from hospital, transfer back to the referring veterinarian and invoicing.

Guidelines for the clinical rotations are available for the Department for Horses (see appendix to 3.1.9) and the Department for Small Animals of the VTH. They help students with orientation regarding the work and skills they have to achieve during their intramural internship. The guidelines are accessible for all students online.

3.1.10 Description of how and by whom the core curriculum is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

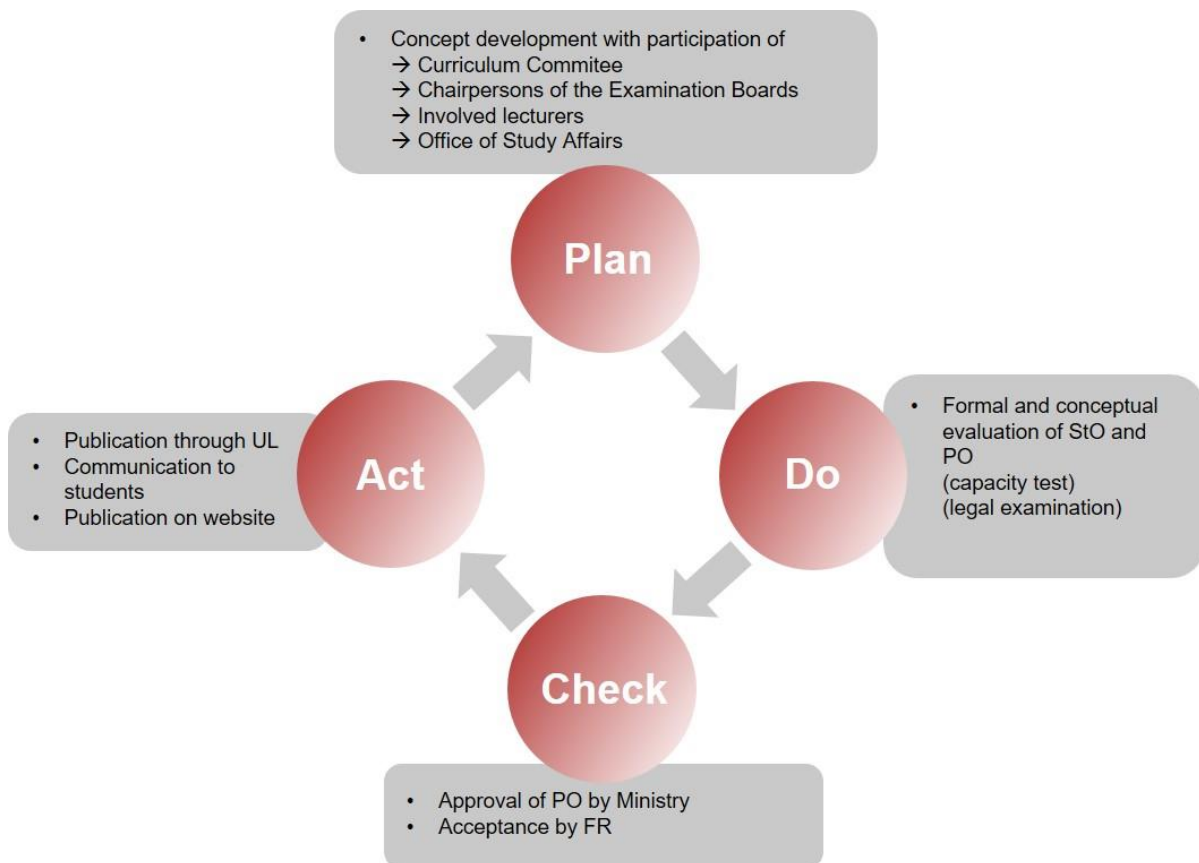
The processes of the curricular development and communication on federal (TAppV) and university level (StO, PO) are described in chapters 3.1.2 and 3.1.3.

Faculty level (StO and PO)

The process of changing StO and PO is regulated across the UL by the SMWK in the SächsHSFG (§§ 34, 36; www.revosax.sachsen.de/vorschrift/10562).

The need to adapt StO and PO results from changes to the TAppV, feedback from student surveys and input from the Committee of Study Affairs (see Chapter 1.1.5 and appendix to 1.1.5), teaching staff involved in the lectures and external experts from within or outside UL as required.

The Dean's Office revises the respective inputs in dialogue with the Curriculum Committee, the chairpersons of the Examination Committees, involved teachers and the Office of Study Affairs. The revised StO and PO undergo a multi-stage procedure:



PDCA cycle: Process for revising of StO and PO

CURRICULUM

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

Values include clinical rotation time, but exclude electives. Hours of EPT are separately shown in table 3.1.4.

| Academic Semester | Lectures | Seminars | Laboratory desk based work | Non-clinical animal work | Clinical animal work | Total |
|-------------------|---|----------|----------------------------|--------------------------|----------------------|-------|
| 1 | 288 | 16 | 48 | | | 352 |
| 2 | 168 | 8.4 | 36 | 56 | | 268.4 |
| 3 | 205 | 8.4 | 64 | 28 | 20 | 325.4 |
| 4 | 109 | 7 | 70 | 28 | 20 | 234 |
| 5 | 366 | 6 | 38 | | 80 | 490 |
| 6 | 402 | | 14 | | 44 | 460 |
| 7 | 335 | 32 | 14 | | 44 | 425 |
| 8 | 320 | 46 | 106 | 28 | 52 | 552 |
| 9/10* | | | 14 | 42 | 370 | 426 |
| 11 | This semester is reserved for final exams | | | | | |
| EPT | | | | 320 | 850 | 1170 |

*in the 5th year, students are divided in two groups. In the 9th semester, one group stays at the VMF and first undergo the clinical practical rotation while the other group completes the EPT. After the 9th semester, the groups change.

Table 3.1.2. Curriculum hours in EU-listed subjects taken by each student.

Values exclude elective hours. The subject definitions partly differ from the EU-list because of the requirements in TappV.

| Subjects | Lectures | Seminars | Laboratory desk based work | Non-clinical animal work | Clinical animal work | Total |
|---|----------|----------|----------------------------|--------------------------|----------------------|-------|
| Basic Subjects | | | | | | |
| Agricultural theory | 28 | | | | | 28 |
| Animal biology, zoology and cell biology | 56 | | | | | 56 |
| Biomedical statistics | 14 | 14 | | | | 28 |
| Chemistry (inorganic and organic sections) | 62 | 16 | 36 | | | 114 |
| Feed plant biology and toxic plants | 56 | | | | | 56 |
| Medical physics | 44 | | 12 | | | 56 |
| Basic Sciences | | | | | | |
| Anatomy | 112 | | | 112 | | 224 |
| Histology and Embryology | 56 | | | 42 | | 98 |
| Animal ethology and animal welfare | 84 | | | | | 84 |
| Animal nutrition | 63 | | 48 | | | 111 |
| Biochemistry | 90 | 23.8 | 32 | | | 145.8 |
| Epidemiology | 26 | 13 | | | | 39 |
| General and molecular genetics, Animal breeding | 84 | | | | | 84 |
| Immunology | 53 | | | | | 53 |
| Laboratory animal science | 14 | | | | | 14 |
| Microbiology | 55 | | 16 | | | 71 |
| Parasitology | 54 | | 22 | | | 76 |
| Pathology incl. diagnostic pathology | 86 | 65 | 28 | 42 | | 221 |
| Pharmacology, pharmacy and pharmacotherapy, toxicology including drug and anaesthesia law | 150 | | 14 | | | 164 |

CURRICULUM

| Subjects | Lectures | Seminars | Laboratory desk based work | Non-clinical animal work | Clinical animal work | Total |
|--|----------|----------|----------------------------|--------------------------|----------------------|-------|
| Physiology | 77 | | 68 | | | 145 |
| Virology | 67 | | 6 | | | 73 |
| Clinical Sciences | | | | | | |
| Clinical practical training in all common domestic animal species | | | | | 564 | 564 |
| Diagnostic imaging* | 42 | | | | | 42 |
| Medicine and surgery incl. anaesthesiology | 407 | | 14 | | | 421 |
| Obstetrics, reproduction and reproductive disorders | 119 | | | | | 119 |
| Propadeutics of all common domestic animal species | 32 | | | | 66 | 98 |
| Veterinary legislation, forensic medicine and certification | 28 | | | | | 28 |
| Animal Production | | | | | | |
| Animal husbandry, Animal production, Animal hygiene | 55 | | 10 | | | 65 |
| Food Safety and Quality | | | | | | |
| Food hygiene and microbiology, Food technology, Inspection and control of food | 113 | | 58 | | | 171 |
| Meat Hygiene incl. Technology and Quality Assurance and Practical work in slaughter plants | 53 | | | 28 | | 81 |
| Professional Knowledge | 42 | | | | | 42 |

* These lectures only include the general radiology, specific diagnostic imaging is implemented in the clinical subjects (medicine, surgery and reproduction)

3.1.11 Curriculum hours taken as electives for each student

Details concerning electives at VMF are described in chapter 3.1.7.

As an example, the following table shows the offered total elective hours from winter semester 15/16 until summer semester 18 (three years period). A detailed list of all offered elective courses is attached in appendix B.

Table 3.1.3. Curriculum hours taken as electives for each student

| Subject area | Seminars | Supervised self learning | Laboratory desk based work | Non-clinical animal work | Clinical animal work | Total |
|-------------------------|----------|--------------------------|----------------------------|--------------------------|----------------------|-------|
| Basic subjects | 97 | 11 | 57 | 0 | 0 | 165 |
| Basic sciences | 204 | 65 | 301 | 95 | 0 | 665 |
| Clinical sciences | 165 | 34 | 21 | 0 | 206 | 426 |
| Animal production | 21 | 0 | 0 | 0 | 21 | 42 |
| Food safety and Quality | 6 | 0 | 14 | 8 | 0 | 28 |
| Professional Knowledge | 105 | 84 | 11 | 10 | 0 | 210 |

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

| | Subjects | Minimum duration in weeks (hours) | Year of programme (Semester) |
|--------------|---|-----------------------------------|--|
| Pre-clinical | Agriculture (genetics, breeding, husbandry, milking techniques, etc.) | 2 weeks (70 hours)* | 1 st and 2 nd year (2 nd /3 rd semester) |
| Clinical | Clinical training (private practice or clinic; companion animals or production animals) | 4 weeks (150 hours) | 3 rd year (5 th /6 th semester) |
| | Clinical training (private practice or clinic; companion animals or production animals) | 16 weeks (700 hours) | 5 th year (9 th /10 th semester) |
| FSQ & VPH | Food hygiene (hygiene control, food monitoring, food examination) | 2 weeks (75 hours) | 4 th or 5 th year (7 th -10 th semester) |
| | Abattoir, ante and post mortem meat inspection | 3 weeks (100 hours) | 5 th year (9 th /10 th semester) |
| | Veterinary inspection offices regarding all issues of VPH | 2 weeks (75 hours) | 5 th year (9 th /10 th semester) |

*Two weeks (70 hours) if done on an official agricultural training and research station; four weeks if done on a farm that is registered / certified to educate agricultural trainees (apprenticeship)

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

| Types | List of Clinical rotations (Disciplines/Species) | Duration | Year of programme (Semester) |
|--------------------|---|------------------|---|
| Intramural (VTH) | „Small rotation“ in all clinics of the VTH* | 40 hours (total) | 2 nd year (3 rd /4 th semester) |
| | Department for Birds and Reptiles | 1 week | 5 th year (9 th /10 th semester) |
| | Department for Horses | 3 weeks | |
| | Department for Ruminants and Swine | 2 weeks | |
| | Department for Small Animals | 5 weeks | |
| Ambulatory clinics | Department for Birds and Reptiles | 1 day | 4 th year (7 th /8 th semester) |
| | Department for Ruminants and Swine | 1 week | 5 th year (9 th /10 th semester) |
| Electives** | Track horse | 42 hours | 5 th year (9 th /10 th semester) |
| | Track livestock and herd management | | |
| | Track rabbits, rodents, exotic pets and zoo animals | | |
| | Track small animals | | |
| | Track paraclinical diagnostics | | |
| | Track VPH | | |
| | Project work | 98 hours | 5 th year (9 th /10 th semester) |
| Others | Pathological necropsy | 42 hours | 5 th year (9 th /10 th semester) |

* i.e. Department for Birds and Reptiles, Department for Horses, Department for Ruminants and Swine, Department for Small Animals

** The electives in clinical rotation have to be taken in the form of so called tracks (3 tracks with 42h each) as well as one project work with 98 h (total: 224h for each student).

3.1.12 Optional courses and exchange programmes proposed to students (not compulsory)

There is a broad range of additional courses organised by the UL offered to the students in topics such as computer literacy (MS Excel, MS Word, Statistics, Literature search etc.). Organised by the Medical Experimental Centre (MEZ), the option of specialised training and completion of Animal Experiment Supervisor Certificates (FELASA B, GV SOLAS criteria) is offered. In addition, students can enrol in a broad range of open lectures and personal skills classes listed by UL. The biennial LTK offers training courses, seminars and discussion rounds especially for students. The students themselves organise a summer academy, "Sommerakademie des Bergfestmatrikels", with courses attended by students and teachers/scientists.

The VMF actively participates in the Erasmus+ programme for traineeships and studies. We have contracts with 16 different establishments for veterinary education (Lyon, Nantes, Ghent, Madrid, Santiago, Lisbon, Bern, Zurich, Bari, Camerino, Vienna, Brno, Helsinki, Oslo, Ankara, Konya). The Erasmus coordinator organises an information event every semester, for students interested in spending traineeship or study abroad. Students are invited to contact the Erasmus coordinator for further information. Incoming Erasmus students receive support from the Erasmus coordinator. The Erasmus coordinator tries to mediate contacts between incoming Erasmus students and interested students of VMF. All incoming Erasmus students have to enrol at UL. This ensures accident insurance as well as free public transportation and the possibility to use accommodations of UL.

Table 3.1.6 Optional courses and exchange programmes proposed to students (not compulsory)

| Students | Programme | 2017 | 2018 |
|----------|--|---|--|
| Incoming | Traineeship | 3 (Clinic for Small Animals), 2 (Clinic for Ruminants), 3 (Clinic for Horses) | 9 (Clinic for Small Animals), 1 (Clinic for Horses) |
| Incoming | Traineeship including rotation between clinics | 5 | 4 |
| Incoming | studies | 6 | 2 |
| Outgoing | traineeship | 2 | 5 |
| Outgoing | studies | 1 | 1 |

3.2 Comments

- The existing legal framework provides a structured veterinary curriculum throughout Germany with options for students to transfer between universities. Curricular design options for the establishments are limited.
- The study load in the curriculum is high; students have little time for participation in extra-curricular activities.
- Since the last EAEVE commissions report the implementation of interdisciplinary work was significantly emphasised.
- The introduction of organ-centered teaching and clinical rotation tracks and project work in the final clinical year substantially improved the curriculum. Efforts are ongoing to further improve these and other study elements such as the interdisciplinary courses.
- Lectures in basic sciences are enriched through clinicians' participation, which motivates the students and shows future application of basic sciences knowledge. These lectures are highly valued by the students; a broader range of these interdisciplinary lectures should be developed.
- The focus coordinators and the compilation of a comprehensive subject-specific learning objective catalogue improved the coordination and transparency.

- EPT is required but explicitly outsourced to the veterinary profession. The German establishments for veterinary education neither have a legal basis nor the resources to implement a high level of quality control.
- Even though students are encouraged to gain experience in practical training and studies abroad, student mobility has remained comparably low.

3.3 Suggestions for improvement

- Together with the German Association of Practitioning Veterinarians (bpt, www.tieraerzteverband.de), further efforts to ensure standardisations and quality control of EPT training will be undertaken.
- Learning catalogues for EPT training will be developed, students will work with an EPT log book.
- There are attempts to expand the spectrum of virtual patients to intensify the opportunities for independent studies.
- Establishment of an EPT coordinator.

4 FACILITIES AND EQUIPMENT

4.1 Factual information

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

All institutes and clinical departments of VMF are situated on one campus (see appendix C). The Institute for Animal Nutrition, Nutritional Diseases and Dietetics was moved to a newly renovated building on campus in 2013. The campus area is in close vicinity to further bio-medical research establishments (see appendix to 4.1.1), like BBZ (Bio-City Leipzig, www.bio-city-leipzig.de), the Fraunhofer-Institute for Cell Therapy and Immunology (Fraunhofer IZI, www.izi.fraunhofer.de) and the Max-Planck-Institute for Evolutionary Anthropology (EVA, www.eva.mpg.de). Due to reconstruction, the Institute of Immunology is currently situated in the BBZ and the Institute of Bacteriology and Mycology has moved into the rooms of the Institute of Immunology on campus. VMF has its own agricultural teaching and research facility (LVG Oberholz), situated approximately 10 km from the campus.

4.1.2 Description (number, size, equipment, ...) of the premises for: - lecturing, - group work, - practical work (laboratories, rooms for clinical skills,...)

The VMF has eight lecture halls (>90 seats) with a total of 1,020 seats. The lecture room in the Department for Horses with 123 seats is currently not in use, due to restrictions imposed by the regulations on fire safety requirements. Therefore, seven lecture rooms with a total of 947 seats are currently available (see appendix to 4.1.2, table 1). All lecture halls are equipped with media technology.

For group work, seminar rooms with a total 697 seats are available (see appendix to 4.1.2, table 2). This includes a seminar room with 35 computers in the central teaching building (Herbert-Gürtler-Haus). All seminar rooms are equipped with state-of-the-art media technology. Room assignment for the regular courses in the curriculum is organised by the Office of Study Affairs.

Laboratories and clinic facilities enable practical training with 748 spaces currently in use (see appendix to 4.1.2, table 3). The library and rooms in the institutes and departments are available to students for individual study, in particular for students in the clinical rotation during case work or for project work. Two seminar rooms at the LVG Oberholz with 60 seats in total are used for course work, scientific and staff member meetings (e.g. "Tag der Forschung", Klausurtagungen der Zentren). The skills lab PAUL is described in Chapter 3. Herbs and feeding plants are presented for demonstration and self-learning in the inner courtyard of the Institute of Animal Nutrition (building No. 9 on the campus map, see appendix C).

4.1.3 Description (number, size, species) of the premises for housing: - healthy animals, - hospitalised animals, - isolated animals

On campus, animals for teaching purposes are maintained in the VTH and several institutes. Species and numbers are summarised in tables 1-3 of the appendix to 4.1.3. Animals of various species including cattle, alpacas, sheep, pigs, birds, rodents, rabbits, dogs, fishes and new world primates used in experimental research settings are kept at individual institutes (e.g. Institute of Physiology, Institute of Physiological Chemistry, Institute of Parasitology, Institute of Pharmacology, Pharmacy and Toxicology, Institute of Animal Nutrition, Nutrition Diseases and Dietetics, Institute of Animal Hygiene), and are used for teaching purposes if allowed according to the Animal Protection Law. Honey bees are kept on campus exclusively for the purpose of teaching.

4.1.4 Description (number, size, species, ...) of the premises for: - clinical activities, - diagnostic services including necropsy, - FSQ & VPH (slaughterhouses, foodstuff processing units, ...), - others (specify)

The VTH has rooms for clinical training (physical examination and surgery) in each department and rooms for diagnostic services. Rooms for clinical training are also available at the LVG Oberholz. At the VTH, special equipment for clinical training in imaging includes sonography (ultrasonographic devices with doppler technology, ultrasonographic devices for pregnancy diagnostics, portable ultrasonographic devices), digital radiography (stationary/portable X-ray devices), flexible and rigid endoscopy, scintigraphy, computed tomography (CT), and in the Department for Horses and the Department for Small Animals also magnetic resonance imaging (MRI). Comprehensive laboratory diagnostic services across campus are organised in a laboratory network, which includes diagnostic services within the VTH and individual institutes among all centres of the VMF. Laboratories are equipped for haematology, blood chemistry, serology, hormones, quick tests, coagulation testing, blood gas analysis, cytology, fluid and lavage diagnostics, synovia tests, urine analysis, spermatology, molecular biology, bacteriology, parasitology and virology.

Necropsy rooms are located in the Institute of Veterinary Pathology and in the Department for Birds and Reptiles.

Part of the testing laboratories at the Institute of Food Hygiene are accredited by the German Accreditation Body GmbH (DakKS) in accordance with ISO DIN 17025. These laboratories are subject to regular audits carried out by DakKS, which examine technical competence, compliances with standard guidelines, laws and quality of service. The Institute of Virology is currently preparing the first audit in order to become accreditation according to ISO DIN 17025. Since 2012, the Institute of Virology is designated a reference laboratory for Enzootic Bovine Leucosis by OIE. Two institutes of VMF have been assigned the status of consulting laboratory by the DVG: The Institute of Parasitology for animal cryptosporidiosis and for intestinal coccidiosis and the Institute of Food Hygiene for *Alaria alata* infestations (see chapter 11.1.1).

Two slaughterhouses are in operation. One slaughterhouse located at LVG Oberholz is intermittently used. The second slaughterhouse is used on a routine basis and located on campus in the Institute of Food Hygiene. The slaughtering facility includes all facilities for slaughtering pigs, sheep, cattle and equines, for further meat processing and for waste disposal. Animals for slaughter are provided by local farms or the VTH.

An integrated meat technological and a meat processing unit is supervised by an official veterinarian (scientific staff) as appointed by the responsible authority. One room is equipped with standard machinery. Other rooms are equipped for heating and smoking/ripening processes, storage and, in addition, two storage rooms for cooling and one room for freezing.

A facility for milk technology is located on campus with room for 20 students, extending the practical teaching on technological issues. The milk facility is equipped with different devices for milk processing.

Carcasses and organs/by-products for demonstration purposes in student courses and teaching examinations (e.g. Institute of Pathology) are also collected from nearby abattoirs.

Waste and confiscates that are produced during slaughter and meat processing at the respective facilities are treated according to legal regulations (VO EG 1069/2009, see chapter 5). Microbiological waste from courses or research is decontaminated by heat treatment in autoclaves or disposed via the Institute of Pathology. Liquid waste effluents are treated according to legal regulations on pollution control (grills, fat traps and preliminary treatments).

In order to assure prudent and safe use of veterinary medicinal products (vmp), the Institute of Pharmacology, Pharmacy and Toxicology has established the internet-based information system VETIDATA. This database provides comprehensive information on all vmps on the market, legal provisions of use and avoidance of harmful residues. VETIDATA is available to all veterinarians; for students and members of the German veterinary faculties, this service is offered without charge. So far,

more than 9,000 users of all fields of the veterinary profession (practitioners, veterinary inspection officers, ministries, pharmaceutical industry as well as students from all faculties) are registered.

4.1.5 Description (number, size, species, ...) of the premises for:

- study and self-learning, - catering, - locker rooms, - accommodation for on call students,
- leisure

Study and self-learning

On campus, study and self-learning units are available at the local library (see chapter 6) and the canteen (open 06:00 a.m. to 08:00 p.m.) and at the Institute of Veterinary Anatomy, Histology and Embryology ("Anatomische Sammlung", open 07:00 a.m. to 04:00 p.m.). At UL main campus, the main library "Campus-Bibliothek" is open 24/7 (30 min walking distance). "Bibliotheca Albertina" is open from 08:00 a.m. to midnight. (30 min walking distance). Other smaller units such as "Zentralbibliothek Medizin" (10 min walking distance) provide further possibilities for self-study. All locations are accessible by public transport and have recently been improved for decent WLAN-access. A computer room provides 35 workstations on the second floor of the main teaching building (Herbert-Gürtler Building).

Catering

The campus cafeteria ("Mensa") provides breakfast and lunch meals. Additional canteens are in close vicinity at the BBZ, the Fraunhofer-Institute for Cell Therapy and Immunology and the Max-Planck-Institute for Evolutionary Anthropology. The main canteen of the UL 'Mensa am Park' is on main campus. Several supermarkets with bakeries and restaurants are located in walking distance to the campus (5-10 min walking distance from VMF).

Locker rooms

Students have access to over 930 lockers (e.g. Centre for Public Health, Centre for Anatomy and Pathology, VTH), either free of charge or with a deposit.

Accommodations for on call students

In the VTH, on-call students share social rooms for cooking and leisure with staff members, and have access to reserved sleeping quarters.

Leisure

The local cafeteria is the meeting point for students of all semesters. It is accessible from 06:00 a.m. until 08:00 p.m. Vending machines offer beverages and snacks. A barbecue grill is located under a shelter hut on campus. It is accessible to the students on advance notice. A soccer field is located in the centre of campus. It is accessible all day long to the students for different sporting activities. Further, the UL sports centre offers a wide variety of activities that are placed at different locations. Students can sign up for activities at the beginning of the semester and during the semester break. Depending on the activity, athletic grounds are in walking distance, or can be reached by bike or public transportation.

4.1.6 Description (number, size, species, ...) of the vehicles used for:

- student transportation (e.g. to extramural facilities), - ambulatory clinics, - live animals transportation, - cadaver transportation

Student transportation, e.g. to LVG Oberholz, and for practical training during track lectures is served by the VMF with seven vehicles. These are located at the Institute of Veterinary Anatomy, Histology and Embryology (1), the Institute of Animal Nutrition, Nutritional Diseases and Dietetics (1), and the Institute of Animal Hygiene and Veterinary Public Health (1), the Department for Birds and Reptiles (1), and the Department for Ruminants and Swine (3).

Three vehicles in the VTH are also used for transportation of students for ambulatory services. For livestock transportation, three vehicles located at the Department for Horses (1), and the Department for Ruminants and Swine (2) are available. Six vehicles are equipped with trailers e.g. for the purpose of claw care services or cadaver transportation. Two of these vehicles are sponsored by third-party funds and not provided by UL. Both vehicles are used for student transportation and ambulatory clinics.

These vehicles are located at the Institute of Veterinary Anatomy, Histology and Embryology (1) and the Department for Ruminants and Swine (1).

4.1.7 Description of the equipment used for - teaching purposes, - clinical services (diagnostic, treatment, prevention, surgery, anaesthesia, physiotherapy)

Most of the equipment used for clinical services is also used for teaching. At the beginning of each practical or clinical course, the students are informed about the hazards and safety measures in the particular field. Veterinary students spend their rotation time in the different sections of the VTH (surgery, internal medicine, neurology, diagnostic imaging, intensive care etc.) and participate in clinical activities. Therefore, students are directly involved in activities in examination rooms and operating theatres. All departments are well-equipped with state-of-the-art equipment (see appendix to 4.1.7).

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

The VMF is in continuous contact with the buildings department of the UL (Department 4). Planned construction matters of up to € 1,500,000 are arranged by the UL and in cooperation with the public enterprise for real estate and construction management (SIB), and in form of a so-called small construction project. The SIB is responsible for the management and execution of construction projects. Construction projects of more than € 1,500,000 have to be approved by the responsible Ministry of the State of Saxony. To plan constructions, the VMF has to provide a detailed proposal of requirements in accordance with Department 4 and SIB.

Currently, there are several small construction projects either planned or already in place (e.g. Institute of Bacteriology and Mycology, Institute of Pharmacology, Pharmacy and Toxicology), one large reconstruction (Institute of Pathology and Institute of Parasitology) lies ahead. Due to heavy water damage in January 2018, part of the building of the Institute of Physiology was destroyed. Reconstruction with the first steps of drying is already implemented. Completion of reconstruction of the building is anticipated for the beginning of the winter term 2019/20.

Further announcements of requirements are currently discussed, alongside strategic developments for the LVG Oberholz. An experimental animal stable and a feed mill were built to integrate the Institute of Animal Nutrition, Nutrition Diseases and Dietetics in the vicinity and to modernise the LVG Oberholz. In addition, the administration building and the student halls were extensively refurbished.

4.1.9 Description of how (procedures) and by whom (description of the committee structure) changes in facilities, equipment and biosecurity procedures (health and safety management for people and animals, including waste management) are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

In 2016, the VMF developed and approved its strategic plan ("Zukunftskonzept", see appendix to 1.1.2). General procedures for structural changes (buildings) are described above (see 4.1.8). In general, decisions are discussed and prepared in commissions before the FR examines and approves them. Commissions and their functionaries are summarised in the appendix to 1.1.4.

Necessary applications for renewal or purchase of equipment with a price range of € 5,000 and € 200,000 are annually gathered, before they are prioritised by the Research Commission. The list is presented to UL; depending on the budget situation, individual devices can be purchased with special allowances (investive means) of UL. Purchases of large-scale equipment (> € 200.000) are made using a list prioritised by the Research Commission as well, and discussed in the Commission for Large-scale Equipment of UL. Depending on the field of application, the Federal State of Saxony or the DFG finances the equipment.

A Hygiene Officer and a Notifiable Diseases Officer have been appointed by the VMF. He is responsible for developing SOPs for the hygiene management of the VMF ("Tierseuchenkrisenplan",

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“Hygieneordnung der Fakultät”). These documents define the rules and regulations concerning waste management, disinfection, biosafety and general hygienic rules.

Each institute assigns an Occupational Safety Officer and an Institute Hygiene Officer. These are in charge of implementing and controlling work safety and specific biosafety measures in the respective institution. They are also responsible for instructing staff members and students at regular intervals, and particularly, when they start course work or teaching.

Comments

- Due to fire safety requirements, access to the lecture hall in the Department for Horses is limited.
- During lunch hour, the campus canteen does not provide enough seats. Although other cafeterias are located within a distance of 3 km, the lecture schedule does not allow for adequate use of these.
- Although vehicles are available for students as well as meat and food transportation, students are obliged for some teaching activities to use their own vehicles or to use public transportation. As the UL has limited the number of vehicles for all faculties, additional vehicles can only be obtained via third-party funding.
- Although public transportation is available to reach places outside of the VMF (e.g. LVG Oberholz), the students' schedule limits its use.
- The time span between planning of new buildings and reconstruction is extremely long (several years up to one decade) and frequently delayed.
- Funds for renewal or purchase of equipment worth between € 5,000 and € 20,000 have not been allocated to the VMF since 2014, despite previous applications.
- The Institute of Animal Nutrition, Nutritional Diseases and Dietetics has moved to the campus in 2013. In that context, new laboratories and offices are located on campus.

Suggestions for improvement

- Reconstruction of the lecture hall (Department for Horses).
- More seats in the local canteen should be considered in the structural development.
- Safe planning and prompt execution of planned constructions should be aimed for in the further structural development of UL and VMF. This concerns several institutions, such as the VTH, the Centre for Pathology and Anatomy, the Centre for Infectious Diseases and the LVG Oberholz.
- Lockers for each student should be made available for practical and hygienic reasons.
- The water damage at the Institute of Physiology should be fixed soon.
- Constant renewal or purchase of devices should be aimed for in the future.
- Maintenance and repair of expensive equipment require a sustainable financial basis.

5 ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN

5.1 Factual information

5.1.1 Description of the global strategy of the Establishment about the use of animals and material of animal origin for the acquisition by each student of Day One Competences

Use of animals and animal material is managed within the individual departments and institutes. Acquisition of Day One Competences is supported by hands-on training using live animals and material of animal origin according to TAppV. The use of animals for teaching requires animal welfare approval and must be applied for with the regulatory authorities of the Federal State of Saxony according to the EU Directive 2010/63/EU. There are general efforts to limit the use of live animals kept for teaching to the necessary minimum, and to strengthen and enhance the capacities of the VMF's Skills Lab "PAUL" for basic Day One Competence training considering the 3R rules. The training stations in PAUL and the integrative learning concept (see chapter 3 and appendix to 3.1.4) offer students opportunities to practice skills in preparation for the clinical practical training.

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

The VTH with its Departments for Birds and Reptiles, Horses, Ruminants and Swine, and Small Animals, is in charge of the acquisition of clinical cases for clinical training and the number of patients available for student training varies between those departments. Students have hands-on training with patients particularly during the 3rd, 4th and 5th year of their studies, where in the 5th year, a total of 12 weeks of clinical rotation offers intense clinical experience. Further clinical hands-on experience will be gathered during the EPT, where TAppV allocates 850 of 1,170 hours of extramural training. Numbers and quality of the cases seen will vary according to the practices or hospitals where EPT is performed.

Non-clinical animal work

Non-clinical animal work is primarily taught and practiced in anatomy, embryology, physiology, animal nutrition, pathology and food hygiene/ meat hygiene. Food hygiene and meat hygiene are taught on campus slaughterhouse facilities using slaughterhouse material as well as a number of livestock for pre-slaughter examination. Therefore, this material is documented in the appendix as well. Figures on numbers and materials used by the institutions other than anatomy (table 5.1.1.), pathology (table 5.1.6.) and slaughterhouse visits (table 5.1.8.) are displayed in table 1 (physiology), table 2 (animal nutrition) and table 3 (meat hygiene) of the appendix to 5.1.2.

Clinical animal work

The Departments of the VTH equally contribute to teaching in propaedeutics, internal medicine, surgery and reproduction. The attendance of all practical courses as well as the clinical rotations, embedded ambulatory excursions and handling of cases including report writing is mandatory. Successful participation is registered by the Office of Study Affairs.

Clinical teaching comprises three formats:

- Special propaedeutics: In small groups of up to 15 students with at least two instructors, students practice the handling of animal species, including the general clinical examination and special examinations of the organ systems.
- Clinical instruction: in four groups of 30 students each. The clinical departments teach the students hands-on work with patients. This way, students deal with patients suffering from problems in internal medicine, surgery, reproduction or herd health problems, when students accompany the ambulatory

services on farm visits. Clinical patients are presented by teaching personnel of the VTH, and students are practically involved in the evaluation, discussion and treatment of the respective cases.

- Clinical rotations: Students are integrated into the daily routines of the VTH departments. They examine animal patients that are assigned to them and present examination results during clinical rounds. Students on rotation are involved in admitting animal patients and accompany them during their stay for diagnostics and inpatient treatment. They either assist or independently carry out tasks under the guidance of the supervising veterinarian. They become involved in weekend and emergency services. Furthermore, students are encouraged to work through cases using a problem-based approach and to present and discuss their concepts with the teaching staff. They attend journal clubs, book clubs, exercises on x-ray image interpretation, patient anaesthesia, surgical hygiene, and assist in surgical procedures. Other elements of clinical hands-on training include laboratory diagnostics in the 6th semester in the scope of laboratory coursework and during clinical instruction and clinical rotation.
- Herd health care and management: The main thematic foci are animal population care as a line of work in veterinary practice, farmers and veterinarians as entrepreneurs, organisational principles in animal population care, definition of and qualitative steps in animal population care, working principles in curative, problem-oriented and prophylactic herd health care as well as foundation and practice courses in a computer-based herd programme. During the clinical rotation, each group is involved in at least five routine herd health visits, where students are involved in curative herd health care and prophylactic treatments. Furthermore, students have the opportunity to get involved in problem-oriented herd health visits where systematic analyses of the individual farms are performed and action plans are developed and discussed.
- PAUL gives students the opportunity, both under supervision and independently, to practice and consolidate relevant clinical skills on medical simulation/training models. To date, 40 models/training stations are available (see appendix to 3.1.4).

5.1.3 Description of the organisation and management of the teaching farm(s) and the involvement of students in its running

Besides the LVG Oberholz, the VMF works in cooperation with the central Teaching and Research Agricultural Unit of the Federal State of Saxony at Köllitsch. This cooperation offers research opportunities as well as teaching opportunities in the most modern setting of animal production. This farm is located at a distance of around 80 km from the VMF.

The mandatory agricultural practical training may be organised on one of these two farms. Training includes basic agricultural training along with training in animal breeding, animal assessment and animal husbandry. Institutions of the VMF are involved in giving accompanying lectures, and practical exercises on animal identification, registration and assessment of horses, dairy cattle, beef cattle, sheep and goats. Introduction to farming and agricultural economics is also provided within the framework of the mandatory agricultural practical training. Alternatively, students can organise their agricultural training as an EPT on private farms that are qualified for apprenticeship training. These students have to prepare a report on the daily work during EPT.

5.1.4 Description of the organisation and management of the VTH and ambulatory clinics

The VTH was restructured in 2017, when the former discipline oriented clinics for large animal surgery, internal medicine and reproduction were transformed into one Department for Horses and one Department for Ruminants and Swine, whereas the Department for Birds and Reptiles and the Department for Small Animals, respectively, kept their existing structure. The departments are structurally independent, while coordinating their common subjects through regular meetings. All departments offer general consultations from Monday to Friday during regular working hours and specialists consultations on specific days, and the Departments for Small Animals, Horses and

Ruminants and Swine provide a 365/24/7 emergency service. Details are described in appendix to 5.1.4.

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

Carcasses or body parts of animals used for the teaching in **Veterinary Anatomy and Embryology** stem from different sources: Dogs and cats are donated by practices and hospitals, either freshly dead or kept frozen. Other pets are donated from practices or hospitals and are made available for anatomical training after agreement or in the form of euthanised experimental animals.

Teaching in **Veterinary Pathology** uses euthanised or dead animals, which were sent for scientific dissection by the VTH or practitioners. These dissections take place due to scientific interest, without any invoices and senders receive notification over the phone regarding pathological-anatomical findings and further histopathological examinations. Results of these dissections are not intended for distribution to owners.

The following table summarises acquisition, storage and disposal of cadavers and material of animal origin for training in anatomy and pathology.

| | Acquisition | Storage | Disposal |
|--|--|--|---|
| Veterinary Anatomy, Histology and Embryology | Material is acquired through veterinary practices: animals euthanised for medical reasons. Additional material is acquired from local abattoirs. | Unfixed material in deepfreeze for in-situ seminars and exercises in the summer semester. Fixed material in tubs (in fixative solution) for dissection exercises in the winter semester. Plastinated material like complete cadavers or specimens. (Anatomical collection or dissection hall). | All carcasses and biological waste are securely collected, <u>transferred to Veterinary Pathology</u> , stored in cooling chambers at 4°C and picked up twice a week for rendering. Disposal occurs according to national regulations. |
| Veterinary Pathology | Animal cadavers and body parts from routine dissections as well as slaughterhouse specimens. | Cadavers and body parts are fixated in formalin, macerated or plastinated. | All cadavers and biological waste are securely collected, stored in cooling chambers at 4°C and picked up twice a week for rendering. Disposal occurs according to national regulations. |

5.1.6 Description of the group size for the different types of clinical training (both intramurally and extramurally)

Clinical training and exercises / practicals take place in groups. In the following table, the exercises are listed with the respective maximum group sizes. Often, student groups are instructed by several lecturers and teaching assistants, thus reducing the effective group size.

ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN

| Practical / Demonstration / Propadeutics | Semester | Groupsize (max.) |
|--|----------|------------------|
| Physics exercises | 1 | 15 |
| Anatomy dissection course | 2 and 3 | 6 |
| Anatomy seminar / In-situ demonstrations | 4 | 12 |
| Histology and embryology exercises | 2-4 | 65-70 |
| Chemistry course | 1 | 36 |
| Agricultural propadeutics course | 2 | 10 |
| Biochemistry course | 4 | 32 |
| Physiology course | 2-4 | 12 |
| Clinical propadeutics course | 5 | 15 |
| Animal nutrition course | 8 | 20-22 |
| Exercises for animal feed science | 3 | 20-22 |
| Animal Hygiene course | 7 | 20-22 |
| Course on animal epidemics | 8 | 40 |
| Clinical instructions (Klinikstunde) | 6 to 8 | 30 |
| Virology course (ViroSkillsLab) | 6 | 12 |
| Microbiology course | 5 | 40-42 |
| Parasitology exercises | 5 | 12 |
| Necropsy course | 9 and 10 | 6-10 |
| Pathological-anatomical demonstrations | 7 and 8 | 19-20 |
| Histopathology course | 7 and 8 | 65-70 |
| Food, milk and meat hygiene courses | 8 | 7-20 |
| Pharmacology (galenics) course | 9 and 10 | 16-18 |
| Clinical laboratory course | 6 | 30 |
| Clinical rotation | 9 and 10 | 3-5 |
| Clinical tracks | 9 and 10 | 15 |
| Paraclinical tracks | 9 and 10 | 15 |

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

In the context of the preclinical rotation in the 3rd and 4th semester, clinical hands-on training of the 3rd and 4th year, as well as the clinical rotation of the 5th year, students are actively involved in the admission, examination and treatment of patients. Essential clinical skills are practically trained in propadeutics exercises and tested in OSCEs. During clinical hands-on training, students are encouraged to actively train patient examination, diagnostic steps and therapeutic options. Clinical skills are further taught and advanced in the 5th year of study (see chapter 3).

Clinical hands-on training during the 3rd and 4th year and particularly the rotating student placement in the 5th year involve students in the work with patients. Goals of the rotation in clinics, which students visit during their practical year, are defined by the respective department (see appendix to 3.1.9).

Students receive this document at the beginning from the rotation supervisor. By examining patients together with the students, veterinarians can assess individual clinical skills and give advice, if necessary. Along with obligatory participation, students are free to voluntarily engage in clinics and thus further develop their clinical skills. The manner and scope of students' involvement in clinical work varies depending on the department (see below). For the EPT, VMF has developed an evaluation form, which can be accessed on the teaching and e-learning platform Moodle.

Department for Birds and Reptiles

In the context of the 5th year, students are assigned patients that they have to look after. At times, students conduct the anamnesis with animal owners. They accompany the patient admission, examination and consultation. Students also supervise inpatient care, however, only during the weeks that they are present in the clinic. One patient is assigned as a "clinical case" at the beginning of the week. Students present this case every day during the morning meeting and document the course of treatment.

In general, students have the opportunity to participate in all diagnostic and therapeutic measures (including surgeries) and discuss them with the treating veterinarian afterwards. If a patient dies, there is the option of attending the dissection of the animal and further examinations, after the respective animal owner gives consent.

Students are also involved in emergency services during clinic rotations. In doing so, they work the emergency service on at least one day and are involved in the care of inpatients and emergency patients. Further, five students have the opportunity to participate in the clinical service as a student assistant. This contract with a duration of one year offers an advanced training, including several tasks regarding patient care, which have to be attended to independently.

Ambulatory services of the Department for Birds and Reptiles cover poultry production units, and students in the 4th year are able to learn about this specialty on their ambulatory service ride outs. Students have to observe work in the poultry ambulance for at least one day.

Department for Horses

During the preclinical training, students work in emergency services at least twice and for 3-4 hours. In the course of the three-week clinical rotation, students are assigned to the emergency service twice on a week day (from 3:30 pm to 8:00 am the following day) and do at least 24 h of emergency duty during the weekend (time can be apportioned). There are generally up to nine students (in three groups) assigned at the same time. The three weeks are divided up into two weeks in surgery/orthopaedics/diagnostic imaging and one week in internal medicine/reproductive medicine.

Students are assigned patients to look after, they accompany the treating veterinarian and are involved in the treatment of "their" patients. They are expected to feel responsible for "their" patients and to exercise the role of a treating veterinarian. Each ambulatory and hospitalised patient is supervised by one veterinarian of this ward. This veterinarian serves as the first contact for students to discuss every step taken in a patient's diagnosis and therapy. The number of patients assigned to each student is determined according to the number of patients examined per day.

Depending on the knowledge and year of study, students receive different tasks. They consist of anamnesis, clinical examination of patients, inpatient care, patient monitoring, supporting the veterinarian in carrying out therapies, helping with diagnostic measures, monitoring all phases of anaesthesia, assisting in endoscopies and surgeries. Students can discuss patients with the veterinarian and make suggestions for the further diagnostic and therapeutic plan.

The practical implementation of examinations, medical measures and therapies is supervised by a veterinarian. Simple and already practiced tasks can be attended to independently upon consultation. Mentoring from veterinarian, case reviews of fictitious or existing patients during medical rounds and working independently benefit practicing clinical approaches. As part of writing discharge letters and reports of findings/referral letters and their independent studies, students can deepen theoretical

knowledge on clinical signs and disease of patients under supervision of a veterinarian. The department offers computer desks to easily access additional information on current cases.

Department for Ruminants and Swine

Students spend three weeks at the Department for Ruminants and Swine. They are clinically mentored in orthopaedics, surgeries, treatment and field trips. Two to three students are assigned to ruminants or swine, and are instructed by one or two veterinarians. Assigning the work in weekly intervals ensures that students can follow the patients' progress and learn how to assess therapeutic successes. Further, they independently carry out therapies under supervision, while they are part of the surgical team and thus actively involved in surgeries. Indications and implementation are discussed for each case individually. Students are introduced to the duties of animal attendants during emergency services, during which they help with feeding and cleaning stables. Moreover, students are responsible for the care of calves and the waterer.

Before morning rounds, each student examines four to six hospitalised ruminants per day. In addition to that, new patients are to be presented, around two to four animals per day. Five to ten bovines that are examined at the farms visited by us. Further, students during their clinical rotation examine up to two pigs.

Department for Small Animals

In the course of the five-week clinical rotation, students are assigned to the emergency service twice on a week day (from 3:30 pm to 8:00 am the following day) and do at least 24 h of emergency service during the weekend (time can be apportioned). During the preclinical training, students work in emergency services at least twice (three to four hours). Depending on the knowledge and year of study, students receive different tasks. They consist of anamnesis, clinical examination of patients, inpatient care, patient monitoring, supporting the veterinarian in carrying out therapies, helping with diagnostic measures, monitoring all phases of anaesthesia, assisting in endoscopies and surgeries. Students can discuss patients with the veterinarian and make suggestions for the further diagnostic and therapeutic plans. During the rotation in the practical year, students are actively involved in the admission, examination and treatment of patients. Every student is asked to accompany patients during out- and inpatient stays and to exercise the role of a primarily responsible veterinarian. Students are always supervised in taking care of cases by the attending veterinarian. This work includes client communication, patient discharge, retransfers and accounting.

The patient volume is determined by the number of patients examined per day and the subspecialty's focus (patient care or primarily diagnostics). The number varies between one and five animals per student. Mentoring from a veterinarian, case reviews of fictitious or existing patients during medical rounds and working independently benefit practicing clinical approaches. Each outpatient and inpatient is supervised by a veterinarian of the respective service. This veterinarian serves as the first contact for students to discuss every step taken in a patient's diagnosis and therapy. The practical implementation of physical examinations, medical measures and therapies is supervised by a veterinarian. Simple and already familiar routine tasks can be attended to independently by the student and upon consultation. During the five weeks of rotation consist of four compulsory weeks (internal medicine, surgery, radiology and anaesthesia – three students per group) and one elective week (neurology, cardiology, ophthalmology, Ear, Nose, Throat [ENT] – one student).

Students are involved in the diagnostic and therapeutic care of patients. The students actively participate in current case reviews and clinical evaluations. This way, they always have the opportunity to discuss "their own" and other cases with veterinarians. Additionally, interesting cases are talked about in the morning and afternoon rounds, as well as in subspecialty service specific medical rounds. Here, students are asked to actively participate in presenting cases. As part of writing discharge letters and reports of findings/referral letters and their independent studies, students can deepen theoretical knowledge on clinical signs and diseases of patients under supervision of a veterinarian.

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

In the context of the clinical rotation (5th year), students are assigned patients they have to present in the medical rounds. It is their task to gather all information on these cases and to discuss them with the responsible veterinarian (see chapter 3 and appendices to 3.1.9). Students practice and assist in clinical examinations and treatments or carry them out independently. Thus, students become more deeply involved and develop a sense of responsibility for their cases (case-oriented approach).

Case studies and case-oriented learning is also applied in the clinical and non clinical tracks. Cases within the tracks may be actual patients or virtual cases, which are presented to students and discussed. Furthermore, they participate in internal measures of continuing education offered by the clinic during the clinical rotation, such as medical rounds, journal clubs and book clubs; that way, they are intensively involved in clinical thinking and continuing scientific education, motivated to independently gather patient data, and made comfortable with current scientific developments. Curricula for clinical rotations in individual clinics/institutes with time periods and subjects covered can be found in the appendix to 3.1.9.

5.1.9 Description of the patient record system and how it is used to efficiently support the teaching, research, and service programmes of the VMF

All information pertaining to admitting animal patients, veterinary services and treatments given, as well as drug administration, is documented in the commercial animal patient management programme “VETERA®”. All clinics have implemented this system since 2008. In addition, both large and small animal departments document medical images on PACS systems (Philips, CURA systems). The Department for Small Animals additionally uses SonoWin 4.2 (Meso) for ultrasound medical images and OR1 & AIDA (Storz) for medical videos (see table below).

| Department of VTH | System used for managing animal patients |
|---------------------|--|
| Birds and Reptiles | VETERA®+ medical records + PACS |
| Horses | VETERA®+ medical records + PACS |
| Ruminants and Swine | VETERA®+ medical records + herd management system HERDE® |
| Small Animals | VETERA®+ medical records + PACS + SonoWin + OR1 & AIDA |

When working on cases, students use information from VETERA® as well as physical barn registers and other digital medical records.

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

According to German animal welfare legislation, both student training and animal experiments require either notification or permission from the relevant authority. Within the VMF, the Faculty Commission for Animal Welfare and the Faculty Officer for Animal Welfare take care of the respective rules and regulations. Learning outcomes and knowledge gains are weighed against the strain inflicted on each animal. In case of teaching, it must be demonstrated that learning objectives cannot be achieved with alternative methods, i.e. without using animals. If animals are used for educational purposes, it must be documented that the least stressful and painful methods are applied and that as few animals as possible are used. The application must specify the level of exposure or strain, measures implemented to reduce suffering, and specify ‘termination criteria’ in order to protect the animal from unreasonable suffering. These criteria are reviewed by animal welfare officers and the relevant authority. The state authority

inspects locations to examine husbandry conditions of clinic animals and to indicate potentially necessary improvements of these conditions for the purpose of animal welfare.

Every use of animals must be ethically justifiable. To ensure that all measures pertaining to animal welfare are followed, training sessions for researchers, technical staff and students dealing with animal experimentation are organised. Animals that are property of UL and have been used in educational training can be adopted out to private animal owners, provided the owners can document that they have the skills needed for handling and care taking. For agricultural livestock this requires the consent of the regional veterinary authority.

The centre for applied training and learning PAUL contributes greatly to reducing strain on animals, in order to assure more intensive and practical training and thus the improvement of Day One Competences for students. Advantages of PAUL noticed by professors and lecturers are highlighted by the systematic integration of these elements into the state examination and will further highlight the importance of using these training offers to students.

5.1.11 Description of how and by who the number and variety of animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the VMF are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Decisions made are the responsibility of the respective unit, and are communicated and defined by the institute or department. It is not possible to plan a required number of patients. Departments will acquire a solid number of patients within the scope of their possibilities. The number is proportional to the development of the department's reputation and performance. There is a generally high sensitivity for animal welfare, which is why any use of live animals for teaching and research is intensively discussed in the respective units.

5.2 Comments

- All VTH clinics use the same patient information system; this will allow for the rapid extraction of number of patients attended to or treated annually in the respective institutions.
- The number of animals and material of animal origin is considered sufficient for preclinical and clinical training. Maintaining these numbers is within the responsibility of the respective institutions.
- Animal welfare legislation mandate to reduce the number of animals used in teaching to the necessary minimum.

5.3 Suggestions for improvement

- A uniform logbook for recording cases and practical training during the clinical rotations in the departments should be developed, agreed upon and consistently used.
- Recording of the number of patients actually seen and treated by students will be improved.
- Continued further development of PAUL and systematic integration of PAUL training stations in teaching for improving the level of First Day Competences.
- More intense use of the formal collaborations with large scale production animal farms in the region for farm animal clinical practical training as well as ambulatory visits and herd health teaching.
- Collaboration with the Teaching and Research farm in Köllitsch should be intensified.

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

| Species | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) |
|--|--|---|---|
| Bovine: Complete body | 0 | 1 | 0 |
| Body parts | 68 distal Limbs, 2 testicles, 6 fetuses, 15 eyes, 2 brains | 50 distal limbs, 5 fetuses, 15 eyes | 50 distal limbs, 4 fetuses, 15 eyes |
| Small ruminants: Complete body | 0 | 2 | 6 |
| Body parts | 12 limbs, 2 heads, 2 rumens, 2 omasums | 12 limbs, 4 heads, 50 eyes | 10 limbs |
| Pigs: Complete body | 20 | 10 | 6 |
| Body parts | 6 fetuses | 6 fetuses | 4 fetuses |
| Dogs: Complete body | 56 | 60 | 58 |
| Body parts | 80 limbs 4 heads 8 fetuses | 72 limbs, 20 heads, 6 fetuses | 72 limbs, 20 heads, 6 fetuses |
| Cats: Complete body | 64 | 60 | 70 |
| Body parts | 4 heads | 4 ovaries and oviducts | 0 |
| Equids: Complete body | 1 | 1 | 2 |
| Body parts | 58 dist. limbs 2 heads 2 fetuses, 4 pararenal glands | 48 dist. limbs, 4 heads | 46 dist. limbs, 5 heads |
| Poultry | 40 | 40 | 40 |
| Exotic animals and birds | 20 | 20 | 20 |
| Small animals (Ieporids, rodents) | 50 | 50 | 50 |
| Other (new world camelids) | | | 1 Alpaca |

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

| Species | AY (2016/17) | | AY-1 (2015/16) | | AY-2 (2014/15) | | Mean | |
|---------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| | Number used in teaching | Actual animal population | Number used in teaching | Actual animal population | Number used in teaching | Actual animal population | Number used in teaching | Actual animal population |
| * | | | | | | | | |
| Cattle LVG | 82 | 82 | 80 | 80 | 80 | 80 | 80 | 80 |
| Small ruminants LVG | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Pigs | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| Companion animals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dogs | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN

| | | | | | | | | |
|---|-------|-----|-------|-----|-------|-----|-------|-----|
| Equine | 9 | | 9 | | 9 | | 9 | 9 |
| Poultry&Rabbits (incl. birds, rodents) | 2-4** | | 2-4** | | 2-4** | | 2-4** | |
| Exotic pets | 5** | 5** | 5** | 5** | 5** | 5** | 5** | 5** |
| Other (Callithrix jacchus: VPCI) | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Other (camelids, deer) | 37 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| Other (deer) | | 100 | | 100 | | 100 | | 100 |

*Total number per year: Due to the restructuring of the Large Animal Clinics in 2017, the exact figures, especially for cattle and pigs, were not always available and are thus extrapolated into the previous years. Numbers for equines are on the basis of the documented numbers of the Large Animal Clinic for Surgery with additions made for the average numbers of equines kept in the Large Animal Clinics for Internal Medicine and Reproduction.

** For propadeutics 2-4 rabbits and 5 gerbils are used in the Department for Small Animals.

Table 5.1.3. Number of patients seen intramurally**

| Species | AY (2016/17) | | AY-1 (2015/16) | | AY-2 (2014/15) | |
|--|--|--------------|---|--------------|---|--------------|
| | Ambulatory | Hospitalised | Ambulatory | Hospitalised | Ambulatory | Hospitalised |
| * Cattle | 90 (clinic), 18,440 (LVG Oberholz and cooperating farms), 3,117 (herd health visits (Scoring, claw trimming) | 326 | 90 (clinic), 18,440 (LVG Oberholz and cooperating farms), 3,117 (herd health visits (Scoring, claw trimming) | 300 | 90 (clinic), 18,440 (LVG Oberholz and cooperating farms), 3,117 (herd health visits (Scoring, claw trimming) | 300 |
| Small ruminants | 34 | 40 | 30 | 40 | 30 | 40 |
| Pigs | 2,650 individual examinations, treatments/ scanning | 0 | 2,500 | 0 | 2,500 | 0 |
| Dogs | 7,253 | 1,641 | 7,417 | 1625 | 6,561 | 1,447 |
| Cats | 2,676 | 688 | 2,676 | 695 | 2,493 | 644 |
| Small companion animals (no species differentiation) | 575 | 88 | 629 | 83 | 553 | 48 |
| Other (Department for Small Animals) | 108 | 1 wildlife | 196 | 6 wildlife | 124 | 2 wildlife |

ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN

| | | | | | | |
|-------------------------------------|-----------------------------|------------------------|-------|-----------------|-------|-----------------|
| Equine* | 0 | 727 (CTK a. KFP) + 200 | 0 | 508 (CTK) + 400 | 0 | 475 (CTK) + 400 |
| Poultry | 24 | 10 | 33 | 10 | 15 | 10 |
| Birds*** | 1,417 | 425 | 1,462 | 439 | 1,418 | 425 |
| Exotic pets: reptiles and amphibiae | 1,014 | 253 | 1077 | 269 | 1,129 | 282 |
| Other | 65 Camelids and minipigs | 54 camelids | 60 | 50 | 60 | 50 |

*Total number per year: Due to the restructuring of the Large Animal Clinics in 2017, the exact figures, especially for cattle and pigs, were not always available. Therefore, the numbers of the previous year were extrapolated backward. Numbers for equines of the Department for Horses (KFP) are on the basis of the documented numbers of the former Large Animal Clinic for Surgery (CTK) with additions made for the average numbers of equines kept in the former Large Animal Clinics for Internal Medicine (MTK) and Reproduction (AGTK).

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

***Number includes numbers of ambulatory visits to groups of birds within the intramural curriculum.

Table 5.1.4. Number of patients seen extra-murally

Numbers for extramural patients cannot be provided because detailed reporting is not established. The reporting forms for EPT will be provided to the EAEVE commission on site.

Table 5.1.5. Percentage (%) of first opinion patients used for clinical training

| Species | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | AY Mean |
|---|--------------|----------------|----------------|---------|
| Cattle* | 80 | 80 | 80 | 80 |
| Small ruminants | 80 | 80 | 80 | 80 |
| Pigs | - | - | - | - |
| Companion animals | 80 | 80 | 80 | 80 |
| Equine | 75 | 75 | 75 | 75 |
| Poultry & rabbits (incl. birds and rodents) | 50 | 50 | 50 | 50 |
| Exotic pets | 50 | 50 | 50 | 50 |

* Clinical patients, either first opinion or second/third opinion, are all potentially used for clinical training. As during Christmas break and at the end of the half-year periods in March and September, some weeks are without students in clinical rotation, some of the patients are not seen by students. However, an estimated percentage of 75 to 80 per cent of the first opinion cases are used for clinical training.

Table 5.1.6 Cadavers used in necropsy

| Species | Number of necropsies | | |
|--|----------------------|---------|---------|
| | 2016/17 | 2015/16 | 2014/15 |
| Food producing animals (excl. equids) | | | |
| Bovine | 68 | 37 | 43 |
| Small ruminants | 27 | 26 | 45 |

ANIMAL RESOURCES AND TEACHING MATERIAL OF ANIMAL ORIGIN

| | | | |
|----------------|------------|------------|------------|
| Pigs | 157 | 228 | 263 |
| Poultry | 91 + 36* | 70 + 68* | 137 + 75* |
| Other | - | - | - |
| Horses | 53 | 64 | 66 |
| Other equids | 3 | 2 | 1 |
| Dogs | 91 | 84 | 86 |
| Cats | 207 | 205 | 191 |
| Leporids | 45 | 35 | 27 |
| Ruminants | 53 | 86 | 70 |
| Birds | 158 + 681* | 75 + 718* | 139 + 668* |
| Exotic animals | 139 + 145* | 117 + 191* | 155 + 172* |

*necropsies performed in the Department for Birds and Reptiles

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

| Species | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|--|------------------------|----------------|----------------|------|
| Cattle* | 134 / 165 total visits | 150 | 150 | 150 |
| Small ruminants | 0 / 0 | 0 | 0 | 0 |
| Pigs | 100 | 100 | 100 | 100 |
| Companion animals | 0 | 0 | 0 | 0 |
| Equine** | 0 | 0 | 0 | 0 |
| Poultry&Rabbits (incl. birds, rodents) | 48 | 48 | 48 | 48 |
| Exotic pets | 3 | 3 | 3 | 3 |
| Other (specify) | 0 | 0 | 0 | 0 |

*Total number per year: Numbers for bovine, small ruminants and pigs estimated based on figures from the new founded Department for Ruminants and Swine, which started its operations April 1st, 2017. Number for previous year have been extrapolated.

**From April 1st, 2017, no ambulatory visits to equine stud farms have been offered. The visits offered until this date were not oriented towards herd management but individual problems and services.

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

| Species | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|-------------|--------------|----------------|----------------|-------|
| All species | n.a.* | n.a.* | n.a.* | n.a.* |

*Not applicable. In the German veterinary curriculum, training in abattoirs and related premises occurs during the mandatory 3 week EPT in the final year. Abattoirs have to meet conditions provided by the TAppV including an EU registration. The VMF is equipped with a slaughterhouse on campus, and therefore, able to organise demonstrations and exercises in Food Hygiene on site.

6 LEARNING RESOURCES

6.1 Factual information

6.1.1 Description of the main Library of the VMF

The Library of Veterinary Medicine is centrally located on the VMF campus and thus easily accessible for students and staff members. The UL library is responsible for decisions regarding content, finances and personal aspects. The interests of the VMF towards the UL library system are represented by the Library Officer of VMF. Students have access to all locations of the UL library. Opening hours are described in detail in chapter 4.1.5.

The VMF campus library is open to the entire VMF and considers all content-related priority programmes for the veterinary training and research. The library has three full-time positions, a qualified librarian and two qualified media employees and information services. Additionally, one field librarian is working full-time in the main library for medicine, assisting with the library for veterinary medicine, while only being temporarily on-site. During lecture periods, additional four student associates are hired, working a total of 15 hours a week.

The library holds 84 study desks. Students use the library for self-directed work and studying. They use print media, the computers and their own electronic devices to access electronic learning materials. Further, students can carry out literature research, scan, copy and print. Two separate rooms offer spaces for group work.

Students can use the online catalogue for literature search including PubMed, Web of Science, CABI Compendia Collection. Students and teachers have access to the VetCenter of the publisher Thieme, with offers of electronic media for veterinary purposes. It currently consists of 108 e-books, four e-journals and other data base offers.

Multiple (3-30) copies of textbooks in German and English are available. E-textbooks on site can be used in the library and outside the library using VPN. The collection of the library consists of 21,200 printed books and 535 printed magazines.

6.1.2 Description of the subsidiary libraries

Approximately 2,718 monographs are held in hand libraries in the respective institutes and clinics; all periodical volumes are kept in the library.

6.1.3 Description of the IT facilities and of the e-learning platform

VMF has a centralised network and server structure on campus (see appendix to 6.1.3):

- 500 computer systems and notebooks,
- 180 ThinClients,
- 52 server systems (100% virtualised),
- 110 WiFi Access Points (VETMED-WLAN) and
- 15 WiFi Access Points (Eduroam-WLAN).

The complete managed disk space amounts to 400 TB. The related services are centrally maintained and offered to institutes and hospitals.

The IT systems of VMF are integrated in a central Active Directory structure on the basis of Windows Server 2012/2016. Microsoft Exchange 2010/2016 is used as e-mail and groupware system. Network infrastructure (active network components) and backbone connections are made available by the UL Computer Centre (URZ), in the department for networks. Kaspersky Antivirus is used for computer work desks and centrally updated and monitored (see appendix to 6.1.3).

The e-learning platform of VMF is part of the centrally managed “Moodle” system of UL.

LEARNING RESOURCES

Electronic examination is being introduced at VMF, and since 2018, examinations are supported using UCAN software. 160 iPad systems have been purchased in 2018 to support the electronic examinations.

6.1.4 Description of the available electronic information and e-learning courses, and their role in supporting student learning and teaching in the core curriculum

Moodle is hosted at the URZ and can be reached via the network of the VMF. UL offers VPN in order to facilitate access from home. Central introduction courses are offered to students. Apart from lecture material, links to online lectures and downloads for further material, the platform is also used for communicating with students, as there are information boards and mailing lists for every course.

6.1.5 Description of the accessibility for staff and students to electronic learning resources both on and off campus

Students have access to work spaces with computers (library, computer pool, VTH). ThinClients are used at all locations.

For independent studying of image diagnostics (core unit Virtual Microscopy), tissue sections scanned in high resolution can be viewed on any terminal device, evaluated and annotated. Study sessions with teachers can be arranged. Furthermore, PAUL offers electronic options like image reporting, anatomic training programmes and platforms for physiology as well as “Core Unit Virtual Microscopy”. In order to use the IT offers, students have access to the eduroam WiFi network. VMF has its own WiFi network to guarantee coverage in all closed areas of the VMF campus.

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

Students receive a campus account at the time of their matriculation. Access to IT resources and systems is possible via Single Sign-On. Support for all central teaching and learning systems, e-learning advice as well as help for specific questions about e-learning will be given by the central Student Service centre of UL (SSZ), the URZ, the library, students of higher years, Office of Study Affairs. Online tutorials are available through Moodle. There are numerous teaching offers to use the library and catalogue, as well as for literature reviews and data base research.

6.1.7 Description of how and who decides on the learning resources provided by the VMF, how it is communicated to staff, students and stakeholders, as well as implemented, assessed and revised

The decision of acquiring media for the library is made by the librarian, wishes and suggestions of students and employees are implemented. The acquisition/incorporation of print media takes place in the library. Purchase and provision of e-media is done by the University Library. Further, the University Library offers user-driven acquisition of print and e-books. Media are listed in the online catalogue and are added to the collection upon request.

The financial means available are decided upon by the rectorate, then by the Commission of Library Representatives of the faculties and finally by the VMF representative after consulting with the Dean and the library branch. Usage of the library collection is regularly and statistically recorded and influences the decision-making. Important news concerning the library is announced via e-mail for employees and on a screen in the canteen for students.

6.2 Comments

- Media and spaces are sufficient. At busy times it can happen that all spaces in the library are used and all print media available for loan are taken, especially newer issues.
- Opening hours of the VMF library are sufficient. Extended opening hours (after 8:00 pm and on weekends) are compensated through offers of other library locations of the University Library.
- Students highly appreciate the „VetCenter“ offered by the library and Thieme publishing company. This way, they can use literature resources at home and even outside library hours.
- The library is adequately staffed.
- It is seen as an advantage that the VMF maintains its own on-site library and IT support.
- The library is well equipped and provides access to a large number of relevant monographs, periodicals and e-books including the VetCenter.
- Students highly value the opportunity for practical training at PAUL.
- Students are content with learning materials and preparations during courses.

6.3 Suggestions for improvement

- Equipping the library with carrels for long-term use, e.g. for doctoral students, would be desirable, however, it is debatable whether it can be achieved structurally.
- Students are supported by the Committee of Study Affairs to request campus wide high-speed internet access via WLAN in order to be able to download and work on learning materials and use tablets/computers during lectures. Expansion of the university-owned eduroam WiFi network on campus has been applied for at the URZ for multiple times and is seen as a sensible improvement.

7 STUDENT ADMISSION, PROGRESSION AND WELFARE

7.1 Factual information

7.1.1 Description of how the educational programme proposed by the VMF is advertised to prospective students

Admission and selection criteria are described on www.hochschulstart.de. The VMF's programme and process are described on the homepage of the UL and on the VMF website. Further, there is information on subjects and content, placements and the application procedure, while a five-page brochure is available at the SSZ. Once a year, VMF informs those interested in the veterinary profession about admission and the curriculum. VMF representatives are available for questions and individual conversations. Every year, the VMF participates in the university-wide open-house event. Students answer questions in the form of a so-called "Studi-Speed-Dating". VMF representatives visit high schools and provide information on the veterinary programme of the VMF for vocational orientation to prospective students. The VMF participates in the "Long Night of Science". The SSZ offers individual consultation for prospective students.

7.1.2 Description of the admission procedures for standard students

7.1.2.1 Selection criteria

Admission is centrally regulated through "Hochschulstart". Prerequisites to enter veterinary education in Germany are a) the higher education entrance qualification, b) meeting the admission requirements of "Hochschulstart" and c) those of the veterinary faculties. 40% of all places are filled directly with applicants on the basis of their final high school grades (20%) or special admission regulations (20%). The VMF invites all applicants with a high school grade of < 2.5 (scale from 1 [best] to 6 [worst]) and Leipzig as their first preference. Applicants receive extra credits by weighing their last four school terms and the final high school grades in biology, chemistry, physics and mathematics. Further, professional qualifications (e.g. veterinary assistant) are valid as well. After determining extra credits, a list is created based on the total score including additions. 60% of the places are filled by using this list.

7.1.2.2 Policy for handicapped and ill students

Handicapped and ill applicants can apply for a reduction in the waiting period and/or grade requirements. For students with disabilities, the first choice university is respected. Once admitted, students with disabilities or chronic illnesses can contact the Central Office for Students with special needs at the UL. Personal and individual counselling is available, covering the following topics: chances of access, applications for hardship cases, compensation for disadvantages and flexible composition of the course of study.

7.1.2.3 Composition and training of the selection committee

Selection committees are not in place at VMF.

7.1.2.4 Appeal process

Students not admitted to the study programme receive a rejection letter from "Stiftung Hochschulstart". It is possible to appeal this notification before the administrative court of Leipzig within one month.

7.1.2.5 Advertisement of the criteria and transparency of the procedures

The procedures and requirements are available in both German and English on the websites of Hochschulstart, the UL and the VMF. The Office of Study Affairs can be contacted, should individual specific questions pertaining to applications or admissions arise. The criteria by which 60% of selected students were evaluated or chosen can be reviewed at the same location.

7.1.3 Description of the admission procedures for full fee students

Not applicable, as there are no tuition fees at German public universities.

7.1.4 Description of how the VMF 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 number of students admitted each year is currently limited to approx. 135 (varying from 132-140). This number is annually recalculated by the UL administration on the basis of the Capacity Regulation (Kapazitätsverordnung, www.revosax.sachsen.de). Teaching hours in the curriculum, student-teacher ratio in the various courses and number of core funded academic staff influence the number of students to be admitted each year. Number of animals as patients and/or for teaching, structural resources (such as teaching facilities) as well as biosecurity and welfare requirements are not taken into account for the calculation of admission numbers. Therefore, VMF has no influence on the numbers of admitted students.

7.1.5 Description of:

7.1.5.1 The progression criteria and procedures for all students

The curriculum and examinations are explained on the VMF's website. The TAppV as well as the VMF's StO and PO regulate the monitoring of students. Successful participation in all practical courses (exercises, seminars, electives, demonstrations, rotations etc.) is documented in the Alma Web "Campus Management". Students can check their status in the Alma Web system. Once eligible, students are invited by the Office of Study Affairs to take the respective examinations. The sequence of examinations is laid out in the TAppV and the PO (appendices F and H).

The process and required qualifications for the examination admission in the respective field are explained by the lecturer to the students and partially published on institute websites or in the associated course on the learning platform (Moodle).

There is an introductory event at the beginning of the clinical part of the curriculum by the Dean of Study Affairs or a designate. The sequence of the examination according to TAppV after the third year (clinical phase of studies) can be accessed by students via Moodle. These data are supposed to be updated in case there are changes in the general course of studies, however, this is not always guaranteed. There is no official written notification by the Office of Study Affairs in place to communicate such changes.

7.1.5.2 The remediation and support for students who do not perform adequately

Liaison lecturers of the VMF are available to students. General academic advising is carried out by the SSZ. In addition to the offers of psychosocial counselling at the SSZ, the Student Advisory Centre and the Centre for Teacher Training and School Research (ZLS) offer initial psychological counselling for students. In these sessions, students can address topics regarding challenges in their studies and the associated consequences on their competences. This includes, among others, concentration disorders, exam anxiety, dealing with stress and overload and emotional crises.

Specific advising regarding the veterinary curriculum is available at the Office of Study Affairs and the chairpersons of the Examination Committee. Students not sufficiently progressing are invited to a counselling led by the chairperson of the respective Examination Committee.

7.1.5.3 The rate and main causes of attrition

As part of the QA process, VMF annually compiles key figures on academic progress in a quality report, which is discussed with the central UL administration. The following table is derived from the 2017 report and presents the progression from the first to the 5th semester for the cohort which started in winter semester 2014/15. The number of students remaining has been constantly over 90% for the past ten years.

Cohort Development (number of those beginning to study in a cohort in the first semester in proportion to those still studying in the 5th semester)

| Students 1 st semester 14/15 | Students 5 th semester 16/17 | Cohort remaining* |
|---|---|-------------------|
| 135 | 126 | 93.3 % |

*Study places becoming vacant are regularly filled to the number defined by the Capacity Regulation with students from other universities. Therefore, the precise percentage of decrease in the student cohort of a specific year cannot be given. Based on de-registration surveys regularly conducted by UL, 74% of the former VMF students continued studying after leaving UL. This indicates that a large proportion of de-registration is due to transfers to other universities; most likely other German establishments for veterinary education.

7.1.5.4 The exclusion and appeal procedures

Students who do not pass the second repeat examination (third attempt) in an individual subject receive a written notice of final examination failure from the Examination Committee's chairperson, and are excluded from further veterinary studies in Germany. A student may lodge an objection in writing within one month. If this is rejected, the action may be brought before the administrative court of Leipzig.

7.1.5.5 The advertisement to students and transparency of these criteria/procedures

The examination process including criteria for expulsion are laid out in the TAppV (appendix F), which is available on the VMF website.

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

VMF appoints liaison lecturers/ombudspersons suggested by students and approved by the FR (appendix to 1.1.4). They are the starting point for questions and advice/counselling. Further, the Dean of Study Affairs and the Chairpersons of the Examination Committee are available for consultation and counselling.

The SSZ offers individual counselling, mentoring and services for the following topics: central introduction day, Career Service, psychological counselling offers, advice on studying with disabilities or chronic illnesses, guidance in cases of doubt and considering dropping out. The SSZ also offers courses handling questions such as "How do I study best?" and "How can I deal with stress?"

Subsidies are granted primarily to foreign students during exam periods and in cases of illness, and to single parents while taking their final exams. Additionally, general social counselling (housing subsidies, study financing, health insurance, etc.) and counselling for students with children is offered. For questions, suggestions and complaints concerning study matters as well as personal problems, e.g. in cases of overwork or conflict with professors and lecturers, students can address their concerns to the respective contact points at the VMF or UL.

Students are organised or participate in a number of associations, such as: Annual Bergfestball Club, Exma Ball Club, TV Club, Schwemme, Blaswerk, Bunter Hund e.V. Students of the 1st semester are welcomed by all professors in an on-campus welcome event. They are matched with tutors from the 3rd semester (buddy system) to support their start at the VMF. Students are furthermore involved in the organisations bvvd, IVSA and “veterinarians without borders”.

VMF attempts to develop individual plans for each pregnant student, when they cannot participate in practical courses. Mothers are taken into special account to guarantee flexibility for their supervision of children. Some institutes have designed specific course modules that allow pregnant or breast-feeding students to continue their studies without being exposed to infectious or toxic material or dangerous cutting tools.

There is a baby changing room located in the disabled bathroom of the Lecture Hall Building, a separate lactation room does not exist at the moment. Moreover, there is still no special room for placement of children during compulsory classes or a playroom available. Here, VMF, the Department 4 of UL and the SIB will try to find solutions and a space for changing and nursing children.

Childcare facilities are available for students at the University Day Care Centre, however, spaces are on high demand. Leipzig Student Service runs “kinderladen” for children from 8 weeks to 6 years old and the nursery “Villa Unifratz”.

7.1.7 Prospected number of new students admitted by the VMF for the next three academic years

Enrolment numbers in the coming years are expected to remain at 132-140 students.

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

Intended or expected changes in the number of incoming students, changes in the number of students progressing through the study stages, reasons for attrition etc. are identified through regular meetings with UL administration in the context of QA, by surveys and feedback from the Office of Study Affairs, the State Examination Office and the chairpersons of the Examination Committees. They are discussed in the Deans’ Office, the Committee of Study Affairs and with the respective teaching staff.

Table 7.1.1 Number of new veterinary students admitted by the VMF

| Type of students | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|-------------------|--------------|----------------|----------------|------------|
| Standard students | 130 | 132 | 135 | 132 |
| Full fee students | n.a. | n.a. | n.a. | n.a. |
| Total | 130 | 132 | 135 | 132 |

Table 7.1.2 Number of veterinary undergraduate students registered at the VMF

| Year of programme | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|-------------------|--------------|----------------|----------------|------------|
| First year | 132 | 130 | 142 | 135 |
| Second year | 133 | 135 | 143 | 137 |
| Third year | 132 | 136 | 137 | 135 |
| Fourth year | 131 | 125 | 138 | 131 |
| Fifth year | 121 | 129 | 136 | 129 |
| Sixth year | 129 | 136 | 144 | 136 |
| ➤ Sixth year | 17 | 9 | 25 | 17 |
| On leave | 29 | 26 | 25 | 27 |
| Total | 824 | 826 | 890 | 847 |

Table 7.1.3 Number of veterinary students graduating annually

| Type of students | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|-------------------|--------------|----------------|----------------|------------|
| Standard students | 122 | 120 | 155 | 132 |
| Full fee students | n.a. | n.a. | n.a. | n.a. |
| Total | 122 | 120 | 155 | 132 |

Table 7.1.4. Average duration of veterinary studies

The average duration of study for graduating students in 2016/17 was 11.6 semesters.

| Duration | % of the students who graduated on AY (2016/17) |
|-------------------|---|
| + 0** | 89 |
| + 1 year | 29 |
| + 2 years | 4 |
| + 3 years or more | 1 |

** This is equivalent to the minimum time required (11 semesters or 5.5 years)

Table 7.1.5. Number of postgraduate students registered with the VMF - Interns

| Programmes | AY (2016/17) | AY-1 (2015/16) | AY-2 (2014/15) | Mean |
|--|--------------|----------------|----------------|--------|
| EC Residents | 5 | 5 | 6 | 5 |
| German Veterinary Specialist Trainees (see also table 10.1.1.) | 121+19 | 100+19 | 85+14 | 102+17 |
| Ph.D. students | n.a. | n.a. | n.a. | n.a. |
| Others: Dr. med. vet | 52 | 43 | 64 | 53 |

7.2 Comments

- VMF is subject to a regulated but transparent central selection procedure for applicants.
- The number of admitted students is externally determined. Recruiting additional teaching staff would result in more students to be centrally admitted.
- The progression of students is closely monitored in the UL's QA processes.
- There is a broad range of support available to students.
- The Maternity Protection Act serves as lawful foundation for pregnant students during their studies. The UL has provisions which regulate conditions for contact with pregnant students. The Office for Occupational Safety develops a risk evaluation with the respective institutes. Decisions regarding pregnant students attending courses posing a risk to unborn children are taken by the responsible course coordinator in the respective units in collaboration with the Office for Occupational Safety. The risk evaluation is the basis for the decisions and measures taken.

7.3 Suggestions for improvement

- Easily accessible information on courses, counselling and other central services.
- Improvement of communication between the office of study affairs and the student body.
- FAQ list to improve information for students on website.
- Students request improved communication and feedback during rotations in the clinical year in some departments of the VTH.
- A brochure providing all relevant information on "Students with Children" at VMF should be developed.
- The Student Guideline will be updated for the winter semester 2018/2019.
- A separate room for students and their children shall be made available. Here, VMF, UL and SIB will make an effort to come up with solutions both mid-term and long-term.
- Improvement of buildings for usability by students with disabilities (e.g. access to buildings with wheel-chair) is desirable.

8 STUDENT ASSESSMENT

8.1 Factual information

8.1.1 Description of the global student's assessment strategy of the VMF

In Germany, subjects and topics of the examinations are regulated by federal law (TAppV, see appendix F) and are thus identical for each of the five German establishments for veterinary education. In September 2017, VMF issued an amended version of the PO (examination regulations, see appendix H).

8.1.2 Description of the specific methodologies for assessing theoretical knowledge, pre-clinical practical skills and clinical practical skills

Within the framework of the TAppV, VMF has defined the different types of examinations, the ranks for MC tests, the timetable for taking the examinations in the various disciplines, the prerequisites for admittance of the students and the maximum time to pass the examination in a discipline after admittance. During preclinical studies, oral examinations with practical parts dominate. There are also written exams, mostly short answer questions. During clinical studies, examinations may be written, including MC, or oral. They often include a practical/OSCE/clinical part and a final report written by the examinee. Examinations of foci are performed as MC. The students collect scores in the subjects taught in the foci over a period of four semesters (5th to 8th semester).

8.1.3 Description of the assessment methodology to ensure that every graduate has achieved the minimum level of competence, as prescribed in the ESEVT Day One Competences (see Annex 2)

The VMF has prepared a comprehensive catalogue of learning outcomes covering all subjects taught according to TAppV Annex 1 (re. § 2 (1), (2) and (3)). These learning outcomes cover the full range of knowledge, skills and competences covered within these subjects. The learning outcome catalogue establishes the basis for all written and oral examinations and consequently for any decisions on grades and progress within the curriculum.

Participation in lectures is documented in exceptional cases only, when attendance is mandatory (in-class lectures). A large part of exercises and seminars is logged at Alma Web. In case of the clinical rotations and the (para-) clinical tracks, attendance is certified with attendance sheets (time, date, signature and stamp). The compulsory project work of each student is documented in a separate certificate. VMF certificates and the external certificates are part of the individual examination file.

8.1.4 Description of the processes for:

- ensuring the advertising and transparency of the assessment criteria/procedures, - awarding grades, including explicit requirements for barrier assessments; - providing to students a feedback post-assessment and a guidance for requested improvement; - appealing

VMF has established a committee to review the MC questions. The review group consists of 5 - 6 members of the clinical, paraclinical and VPH departments as well as the chairperson of the Examination Committee. Members (except the chairperson of the Examination Committee) change every 1-2 years on a regular basis. The mission of the review group is to ensure a sufficient quality and reliability of the MC questions. The coordinator for the individual focus collects and reviews the MC questions for scientific content related to the focus. Then the review group evaluates the questions.

The questions are reviewed according to established rules for content, formatting, style, stem and choices. All questions that do not fulfil the required criteria are returned to the respective examiner for correction (also see chapter 11.1.1).

The exams MC questions are analysed for reliability and validity. MC questions that are answered correctly by less than 30% of the students and with a low discriminatory power (<0.2) are identified and discussed with the author, the student advisory group of the corresponding semester, the chairperson of the Examination Committee and the coordinator of the focus.

MC question files have been collected on the faculty server. Access is restricted to the author and to members of the review group. The questions are moved through a folder system according to the review progress until they are ready to be used for a written MC examination. With the begin of use of UCAN in 2017 collection and review of questions are realised on this electronic database.

Initial training and further education of the examiners is coordinated, comprehensive and properly funded. Thereby all examiners acquire the knowledge, attitudes and resources that they need as examiners. Regularly held, intensive educational courses are offered in cooperation with the e-learning centre of the UL and the local UCAN-admin. These have been used by most examiners in the last three years. Meetings with all examiners present are held one to two times per semester to improve professionalism, to promote a culture of discussion and scientific approach. The updated PO is distributed to the examiners.

Requirements to pass an examination are explicitly described in § 5 of the PO. The assessment tasks and grading criteria for each examination are clearly identified and available to students in advance of the assessment as regulated in the TAppV and the PO (see appendix F and H).

After oral examinations, students are informed immediately about their results. The results of written exams are usually disclosed within a maximum of 21 days (according to § 5 PO).

Feedback from students is essential to identify and exclude inadequate MC questions. For this purpose, a meeting with the examiners individual focus is scheduled directly after a MC examination. This process is regulated in the specified rules for feedback on written examinations within the foci, as confirmed by the FR. Furthermore, the examination advisory student group may be involved at this stage.

VMF is participating in the PTT. After a formal review, PTT questions are available for the technical review. Lecturers from the other five establishments for veterinary education involved (Berlin, Giessen, Hanover, Munich, Vienna) have the opportunity to examine questions from their field of expertise and classify them as correct or, if necessary, as in need of improvement. For the PTT, the question format MC Type A is used.

The appeal against assessment outcomes is opened as regulated by § 7 of the PO.

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

The examinations in veterinary medicine are state examinations and are performed under the supervision of the Saxon State Ministry for Social Affairs (SMS). Examinations are executed by the Examination Committees, one each for the preclinical and the clinical veterinary examinations. The members of these boards are appointed by the SMS. The running affairs of the examinations are organised by the chairperson of the respective board supported by the Office of Study Affairs.

8.2 Comments

- Student assessment by summative examinations is well established. The teaching staff works towards a high quality of written and oral examinations. Clinical examiners have become acquainted with the MC procedures and recognise the importance of creating examination questions as part of their teaching obligation.
- The Office of Student Affairs supports examiners in their efforts.
- Software and hardware to implement electronic examination (UCAN) have been acquired.

8.3 Suggestions for improvement

- Further formats of student assessment (e.g. tablet-based examinations) are planned and will be realised when the examination software UCAN is fully established.
- Students request a timely announcement of the examination dates for better time management.
- The options for student self-evaluation (PTT) should be further promoted.
- In order to permanently improve student assessment, formative examinations should be established.
- Examiners should be encouraged to attend further training and utilise the existing training opportunities.

9 ACADEMIC AND SUPPORT STAFF

9.1 Factual Information

The academic personnel fulfil tasks in teaching, research and service. Depending on the position, the teaching load is set to four to eight hours per week (per 1 FTE). This does not include preparations and follow-up work for lectures. In the same way, non-academic personnel have a function in teaching, however, to a different extent and exclusively for supporting lecturers. Additional staff, mostly academics, is temporarily hired in the context of research projects. Staff of the ADTI associated with the UL (“Aninstitut”) supports research, service and teaching, based on cooperative agreements.

9.1.1 Global Strategy

In 2016, the VMF adopted the “Zukunftskonzept” (concept for planning and development 2023) in which the policy and profile are described. Along with other aspects, the staff- and organisational development is discussed in an individual chapter.

Based on a recent analysis, up to 15 professorship positions will have to be filled until 2026; this will support intentional changes of the structure and establishment of priority programmes in research. The interdisciplinary foci, funding for centre development, development of trainings and the VMF's choice of the main area of research are defined in the concept as to be considered for appointment of new professors.

VMF is proposing a new professorship for “Animal Welfare and Ethology”, discusses creation of a central clinical laboratory and intends to increase the responsibilities of the centres which includes a limited self-reliance in allocating personnel.

9.1.2 Academic staff: Formal programme for the selection, recruitment and training to teach and assess students

Choosing academic staff is described in chapter 9.1.8 in detail. The competence for independent teaching is generally proved by the habilitation or appointment. Teaching assignments for qualified specialists that are not members of the VMF or UL can be given, if necessary, by the FR after considering the circumstances and with recommendation from the Committee of Study Affairs. Students are participating as committee members in these decisions. When grave deficits in the training become apparent, the Committee of Study Affairs talks to the lecturer, in order to work on possible solutions. Training and conducting thereof are part of the target agreements between professors and the UL, while having an impact on the salary.

The examination authorisation is issued on request by the responsible State Ministry. Proof of sufficient experience in the field is necessary. All examiners serve as voting members of the Examination Committee for the preclinical (semester 1 to 4) or clinical portion (starting semester 5). The Examination Committee does not answer to VMF or the UL and thus acts independently and autonomously.

EC Residents contribute to service, training and further scientific education under guidance of an EBVS Diplomate, based on the training programme approved by the respective college. Scholarship holders work on scientific qualifications, in most cases their postgraduate doctoral degree.

UL and VMF offer courses on didactics and examination. Lecturers and examiners are expected to use these opportunities. The Higher Education Didactics Centre (HDS, www.hd-sachsen.de) in the field of „Wissenschaftliche Weiterbildung“ (scientific advanced training) of UL regularly offers workshops on „Teaching and Learning“, „Examining and Evaluating“, „Counsel and Company“ and „Diversity“; these workshops are recognised in the context of the „Saxon Higher Education Didactics Certificate“ and are open to all members of the VMF.

The project “Laboratory University” allows teachers to try innovative teaching concepts with financial support. This initiative is part of greater third party funded projects for improving the quality of teaching (StiL, www.stil.uni-leipzig.de).

„LiT+“ is a university-wide project within the HDS for improving teaching by advanced education, which is open to the teaching staff of VMF.

By way of a rotating system, each examiner contributes periodically to the efforts of the review group (see chapter 8.1.4). This way, they can gain further experience regarding the QM of MC examinations. Generally, and to comply with the agenda of the review group, all examiners are obliged to participate in relevant training. In the context of introducing the electronic examination system UCAN, there are special courses for examiners in place, which focus intensively on QM.

9.1.3 Support staff: Formal programme for the selection, recruitment and training

In the non-academic field, VMF offers training for farriers, veterinary assistants, biological laboratory technicians and animal attendants.

Open positions are advertised officially and online (see also 9.1.8). Applications are collected in the UL staff department and then forwarded to the head of the facility/work group. After reviewing the documents, eligible candidates are invited for an interview. As a result, the head suggests a list of candidates. Aspects of equal opportunity and inclusion are to be considered. Content, duration and results of the interviews are minuted. The staff department is responsible for hiring after reviewing the list of candidates.

The facilities regularly instruct the technical staff about occupational safety and fire safety, while documenting attendance. This includes biological, chemical or genetic engineering hazards, and radiation protection in the VTH. There are also continuing education opportunities for the university staff (Hochschule Meißen, Skill Centre, education programme at the UL). The right to free of charge participation and, if necessary compensation of travel and accommodation expenses, was agreed upon between UL and the Staff Council, in accordance with § 80 (2) Saxon Law concerning Personnel Representation connected to § 5 (2) Wage Agreement for Public Services (TV-L) and § 72 Saxon Civil Servants Act.

9.1.4 Supporting and mentoring of academic and support staff

The URZ offers IT courses, which staff members can attend after consultation with a supervisor. Further course offerings are coordinated by the UL and are offered to the staff, depending on their area of interest (see also 9.1.3).

“T.e.a.m.”, a programme at the UL (www.gleichstellung.uni-leipzig.de), was created to promote equality; here, female doctoral students and post doctoral researchers can get motivated for pursuing a scientific career with workshops, alumni talks and individual mentoring from professors. UL is also a member of the “Best Practise Club” of family-friendly universities in Germany. Another central topic regarding equal opportunity is the inclusion of people with disabilities. In 2017, a plan was developed that also served as the base for future measurements and to secure participation.

VMF and FKT collectively support junior scientists, by awarding prizes for outstanding dissertation achievements and creating a seed fund for innovative research ideas in the postdoc phase. Further, FKT supports visits to congresses for young scientists upon formal application.

9.1.5 Outside work of staff members

Additional work has to be reported and approved. Approval can be denied when form and scope of the occupation could substantially compromise the position at the VMF. UL makes the decision after consulting the Dean of VMF.

9.1.6 Assessment of teachers by students

The “Evaluation Ordinance of Teaching and Studying at the UL” from 2 September 2015 regulates the process and evaluation of the didactic evaluation based on §9 SächsHSFG. It is bindingly regulated, mandatory and should be incorporated in the teaching report. The Dean of Study Affairs is responsible for conducting the didactic evaluation. Evaluation results are then discussed in the Committee of Study

Affairs and, if necessary, used for instigating measures for improving deficits, after consulting the person in charge of the class. Throughout the evaluation process, it is stringently required to take data protection into account, in order to forward evaluations of lecturers to the respective lecturer only, instead of publishing them. Regardless, students have the choice to voice criticism about classes or lecturers in front of the Committee of Study Affairs, in order to request further investigation. Outstanding performances in the training are awarded annually with the “Ackerknecht-Prize”. The winners are appointed at the suggestion of students in the FR, and the certificate is publicly given.

9.1.7 Number of academic and support staff FTE for the next 3 academic years

An increase of staff until 2021 appears unlikely. Rather, the UL will aim at reducing established posts, especially in technical support. In the best-case scenario, the academic and technical staff will be kept at a stable and low level. The UL's decision to strip VMF of the W3-professorship “Molecular Pathogenesis”, contrary to its development concept, is seen as a negative development. Considering the professorship positions to be filled within the next years, the general lack of resources for technical support personnel represents a great competitive disadvantage compared to other establishments for veterinary education. There are no sustainable solutions for the long-term shortage of staff in administration, as there are no additional assignments to established posts through UL aimed at. Further, the financial leeway only allows for temporary relief in precarious situations at most.

9.1.8 Procedures and strategy for allocating, recruiting, promoting, supporting, assessing academic and support staff

Fundamentals and procedure of awarding a professorship are regulated by the SächsHSFG and the appointment regulations. First, a denomination, tender text and an Appointment Commission are suggested by the FR after consulting KHE, before the rectorate of UL confirms. The KHE is represented by professors, academic staff and non academic members and students. Tendering usually takes place internationally. The appointment representative of the rectorate participates in meetings of the Appointment Commission as consultant and reports back to the rectorate. For professorships, as far as veterinary tasks are connected to it, the applicants are required to proof not only habilitation or equivalent, but also skills as veterinary specialist and/or Diplomate of the respective European/American College, as well as proof of teaching experience, didactic evaluation and relevant continuing education. The selection process includes, along with the evaluation of scientific skills and individual interviews, trial lectures in which students are involved.

For filling established positions that are not professorships, the head of the respective facility has to file a reasonable request to the KHE. The necessity of filling the position is then being discussed in the KHE, whereby questions of perspectival developments of the VMF are being considered. The recommendation serves as the basis for discussion and decision in the FR. If the decision is positive, the Dean's Office forwards the application for approval and filling the position or reoccupation, respectively, to the Staff Department. The established post that is to be filled is publicly advertised by naming the tasks and required qualifications. The most qualified person is chosen by a selection panel, which consists of the head of the unit or working group, as well as one or two employees of the unit. The representative for employees with disabilities, equal opportunities officer and the Staff Council are to be informed and contribute to the commission work just as the Staff Department. The head of the respective unit/working group suggests a candidate for hire before the decision is finalised by the Staff Department of UL respecting the legal basis and provided that there are not objections regarding equal opportunity or inclusion. Objectivity and transparency are guaranteed according to the “action orientation: hiring methods” of the UL.

Table 9.1.1. Academic staff * of the veterinary programme (FTE)

All academic staff included in this table is core-funded and responsible for teaching and research tasks and has received appropriate training prior to teach and to assess undergraduate students.

| Type of contract* | 2017 | 2016 | 2015 | Mean |
|--|--------------|-----------|-------------|--------------|
| Permanent | 42 | 41 | 41 | 41.33 |
| Temporary** | 43.25 | 47 | 48.5 | 46.25 |
| Interns*** | - | - | - | - |
| EC residents*** | - | - | - | - |
| Veterinarians in specialist training | 25.7 | 23.5 | 25.25 | 24.82 |
| Ph.D. students**** | n.a. | n.a. | n.a. | n.a. |
| Doctoral students | 8.35 | 6.25 | 7.25 | 7.28 |
| Practitioners | 0,7 | 0.25 | - | - |
| Specialised veterinarians | 4.5 | 12 | 11 | 9.17 |
| Diplomate European or American college | 3 | 3 | 3 | 3.00 |
| MSc Biology | 1 | 2 | 2 | 1.67 |
| Total | 85.25 | 88 | 89.5 | 87.58 |

* Practitioners involved with EPT are not included in this table.

**Details of staff holding temporary positions

***Interns and EC residents do not have any teaching responsibilities and numbers are not included in this table. The number of interns is presented in chapter 10.1.1.

****a Ph.D. course is not yet established at VMF

Table 9.1.2. Percentage (%) of veterinarians in academic staff

| Type of contract | 2017 | 2016 | Mean % |
|-----------------------------|---------------|---------------|--------|
| Permanent (FTE) | 42.0 (40.4 %) | 42.0 (40.4 %) | 40.4 |
| Temporary (FTE) | 48.0 (46.2 %) | 45.8 (44.0 %) | 45.1 |
| Total academic staff* (FTE) | 104.0 | 104.0 | 85.5 |

* Total FTE includes also non-veterinarian academic staff.

Table 9.1.3. Support staff of the veterinary programme

| Type of contract | 2017 | 2016 | 2015 | Mean |
|------------------|-------|-------|-------|-------|
| Permanent (FTE) | 114.9 | 114.7 | 113.4 | 114.3 |
| Temporary (FTE) | 24.1 | 24.2 | 25.0 | 24.4 |
| Total (FTE) | 139.0 | 138.9 | 138.4 | 138.8 |

Table 9.1.4. Research staff of the VMF (Third party fund)

| Type of contract | 2017 | 2016 | 2015 | Mean |
|------------------|------|------|------|------|
| Permanent (FTE) | - | - | - | - |
| Temporary (FTE) | 41.6 | 32.5 | 30.8 | 35.0 |
| Total (FTE) | 41.6 | 32.5 | 30.8 | 35.0 |

9.2 Comments

- Basic funding of the VMF is still crucial (see evaluation report 2008) and compromises necessary organisational developments and technological innovations in administration, teaching and research.
- The number of staff in the Dean's Office, especially in those sections designated to the study programme and examination, is too small, thus limiting timely completion of their tasks.
- New developments such as PAUL require additional supervision and the new establishment of an electronic examination format is difficult to sustainably implement, without investing in additional personnel.
- The research fund to support the start-up phase of junior scientists, which was recently established, serves as an important tool that has, however, still to be improved.

9.3 Suggestions for improvement

- The lack of basic financial support, known to the UL and the Government, shall be further thematised.
- Cooperation with the FKT provides a cushion for financial deficits and shall be intensified.
- Requirements for additional personnel must be met by UL in the form of filling permanent positions.
- The high number of open professorship positions in the coming years shall be used for strategic planning.
- Creating a new professorship "Animal Welfare and Ethology" shall be aimed at, however, without causing any deficits in other fields.
- The VMF shall also consider how academic careers can be made more appealing to newly graduated veterinarians.

10 RESEARCH PROGRAMMES, CONTINUING AND POSTGRADUATE EDUCATION

10.1 Factual information

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

Promoting undergraduate research activities and research-based education are key goals of the VMF. The majority of research activities are conducted within five interdisciplinary research foci (see Appendix to 10.1.1.) introduced and discussed by the VMF at regular conferences ("Research Day") between 2014 and 2016 and agreed upon in 2016 in the VMF's "Zukunftskonzept". A major goal is the further development of coordinated and competitive research programmes. In a subsequent initiative in 2017, the VMF has started to prepare three joint grant applications, two for Research Training Groups ("Graduiertenkolleg") for structured postgraduate education which are going to be submitted to the DFG in 2018 and 2019, respectively. One application for a Research Unit ("Forschungsgruppe") has been submitted in June 2018.

Undergraduate veterinary education comprises a compulsory student thesis (project work) which represents a first opportunity to practically experience clinical research, laboratory-based research, or both. Undergraduate research projects are offered by all institutes and clinics. Within the scope of these projects, supervisors introduce the students to scientific work, bibliographic research, and the presentation of their results. Public recognition of the student's project is given once a year as part of the program at the "dies academicus", organised by veterinary students, and the best projects are conferred an award.

Students have access to and are able to learn a large variety of scientific techniques during regularly offered optional compulsory courses. Core units have been established for flow cytometry (2012) at the VMF and laser scanning microscopy (2015) integrated at the university-wide BioImaging Core Facility (BCF), with an additional mass spectrometry unit to be introduced shortly.

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

Clinical cases are typically managed by veterinarians in either clinical specialty training programmes (residents or candidates for national specialist certification; see table 10.1.1. and appendix to 10.1.2.) or general/rotating clinical trainees (interns) together with veterinary students. The VTH's high caseloads ensure that an adequate amount of primary clinical cases can be allotted to all levels of clinical training and mentoring. While this is essential to ensure proper clinical teaching, it conflicts with the obligation to invest in research.

Daily case or topic rounds and weekly seminars (e.g., the problem-oriented approach to clinical cases) are an integral part of the clinical rotation. Those teaching efforts are led by lecturers as well as graduate and postgraduate clinical trainees. Active participation in journal clubs and book clubs are mandatory for postgraduate, graduate, and undergraduate students (e.g., during the clinical rotation or in basic veterinary science) and serve to expose trainees to state of the art research. In addition, several elective workshops and wet labs are offered for all trainees.

The VMF supports an annual college-wide and national research symposium for graduate and postgraduate students ("Doktorandenforum"), organised by graduate students. At this full-day research symposium projects are discussed following an oral presentation.

The RAL offers several lecture series, seminars, and workshops for the advancement of young scientists offering opportunities to develop professional skills. In addition, the programme "t.e.a.m." serves particularly for the promotion of female young scientists.

10.1.3 Description of how undergraduate students are - made aware of the importance of evidence-based medicine, scientific research and lifelong learning; - initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers (e.g. through a graduation thesis); - offered to participate to research programmes on a non-compulsory basis

Evidence-based medicine and research are emphasised throughout the entire curriculum. Lectures on biometrics (28 hours) and laboratory animal medicine (14 hours) are both concluded with an exam. Compulsory courses offer an introduction to scientific methods and research techniques for students. In addition, VMF refers to current research in lectures, thus emphasizing the importance of continuous research in all specialties of veterinary medicine. Students are also encouraged to join or present at journal club meetings. Participation in journal clubs and book clubs is mandatory during the clinical rotation in the clinical year. Students are also invited to colloquia regularly held at the different centres, exemplifying lifelong learning. The VMF and the FKT encourage students to compete for awards that are related to achievements in learning and research and support participation of students at national and international scientific conferences.

In their fourth year, students are obliged to do a project works as a first scientific work (see 10.1.1). There are also diverse possibilities for students to participate in research programmes on a non-compulsory basis, because many clinics and institutes offer positions as student assistants. In addition, the university-wide academic lab offers classes (e.g. scientific writing) for students.

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

Altogether, there are 7 international and 28 nationally recognised CE programmes (see 10.1.1) with 3 additional internal CE programmes having been active over the past 10 years (see table 10.1.1.). The VMF cooperates closely with the SLTK, and members of the VMF serve on the SLTK board and the SLTK CE committee.

Veterinarians of VMF are required to accumulate at least 20 - 40 hours of CE per year, and are also frequently involved in the active participation of local, national, and international continuing education events. CE lectures, seminars, and workshops are also offered by the centres of the VMF (see table 10.1.3.). The biennial LTK is organised by the VMF together with the Leipzig Trade Fair and the Veterinary Councils of Saxony, Thuringia, Saxony-Anhalt, Brandenburg, Berlin and Mecklenburg-Vorpommern. It offers 450 lectures and approximately 40 hands-on courses concerning all specialties in veterinary medicine with up to 19 sessions being held in parallel. The most recent LTK took place in January 2018 and had 5.400 visitors, including 650 undergraduate students, and a total number of 600 speakers and chairs.

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

On the basis of the past three years the VMF expects stable numbers of Dr. med. vet. students (table 10.1.2.). In addition, there is a stable number of postgraduates acquiring the "habilitation" degree which is a prerequisite for further academic career (table 10.1.2.). Unfortunately, there is currently no structured Ph.D. programme due to limited resources.

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

The Commission for Promotion is responsible for enrollment and monitoring of doctoral postgraduates. To ensure adequate mentorship and timely completion of the dissertation research project, the VMF has

introduced a mandatory agreement form (“Betreuungsvereinbarung”). In addition, the VMF has changed the dissertation regularities and has abolished grades in 2017. Several awards have been created to value excellent dissertation achievements. In the context of the current joint research initiatives (see 10.1.1), the VMF currently prepares two applications for a Research Training Group (“Graduiertenkolleg”) for structured postgraduate education funded by the DFG. Within individual programmes (e.g., nutriCARD, DFG Collaborative Research Centre 1052 – Obesity Mechanisms, DFG Collaborative Research Centre 1270 – Electrically Active Implants, including a research training group) veterinary students are enrolled into a Ph.D. programme.

VMF has developed a competitive intramural funding for early postgraduate students to prepare an own extramural research grant application. Financial support comes from VMF sources (2016: € 44,000, 2017: € 20,000), from the FKT (€ 4,000) and starting in 2018 also from the industry (€ 50,000 annually for three years).

The VMF has defined interdisciplinary research foci (see appendix to 10.1.1.). Research projects not within the scope of the research foci are also supported but will receive lower priority e.g. in the competitive postgraduate education programme. The defined research priorities provide a basis for the selection of new VMF members. Research projects are also initiated and performed under the responsibility of the ADTI, which is an independent organisation that is closely affiliated with the VMF (“Aninstitut”). It allows flexible use of intellectual and infrastructural capacities and building of project-related networks within the VMF.

Continuing education events are regularly offered (see 10.1.4. and table 10.1.3). Important dates and information are primarily communicated via email or the internet. Regular evaluations are being performed by the organising clinics or institutes, or via external evaluators or through participant surveys). Only few Residency Training Programme (RTP, EC) exist at VMF due to a lack of necessary resources.

10.2 Comments

The VMF supports student research activities and early career development. The recent introduction of the five research foci has created a momentum of interdisciplinary efforts and resulted in grant applications for joint research projects. A short application for the DFG-Research Unit (“Forschungsgruppe”) has been submitted in June 2018.

Still, the VMF is well aware of current structural weaknesses:

- The VMF lacks the full resources required for structured postgraduate education (Ph.D.) and RTP in a larger number of clinical and paraclinical specialties.
- There is a lack of facilities for experimental small and middle-sized animal models (i.e. conventional and specific pathogen-free containments, gene technology standard BSL-2).
- Sufficient laboratory equipment is available but there are significant constraints in available personnel.
- While it is feasible to apply for expensive research instruments/machines (i.e. initial costs in excess of € 200,000), financial support by the UL for routine service, potential repair, and operating costs and also for the replacement of routine laboratory equipment is not adequate.

10.3 Suggestions for improvement

- The VMF is currently preparing grant applications allowing for temporary structured Ph.D. programmes with external funding (Research Training Groups). Nevertheless, provision of the necessary resources required to establish a permanent structured Ph.D. programme and also to establish successful RTPs is required.
- Development and sustainment of RTPs will depend on more flexible and extendable employment policies (federal law) and financial support from the UL and the SMWK.

RESEARCH PROGRAMMES, CONTINUING AND POSTGRADUATE EDUCATION

- Further development of university-wide core units for advanced scientific techniques is required.

Table 10.1.1. Number of students registered at postgraduate clinical training (Interns, Residents, European Colleges etc.)

| European Veterinary College Residency Programmes | 2015 | 2016 | 2017 |
|--|----------|----------|----------|
| ECBHM (European College of Bovine Health Management) | - | - | 1 |
| ECEIM (European College of Equine Internal Medicine) | 2 | - | - |
| EVPC (European Veterinary Parasitology College) | - | - | 1 |
| ECVDI (European College of Veterinary Diagnostic Imaging) | 1 | 1 | - |
| ECVS (European College of Veterinary Surgeons [Equine]) | 1 | 1 | 1 |
| ECVAA (European College of Veterinary Anaesthesia and Analgesia) | 1 | 2 | 2 |
| ECZM (European College of Zoological Medicine) | 1 | 1 | - |
| TOTAL | 6 | 5 | 5 |

| Specialist Certificate Programmes („Fachtierarzt“) | 2015 | 2016 | 2017 |
|--|-----------|------------|------------|
| Anatomy (Anatomie) | 3 | 5 | 5 |
| Animal and Environmental Hygiene (Tier- und Umwelthygiene) | 1 | 1 | 2 |
| Anaesthesiology, Intensive Care and Pain Management (Anästhesiologie, Intensivmedizin und Schmerztherapie) | 3 | 4 | 3 |
| Animal Nutrition and Dietetics (Tierernährung) | 3 | 4 | 5 |
| Animal Welfare (Tierschutz) | 1 | 2 | 3 |
| Bacteriology and Mycology (Bakteriologie und Mykologie) | 2 | 6 | 12 |
| Bovine Medicine (Rinder) | 9 | 12 | 13 |
| Epidemiology (Epidemiologie) | - | 1 | 1 |
| Equine Medicine (Pferde) | 5 | 6 | 6 |
| Food Hygiene (Lebensmittelhygiene) | 9 | 9 | 9 |
| Laboratory Animal Medicine (Versuchstierkunde) | 3 | 2 | 2 |
| Meat Hygiene (Fleischhygiene) | 3 | 5 | 5 |
| Parasitology (Parasitologie) | 1 | 3 | 5 |
| Pharmacology and Toxicology (Pharmakologie und Toxikologie) | 7 | 7 | 9 |
| Small Animals and Small Mammals (Klein- und Heimtiere) | 10 | 7 | 8 |
| Small Animal Internal Medicine (Innere Medizin der Kleintiere) | 5 | 6 | 7 |
| Small Animal Surgery (Kleintierchirurgie) | 1 | 1 | 1 |
| Physiology (Physiologie) | 5 | 5 | 5 |
| Physiological Chemistry / Biochemistry (Physiologische Chemie) | - | 1 | 3 |
| Porcine Medicine/Health Management (Schweine) | 1 | 1 | 2 |
| Theriogenology (Reproduktionsmedizin) | 3 | 3 | 4 |
| Veterinary Diagnostic Imaging (Diagnostische Radiologie) | 4 | 4 | 5 |
| Veterinary Immunology (Immunologie) | 5 | 5 | 6 |
| Virology (Virologie) | 1 | - | - |
| TOTAL | 85 | 100 | 121 |

| Specialist Certificate Programmes („Fachtierarzt“) | 2015 | 2016 | 2017 |
|--|-----------|-----------|-----------|
| Additional Qualification (“Zusatzbezeichnung”) | 2015 | 2016 | 2017 |
| Avian Medicine (Zier-, Zoo- und Wildvögel) | 4 | 7 | 4 |
| Cardiology (Kardiologie) | 1 | - | - |
| ENT (Hals-, Nasen-, Ohrenheilkunde) | 4 | 5 | 7 |
| Ophthalmology (Ophthalmologie) | 2 | 2 | 2 |
| Regenerative Medicine (Regenerative Medizin) | 1 | 1 | 1 |
| Reptile Medicine and Surgery (Reptilien) | 2 | 4 | 5 |
| TOTAL | 14 | 19 | 19 |

Table 10.1.2. Number of students registered at postgraduate research training (Dr. med. vet., Dr. med. vet. habil.)

| Doctorate Programme | 2015 | 2016 | 2017 |
|--------------------------|------|------|------|
| Promotion (completed) | 64 | 43 | 52 |
| Habilitation (completed) | 3 | 2 | 1 |

Table 10.1.3. Number of attendees to CE courses provided by the VMF

| Focus | 2015 | | 2016 | | 2017 | | Mean attendees |
|----------------------------|-------------|------------|-------------|------------|-------------|------------|----------------|
| | attendees | hours | attendees | hours | attendees | hours | |
| Basic Sciences | 200 | 25 | 130 | 17 | 130 | 33 | 153 |
| Equine Medicine | 189 | 55 | 290 | 69 | 14 | 29 | 164 |
| Exotic Animals | 28 | 20 | 30 | 20 | 30 | 20 | 29 |
| Farm Animals | 357 | 86 | 324 | 78 | 205 | 98 | 295 |
| Infectious Diseases | 30 | 25 | 57 | 46 | 74 | 57.5 | 54 |
| Laboratory Animal Medicine | 20 | 8 | - | - | - | - | 7 |
| LTK | n | - | 5000 | 24 | - | - | 1667 |
| Pathology & Anatomy | 220 | 63 | 120 | 28 | 100 | 28 | 147 |
| Small Animal Medicine | 1092 | 349 | 1626 | 383 | 657 | 266 | 1125 |
| VPH | 284 | 93 | 312 | 105 | 285 | 33 | 293 |
| TOTAL | 2540 | 730 | 7889 | 770 | 1495 | 507 | 3975 |

Table 10.1.5 List of the major funded research programmes in the VMF which were on-going during the last full academic year prior to the Visitation

The VMF has recruited external research funding in the amount of € 4.5 million (2015), € 3.6 million (2016) and € 4.1 million (2017). This indicates a significant rise (2.3-fold) in research grants since 2008 (€ 1.8 million).

11 OUTCOME ASSESMENT AND QUALITY ASSURANCE

11.1 Factual information

11.1.1 Description of the global strategy of the VMF for outcome assessment and Quality Assurance (QA), in order to demonstrate that the VMF...

- has a culture of QA and continued enhancement of quality,

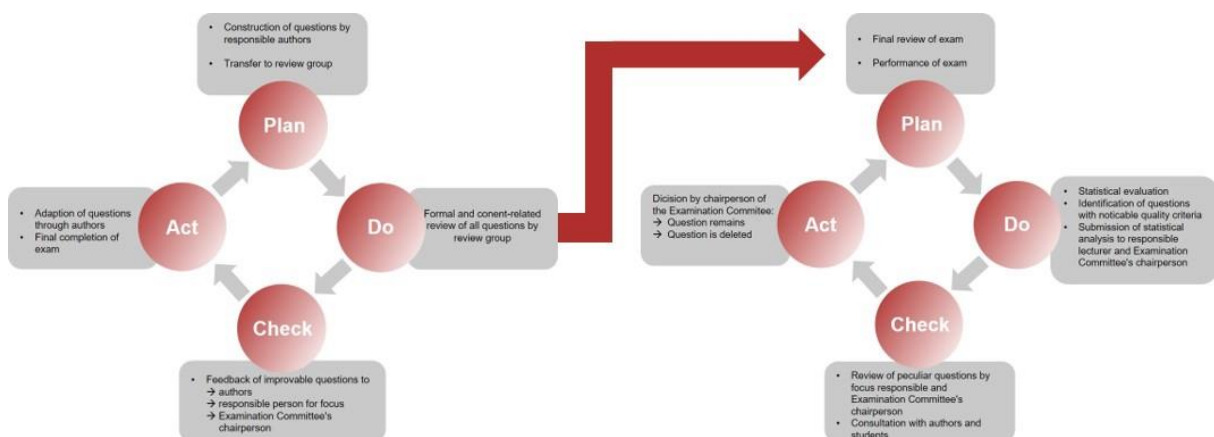
Since July 2018, the UL is system-accredited. As this system accreditation focuses on bachelor and master study programmes, the UL management's has been prioritising these study programmes. In the course of the accreditation process, UL enacted regulations for evaluation in 2015 (www.db.uni-leipzig.de/bekanntmachung). In 2017, the QM handbook "Teaching and Studies" was approved by the senate. By combining defined standards of good teaching and the illustration of essential processes of quality management in teaching and learning, this guide shall build a sustainable frame for quality discourse between teacher, student, the course coordinator, faculty administration and the rectorate. Further, it creates transparency of responsibilities and instruments of QA. It also offers all participating groups guidance and input for the development of their study programmes. The QM shift towards decentralisation allowed for individual faculties to organise and develop their subject-specific quality culture with great autonomy. This decentralisation was drafted through VMF internal mission statements ("Healthy animal, healthy human", see chapter 1), which articulates the respective and specific self-understanding of VMF, elaborates on common values, beliefs and goals and at the same time integrates requirements of the scientific community.

QA plays a critical role in the process of studying with active participation of students, professors, lecturers and the Office of Study Affairs. Vivid exchange with students is very important to the VMF in order to respond to current needs. Results are submitted to the Committee of Study Affairs, which engages in the necessary changes that are sensible for the development of the curriculum and takes the respective measures of implementation with the FR.

VMF puts forth an effort, parallel to the system accreditation, to establish a system of QA according to the QM Guide. In many areas, QA processes are in place, e.g. systematic reviews of all written examination questions, regular student evaluations of lectures and QA concepts in many laboratories.

- operates ad hoc, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms; closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;

Since 2006, the VMF has been using a standardised process for reviews of all MC questions. Only those MC questions that are approved by the review group (consisting of six teachers of various subjects with an examination authorization) will be included in an examination. After the written examination and the following evaluation, statistically conspicuous questions are forwarded to the Examination Committee's chairperson for assessment. Decisions of the review group and the Examination Committee's chairperson are announced to the respective lecturers as well as the Committee of Study Affairs / Dean of Study Affairs, if necessary. Further, all questions are discussed with the students after a written exam.



PDCA cycle to 11.1.1. describing the QA process of written examinations at the VMF

- collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities (teaching, research, services);

Teaching

Every three years, the Prorektor for Education is given a teaching report that covers all aspects of studying at the VMF. This report is discussed in the Committee of Study Affairs, FR, with the prorektor and the VMF administration who then take actions. Constant exchange between teachers and students is an important part in the QA of the VMF. In line with that, three "Days of Study" were organised in 2016 and 2017. Here, professors, lecturers and students were able to enter in an active discourse on currently relevant topics. Moreover, important information/changes concerning the curriculum are announced at these events.

VMF executes student evaluations of lectures, focus classes are discussed with students during the course of the last lecture to receive direct feedback. Other lecturers involved are invited by the focus coordinator in order to debate strong and weak aspects of the lecture with the students. Results of these consultations are incorporated in the planning of the next year of study; that way, lecturers are able to adjust their focus lecture, if necessary. Since the summer semester of 2018, questions are discussed with the students immediately after each focus examination (written, MC) in the same way to give them direct feedback on their performance.

Evaluation according to the standards of UL's QM Guide created a faculty-wide regulation for all evaluations. This allows for classes, including intramural courses, to be regularly evaluated. EPT is evaluated by students (online) and established veterinarians (anonymised survey) as well. In the same way, EPT in animal slaughter and meat inspection, food inspection services, methods and techniques including inspection of fresh meat and in public veterinary services are evaluated by students and placement sites (see chapter 3). The results of these evaluations are anonymously submitted to the respective subject representative. Feedback to the VMF in turn takes place via the Committee of Study Affairs / Dean of Study Affairs.

Along with the evaluations organised by professors and lecturers, students/the Student Council initiate regular surveys on different topics. Approximately every five years, the Student Council carries out an ample survey whose content is coordinated with the Committee of Study Affairs. The last survey took place in December 2017. The content of this survey was identified one year prior by the students in the form of a preliminary free text survey. Around 400 students participated in this survey. Results of further smaller surveys are always forwarded to the Dean of Study Affairs. As a result of the student's survey in 2017, the preparation time for the preclinical examinations after the 4th semester was extended by one week.

VMF pursues the goal to constantly and constructively communicate between administration, lecturers and students. There are regular meetings of representatives of the Student Council with the Dean of Study Affairs, in which current topics are discussed and prepared for further announcement and revision. In the summer semester of 2017, the "Vetilog" was introduced; here, students are informed on the current semester's most important, and also other relevant topics allowing for having direct exchange with the professors/lecturers and the administration.

In monthly meetings of the FR, members of the VMF are informed on current topics from all fields. Those sessions are used for discussion of relevant topics, to implement action, where necessary, and to deliver important matters directly to the administration. There are student members in each commission as well as the FR, who have rights to vote and speak. Thus, they can participate in discussion and significantly affect the decision making process.

In the context of full meetings, employees of the VMF are informed on, for example, QA processes in other fields. Within the UL, the Deans of Study Affairs and the Prorektor for Education meet to present and discuss current topics.

Recently, UL introduced a quality control task force for teaching and training, consisting of one representative from each faculty. Sessions once or twice per semester on current topics concerning QA will be held. The current goal for this group is the adaptation of the QM Guide in regards to demands posed by the authority and in the context of the system accreditation.

Research

Research results for the VMF are collected annually and published as a research report, which is centrally entered into the research information system of UL (see chapter 10).

Services

The VMF possesses a number of diagnostic laboratories, whose SOPs comply with the standards set by the GLP/GVP.

Furthermore, there are a total of ten BSL-laboratories (3x BSL1 and 7x BSL2) at the VMF that are approved by the veterinary authority and regulated by the requirements of QA due to its approval.

Laboratories for microbiology and food chemistry of the Institute of Food Hygiene are accredited by DakkS according to the standard DIN EN ISO/IEC 17025:2005 and are thus liable to the QA regulations that are required.

Since 2016, the German Veterinary Society (DVG) has so-called consulting laboratories. Due to the Animal Health law coming into effect, an independent quality inspection of diagnostics of animal pathogens, zoonotic pathogens or food borne pathogens that are not notifiable, reportable or require inspection are not mandatory, there is a need for external QA. This gap is filled by consultant laboratories of the DVG.

Laboratories can become consulting labs once they have expertise and reputation in diagnosing pathogens available. Naming takes place according to specific pathogens and is bound to the head of the laboratory. The VMF possesses three of those consultant laboratories: The Institute of Parasitology for intestinal coccidiosis and animal cryptosporidiosis, the Institute of Food Hygiene for *Alaria alata* infestations. The Institute of Virology is an OIE referential laboratory of the World Organisation for Animal Health for Enzootic Bovine leucosis. (Also see chapter 4.1.4).

- regularly informs staff, students and stakeholders and involves them in the QA processes;

As mentioned in the beginning, the VMF pursues the goal to constantly and constructively communicate between the VMF administration and the lecturers on the one hand, and students on the other hand. On this base, there are regular meetings of student representatives of the Student Council with the Dean of Study Affairs, in which current topics are discussed and prepared for further announcement and editing with everyone interested. In the summer semester of 2017, the so-called "Vetilog" was introduced; here, students are informed on the current semester's most important and topics relevant to them, while having direct exchange with the teachers and the faculty administration. The goal is to find solutions in small groups consisting of students and teachers. The Dean of Study Affairs, the Faculty Council and the Committee of Study Affairs submit results from these sessions to administration; changes and adaptations can be made where necessary and possible.

In monthly meetings of the FR, members of the VMF are informed on current topics from all fields. These topics are either presented by the faculty administration in the auditorium or by the chairpersons of various Commissions to be open for discussion. Those sessions are also used, especially the Committee of Study Affairs and the FR especially of students, to deliver important matters straight to administration. There are student members in each commission as well as the FR, who have rights to vote and speak. Thus, they can participate in discussion and significantly affect the decision making process. According to regulations of the University Constitution of the UL, students and teachers are equally represented in the Committee of Study Affairs; this offers a great chance for students at the VMF to participate in designing the training, while highlighting the importance of students co-creating.

In the context of full meetings of the VMF, employees of the VMF are informed on, for example, QA processes in different fields, if necessary. Within the UL, there is a service meeting of every Dean of Study Affairs and the Prorector for Education; in these meetings, all Faculties have the possibility to present and discuss current topics.

Only a few weeks ago, the Prorector for Education and International Affairs and the executive department for QA introduced a quality circle in teaching and training, consisting of one representative of the Faculty each. After the first successful meeting, there will be sessions once or twice per semester

on current topics concerning QA. Current goal for this circle is adapting the QM Guide in regards to demands posed by the authority and in the context of the system accreditation.

The administrations of all five german faculties meet once a year for an Assembly of the German Veterinary Establishments (Veterinärmedizinischer Fakultätentag) on which there is regular exchange on topics concerning QA.

There are also information events for external groups, where people interested in the VMF's activities can get more details:

- On open house days, the VMF offers students to get informed on the programme in general, but also on different fields and other education programmes of the VMF.
- The so-called VetDay introduces children to the world of Veterinary Medicine.

- **is compliant with ESG Standards**

- Qualifications framework for german university degrees (21 April 2005)
- Ordinance for the Evaluation of Teaching and Learning at the UL (2 September 2015)
- Saxon law for higher education institutions (15 January 2013, lastly amended 15 October 2017)
- University Constitution of the UL (6 August 2013)
- QM Guide for Teaching and Learning (11 April 2017)
- Standards and Operating Procedures of the European System of Evaluation of Veterinary Training (ESEVT 'Uppsala' SOP May 2016).

11.1.2 Description of the form by which the strategy, policy and procedures are made formal and are publicly available.

Current information on the programme, the duration and the study- and examination regulations are accessible via the VMF homepage (www.dekanat.vetmed.uni-leipzig.de). Central documents regarding QA (QM Guide, evaluation regulations of UL) are publicly available on the website of UL (www.uni-leipzig.de). Descriptions of certain procedures are made available to staff of the respective institution via the intranet. Students receive results of e.g. evaluations from the representative lecturer and/or online via Moodle.

11.1.3 Description of the regular publication of up to date, impartial and objective information, both quantitative and qualitative, about the educational programmes and awards the VMF is offering.

All information on the curriculum is accessible via the VMF's homepage (www.dekanat.vetmed.uni-leipzig.de), where documents (TappV, StO and PO) can be downloaded. All members of the VMF are informed about current changes through different channels (protocols from meetings of the FR, circulation of e-mails, as well as via Moodle and the Student Council's homepage). Moreover, the newsletters of the UL, VMF ("Synapse") and of the FKT keep VMF members up to date. Schedules and examination periods are communicated to the students at the beginning of the semester. Students can receive all information from the Office of Study Affairs during their opening hours as well.

VMF offers a number of awards/prizes and grant opportunities, mostly financed by the alumni club FKT. Further information on this is available through the websites of VMF and FKT (www.frk-leipzig.de). Further, students are informed about current developments via the Student Council's website (www.fachschaft.vetmed.uni-leipzig.de).

11.1.4 Description of the QA processes not yet described in the other 10 Standards (with information on how (procedures), when (periodicity) and by who (committee structure) they are completed

All PDCA-cycles are mentioned in the respective chapters.

11.1.5 Description of how (procedures) and by whom (description of the committee structure) the QA strategy of the VMF is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The Office of Study Affairs has an essential role in the QA and contributes together with central entities to all processes for implementation, execution and development of the curriculum. The Prorektor for Education is the supreme authority, while the QM Guide Teaching, which was developed by this department and approved by the Senate, serves as the basis for QA in the training. Further communication to the UL takes place in the form of regular meetings. On the VMF level, requests are first handled and approved in the Committee of Study Affairs before being forwarded to the FR for further evaluation. The decisions made by the FR are publicly available to members of the VMF in the form of meeting minutes. Having student representatives in committees and the FR ensures that all non-confidential information will be forwarded to the students via the Student Council. All sensible changes are realised within the framework of the TAppV, StO and PO.

11.2 Comments

- UL regulations on QA and the QM Guide bind and enable VMF to undergo systematic and uniform processes. This aspect of systemisation represents a new approach of QA for the UL and the VMF and is currently still in the pilot stage.
- There are many activities and new approaches within the VMF and many establishments reach for QA in teaching, research and service, while already having QA processes in place. Educational processes are regulated and determined including the evaluation of lectures and courses.
- VMF has entered UCAN thus acquiring an electronic examination system with established examination procedures. This will be of significant value to the areas of teaching and examination in regards to QA. In order to establish UCAN, the central evaluation system and general reflections on QA, VMF was given a temporary position for a scientific employee and a half-time position for a consultant.

11.3 Suggestions for improvement

- Better definition of responsibilities for executing QA.
- Organisation, coordination and feedback of focus lectures have to be conducted in a more standardised manner, in order to create sufficient transparency for professors/lecturers and students.
- Offering resources in personnel through the UL for continuation regarding the electronic examination system, evaluations and QA.
- Further implementing QA processes in various fields (teaching, research, service) in all establishments: Continuing education/training of employees poses an important aspect as well.
- Creating a central access point (intranet), where important documents and protocols (FKR, Student Commission etc) are updated and available to all employees.
- Without an employee solely responsible for QA and feedback analyses, it will be difficult for the VMF to cope with the increasing demands for QA.

12 ESEVT INDICATORS

12.1 Factual information

| Calculated indicators from raw data | | VMF values | Minimal values | Balance |
|-------------------------------------|--|------------|----------------|----------------|
| 1 | : n° of FTE academic staff involved in veterinary training / n° of undergraduate students | 0.131 | 0.119 | 0.012 |
| 2 | n° of FTE veterinarians involved in veterinary training / n° of students graduating annually | 0.695 | 0.483 | 0.212 |
| 3 | n° of FTE support staff involved in veterinary training / n° of students graduating annually | 0.892 | Not calculated | 0,892 |
| 4 | n° of hours of practical (non-clinical) training | 680 | Not calculated | 680 |
| 5 | n° of hours of clinical training | 1452 | Not calculated | 1452 |
| 6 | n° of hours of FSQ and VPH training | 440 | Not calculated | 440 |
| 7 | n° of hours of EPT in FSQ and VPH | 250 | Not calculated | 250 |
| 8 | n° of companion animal patients seen intramurally / n° of students graduating annually | 95.194 | 48.06 | 47.134 |
| 9 | n° of ruminant and pig patients seen intramurally / n° of students graduating annually | 185.720 | 0.758 | 184.962 |
| 10 | n° of equine patients seen intramurally / n° of students graduating annually | 6.826 | 2.7 | 4.126 |
| 11 | n° of rabbit, rodent, bird and exotic patients seen intramurally / n° of students graduating annually | 19.146 | 0.407 | 18.739 |
| 12 | n° of companion animal patients seen extramurally / n° of students graduating annually | 0.378 | Not calculated | 0.052 |
| 13 | n° of individual ruminants and pig patients seen extramurally / n° of students graduating annually | 1.511 | Not calculated | 1.511 |
| 14 | n° of equine patients seen extramurally / n° of students graduating annually | 0.756 | Not calculated | 0.756 |
| 15 | n° of visits to ruminant and pig herds / n° of students graduating annually | 0.622 | 0.326 | Not calculated |
| 16 | n° of visits to poultry and farmed rabbit units / n° of students graduating annually | 0.355 | 0.035 | 0.320 |
| 17 | n° of companion animal necropsies / n° of students graduating annually | 2.179 | 1.589 | 0.590 |
| 18 | n° of ruminant and pig necropsies / n° of students graduating annually | 2.909 | Not calculated | 2.909 |
| 19 | n° of equine necropsies / n° of students graduating annually | 0.484 | Not calculated | 0.484 |
| 20 | n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually | 9.700 | 0.601 | 9.099 |
| 21 | n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually | 0.733 | Not calculated | 0.733 |
| 22 | n° of Ph.D.-students graduating annually / n° of students graduating annually | 0.401 | Not calculated | 0.401 |

12.2 Comments

- Indicator 4: excludes 250 h of mandatory EPT in a State or Regional Veterinary Office with activities related to issues of VPH; Food hygiene (hygiene control, food monitoring, food examination); Abattoir, ante and post mortem meat inspection; these are included in Indicator 6.
- Indicator 5: includes intramural clinical rotation (ambulatory medicine, clinic hours, propaedeutics, 850 hours of mandatory EPT in veterinary practice, 70 hours of agricultural placement)
- Indicators 10-13: patients seen intramurally = this number includes both ambulatory and stationary patients
- Indicators 12 und 14: The Small Animal Clinic and the Equine Clinic do not provide regular out-patient ambulatory services.

12.3 Suggestions for improvement

- The currently vacant professorship positions should be filled as soon as possible and the recruitment process for future positions should be shortened substantially.

GLOSSARY

| | |
|----------------------|--|
| ADTI | Albrecht-Daniel-Thaer-Institute |
| ATF | Akademie für tierärztliche Fortbildung (Academy for Veterinary Continuing Education) |
| AlmaWeb | Campus Management System of UL |
| BA | Business Administration |
| BBZ | Biotechnologisch-Biomedizinisches Zentrum Leipzig (BioCity Leipzig) |
| BCF | BioImaging Core Facility |
| BMEL | Bundesministerium für Ernährung und Landwirtschaft (Federal Ministry for Food and Agriculture) |
| bpt | Bundesverband praktizierender Tierärzte (German Association of Practising Veterinarians) |
| BTÄO | Bundes-Tierärzteordnung (German Federal Veterinary Regulation) |
| BTK | Bundestierärztekammer (German Chamber of Veterinary Surgeons) |
| bvvd | bundesverband der veterinärmedizinischen studierenden deutschland e.V. (German association of veterinary students) |
| CE | Continuing Education |
| DFG | Deutsche Forschungsgemeinschaft (German Research Foundation) |
| DVG | Deutsche Veterinärmedizinische Gesellschaft (German Veterinary Society) |
| EBVS | European Board of Veterinary Specialisation |
| EC | European College |
| ENT | Ear, Nose, Throat |
| EPT | Extramural Practical Training/Internship |
| FIS | Forschungsinformationssystem der Universität Leipzig (Research Information System at UL) |
| FKT | Freundeskreis Tiermedizin e.V. (Circle of friends of VMF) |
| Focus | Modular integrated interdisciplinary teaching block ("Module") |
| FR | Fakultätsrat (Faculty Council) |
| FSQ | Food Safety and Quality |
| FTE | Full Time Equivalent (German VZÄ, or Vollzeitäquivalent, 100% employment: one FTE may be divided between two or more employees, creating employments of less than 100%) |
| GCP, GLP, GVP | Good Clinical Practice, Good Laboratory Practice, Good Veterinary Practice |
| HACCP | Hazard Analysis Critical Control Point |
| IVSA | International Veterinary Student Association |
| KELDAT | Kompetenzzentrum für E-Learning, Didaktik und Ausbildungsforschung der Tiermedizin (Competence center for E-Learning, didactics and educational research in veterinary medicine) |
| KHE | Kommission für Haushalt und Entwicklung (Commission for Budget and Development) |
| koVet | Koordinationsstelle für veterinär-klinische Studien (Coordination Office for Veterinary Clinical Studies) |
| LBH | „Leipziger Blaue Hefte“ (Publication for dissertations at the VMF) |
| LTK | Leipziger Tierärztekongress (Leipzig Veterinary Congress) |
| LVG | Teaching and Research Farm (LVG Oberholz) of the VMF |
| OIE | World Organisation for Animal Health |
| Moodle | Modular object-orientated dynamic learning environment. Teaching and e-learning platform of the UL |
| PAUL | Praktisches Ausbildungs und Lernzentrum (Centre for applied training and learning) |
| PO | Prüfungsordnung (Examination regulation) |
| PTT | Progress Test Tiermedizin (Progress test in veterinary medicine) |
| QA | Quality Assessment |

GLOSSARY

| | |
|------------------------|--|
| QM | Quality Management |
| RAL | Research Academy Leipzig |
| RTP | Residency training programme |
| SächsHSFG | Sächsisches Hochschulfreiheitsgesetz (Saxon University Freedom Law) |
| SIB | Sächsische Immobilien Bau Gesellschaft (state owned company which is responsible for all real estate of the federal state of Saxony) |
| SLTK | Sächsische Landestierärztekammer (Veterinary Council of Saxony) |
| SMILE® | Selbst Management Initiative LEipzig (organisation for the support of spin off activities at UL, https://www.smile.uni-leipzig.de/) |
| SMS | Sächsisches Staatsministerium für Soziales und Verbraucherschutz (Saxon State Ministry for Social Welfare and consumer protection) |
| SMWK | Staatsministerium für Wissenschaft und Kunst (Staates Ministry of Science and Art) |
| SSZ | Studenten Service Zentrum der Universität (Student Service Center of UL) |
| StO | Studienordnung (Education regulation) |
| TAppV | Verordnung zur Approbation von Tierärztinnen und Tierärzte (German Ordinance concerning the Certification of Veterinary Surgeons) |
| t.e.a.m. | Training-Expertise-Alumnae-Mentoring |
| TFA | Tiermedizinische Fachangestellte (Veterinary Assistant) |
| UCAN | Umbrella Consortium for Assessment Networks |
| UL | University of Leipzig |
| URZ | Universitätsrechenzentrum (University Computer Center) |
| VetCenter | electronic library for veterinary books and magazines (Thieme Verlag) |
| VetDay | day of veterinary profession related activities for children of elementary schools at VMF |
| VetFive | informal association of the five German establishments for veterinary education |
| VETIDATA | Veterinärmedizinischer Informationsdienst für Arzneimittelanwendung, Toxikologie und Arzneimittelrecht (veterinary information service on drug use, toxicology and veterinary medicinal law) |
| VETERA® | Clinic information system software package distributed by GP. Software GmbH |
| VMF | Veterinärmedizinische Fakultät der Universität Leipzig (Faculty of Veterinary Medicine, UL) |
| vmp | veterinary medicinal product |
| VPH | Veterinary Public Health |
| VTH | Veterinary Teaching Hospital |
| ZLS | Zentrum für Lehrerbildung und Schulforschung (Centre for Teacher Training and School Research) |
| Zukunftskonzept | Strategic plan of the VMF |

List of appendices

All appendices listed below can be found in the document Appendices of the Self Evaluation Report for the EAEVE.

- A. Current academic staff, qualifications, their FTE, teaching responsibilities and departmental affiliations
 - B. Units of study of the core veterinary programme (including clinical rotations, EPT and graduation thesis): title, reference number, ECTS value, position in curriculum (year, semester), whether it is compulsory or elective, hours and modes of instruction, learning outcomes and their alignment with the ESEVT Day One Competences
 - C. Maps of the VMF and the intramural and extramural facilities used in the core veterinary programme
 - D. Written assessment procedures for QA
 - E. List of scientific publications from the VMF's academic staff in peer reviewed journals during the last three academic years
 - F. TAppV
 - G. Study regulations of the study programme Veterinary Medicine at the University of Leipzig
 - H. PO of the study programme Veterinary Medicine at the University of Leipzig
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- Appendix to 1.1.2. Strategic plan of the VMF (Zukunftskonzept) and detailed SWOT-Analysis
- Appendix to 1.1.4. Personal responsibilities within the Faculty of Veterinary Medicine
- Appendix to 3.1.2. Description of the legal constraints imposed on the curriculum by national/regional legislations and the degree of autonomy that the Establishment has to change the curriculum
- Appendix to 3.1.4. PAUL catalogue of training stations and education concept
- Appendix to 3.1.8. Quality assurance of extramural traineeships in the framework of veterinary medicine training in Germany
- Appendix to 3.1.9. Guidelines for the clinical rotations at the Department for Horses of the VTH
- Appendix to 4.1.1. Research facilities in vicinity of the VMF
- Appendix to 4.1.2. Premises for lecturing, group work and practical work Details of the premises are displayed in tables 1, 2 and 3 of the appendix to 4.1.2.
- Appendix to 4.1.3. Description (number, size, species) of the premises for housing: - healthy animals, - hospitalised animals, - isolated animals
- Appendix to 4.1.7. Description of the equipment used for - teaching purposes, - clinical services (diagnostic, treatment, prevention, surgery, anaesthesia, physiotherapy) Specialised equipment (selection)
- Appendix to 5.1.2. Live animals, cadavers and material of animal origin used in practical non-clinical animal work
- Appendix to 5.1.4. Description of the organisation and management of the VTH and ambulatory clinics Service hours offered by the Department for Small Animals

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- Appendix to 6.1.3. Details on IT-Services at VMF
- Appendix to 10.1.1. Research Foci at the VMF
- Appendix to 10.1.2. Number of post graduate students registered at European College Residency Trainings Programs (2008–2014)