Freie Universität Berlin

Faculty of Veterinary Medicine
Freie Universität Berlin

Self Evaluation Report for the European Association of Establishments for Veterinary Education | **Full Visitation 13 – 17 November 2017**

CONTENTS

INTRODUCTION

Preamble

In the context of this report, the terms “Faculty”, “Establishment” and “Department” are used interchangibly and all refer to the Faculty (Department, School) of Veterinary Medicine, Freie Universität Berlin. The term “University”, if not stated otherwise, refers to Freie Universität Berlin.

Brief history of the Establishment and of its previous ESEVT Visitations

The Berlin Veterinary Medicinal School was founded in 1787, opened in 1790, renamed in 1887 to Veterinary University and in 1910 permitted to award doctoral titles. In 1934 it was incorporated into the Agricultural and Veterinary Faculty of the former Friedrich-Wilhelms-Universität (now Humboldt Universität). Following the division of Berlin after the Second World War, this University was located in the Soviet sector (later East Berlin), and a second veterinary faculty was established in the newly founded Freie Universität in West Berlin. After the German reunification (1990) the two veterinary faculties were first administratively merged (1992) and in 1997 fully embedded into the Freie Universität. Since then the Establishment is one of the 12 scientific departments at Freie Universität Berlin. It has twice been positively evaluated (1998, 2007) by the European Association of Establishments for Veterinary Education (EAEVE).

Main features of the Establishment

The Establishment is one of five veterinary medical training and research facilities in Germany. It is located in North-Eastern Germany in the Federal State and City of Berlin, the German Capital with a population of 3.5 Million inhabitants. Approx. 175 of the over 1,000 students admitted to German veterinary schools each year start their education in Berlin. Most (90%) of our veterinary students are female.

Mission statement

The Faculty of Veterinary Medicine strives for excellence in research, teaching and services. Our objective is to develop sustainable veterinary medical science for humans and animals and to deliver outstanding teaching and services.

We aim to convey scientific knowledge, practical skills, intellectual and ethical fundamentals as well as a professional attitude committed to the well-being of animals, humans and the environment to our students. We encourage self-responsibility and self-reliant practices within the veterinary profession as well as lifelong learning. Our activities are guided by the traditional principles of Freie Universität Berlin: *veritas, iustitia, libertas* (“Truth, Justice and Liberty”).

Our activities are based on the unity of research and learning, that is, contemporary and progress-oriented veterinary medicine that is of central relevance for animal welfare, human well-being and care for the environment ("One Health"):

- Optimal patient care by means of evidence-based veterinary medicine
- Ensuring the production of safe and high-quality food of animal origin
- Concern for the health and well-being of humans by controlling zoonotic diseases through research into fundamental disease mechanisms
- Scientific approaches to improvement of animal welfare
- Interdisciplinary engagement with other scientific and academic subjects

Our high standards of veterinary medical training provide excellent career opportunities in relevant professional fields for our students. We offer a wide range of postgraduate training, specialisation and continued education opportunities as well as academic career paths. Veterinary specialisation is nationally regulated and wherever possible integrated into the College system of the European Board of Veterinary Specialisation (EBVS).

In addition to a comprehensive range of patient care on our campus in Düppel, we offer a wide spectrum of veterinary services for veterinary practices, clinics and the general public. We are closely linked with regional, national and international universities and non-university research institutions, resident colleagues as well as companies, enterprises and authorities.

Culture of QA and continuing quality enhancement

All our activities are monitored by professional quality management systems.

- Quality assurance (QA) is a central component of Freie Universität Berlin and the Establishment. We wish to provide excellent services for students, alumni, employees, customers, partners and stakeholders.
- The QA allows for monitoring and evaluation of our services to ensure a continuous improvement process. As part of the Berlin Higher Education Act (2011) the demand for measures of quality assurance within university studies and teaching was legally secured. Freie Universität Berlin is bound to this goal. The internal quality assurance system is regularly subjected to an external assessment.
- The University was system accredited in November 2016, the first Berlin higher education institution to be awarded the quality seal of the Accreditation Council by the accreditation agency AQAS. It has therefore been certified that Freie Universität Berlin's internal QS system for university studies and teaching ensures the quality of its degree programmes.
- The Establishment is fully embedded in the University QA processes though constant interactions between the Dean's Office and relevant office holders in university management and in central university administration.
- The Dean's Office coordinates communication within the faculty between all university teachers, staff and students.[1]

Main developments since the last Visitation

Objectives and Organisation

A new "Mission|Strategy|Objectives" document was approved in 2017.[2]

The Establishment has made substantial progress in moving institutions to the location in Düppel:

- **Robert von Ostertag building (RvO)**: The building was opened in 2014 on the Düppel Campus and now houses the Institutes of Virology, Immunology, Microbiology and Epizootics, Parasitology & Tropical Veterinary Medicine and Animal Hygiene & Environmental Health.
- **Fusion of the Institutes of Food Hygiene and Meat Hygiene:** In 2016 they became the Institute of Food Safety and Food Hygiene. In 2017 most of the former Institute of Meat Hygiene was moved from Campus Mitte into temporary facilities on the Düppel Campus. In 2020 new institute facilities will be built in Düppel. Until then, the meat inspection room will remain the last facility in Campus Mitte.

[1] For further information, see Chapter 11.

[2] See Chapter 1.1.2.

The following initiatives have increased visibility on topics related to animal production and food of animal origin:

- **Food Berlin** is a joint project between several universities in Berlin and Potsdam with a joined focus program on food systems and related subjects such as sustainability, health and safety.
- **Virtual Center of Veterinary Public Health**: established in 2015, the Center encompasses the Institutes for Food Safety and Hygiene; Animal Welfare, Animal Behaviour and Laboratory Animal Science and Veterinary Epidemiology and Biostatistics. In addition to joined work at the FAO Reference Center for VPH, the objectives are a closer collaboration in the fields of training, continuing education and research.

Curriculum

The curriculum has been altered in several aspects and is under constant further development:

- **Reduction of the number of hours in the preclinical section** and focussing of the contents of chemistry, physics, zoology and botany to better meet the learning objectives of veterinary medicine.
- **Links between the preclinical and clinical parts** of the curriculum have been strengthened by creating new interdisciplinary courses.
- **Content harmonization** by appointing subject coordinators for each teaching subject as well for organ-centred modules.
- **Learning objective and examination topics catalogues** have been created for all subjects, are available to students and teachers, and are reviewed and adapted on a regular basis to ensure that the educational objectives are met.
- **Extramural internship (extramural practical training; EPT)** coordinators have been appointed, learning objectives defined and an evaluation system established.
- **Clinical rotations** were introduced in 2008 to strengthen clinical and practical training.
- **A tracking system** for elective courses was implemented in 2015/16 in which students have to place emphasis on one of thee clinical tracks (horses, farm animals, small animals) as well as on research and veterinary public health (VPH).
- In the most recent amendment of the **German Veterinary Medical Licensure Law (TAppV)** in 2016 regulations related to oral and electronic (written) examinations were modified.
- Development of a broad range of **E-Learning and blended learning modules** with an increasing range of topics and ongoing projects (QuerVet, Vetipedia etc.).[3]
- Transition from oral to **electronic written examinations** in several subjects, with more to follow.
- Establisment and continuous further development of a **Veterinary Skills Net (VSN)** to be integrated in self-directed learning and practical examinations **.**
- Participation in the University **SUPPORT mentoring programme** with establishment or peer-to-peer mentoring and soft skill modules.

Facilities and Equipment

Quality improvement and optimization of the learning infrastructure:

- Extension of the opening hours of the Establishment Library (2014).
- Library renovation to achieve a comprehensive and comfortable learning environment.
- Installment of a children's room in the Veterinary Library (2014).
- Opening of (group) learning spaces in the library (2015).
- New common rooms & kitchen for students in the Veterinarium Progressum (2017).
- New office for veterinary medical student representatives (2017).

[3] For more information, see Appendix to 5.1.8.b

Additional Significant Improvements including Acquisition of Equipment:

- Opening of the Bad Saarow Equine Center (2014) including a division for reproductive medicine and an EU insemination station; establishemt of a BSc. degree program in Equine Sciences.
- Moving the engineering office to the Düppel campus to improve communication in construction.
- Creation of new laboratory facilities for the Institutes of Physiology and Biochemistry (2015).
- Renovation of the Equine Clinic (since 2016) including a lecture hall for 170 students; procurement of CT, MRT, scintigraphy and X-ray machines.
- Partial renovation of the Small Animal Clinic, procurement of a CT scanner and a shared MRT machine with the Equine Clinic (ongoing).
- FACS core facility used for research and teaching (2016).

Other issues of relevance

- Increased awareness for animal welfare issues and the 3R concept als well as changes in EU legislation 2010/63/EU[4], the amendment of animal welfare law[5] and internal guidelines concerning the implementation of animal welfare law[6] require in adaptation of the use of animals for education.
- Student selection is now partially based on a written (MC) test specifically developed for that purpose.[7]
- The Establishment participates in the **Progress Test in Veterinary Medicine (PTT)** that allows students to monitor their individual learning progession through the curriculum.
- A University based teaching qualification program, "SUPPORT for teaching", is available to interested staff since 2014. In addition, the faculty hosts a **"Basic Course Teaching"** twice each year devoted to teaching and didactics, e-learning and examinations for teachers. Participation at these events is mandatory for teachers. In addition, a **"Day of Teaching"** is offered once a year whith input lectures and workshops on specific topics in the field of teaching. [8]
- Since January 2015 the Equine Clinic offers a postgraduate M.Sc. degree program in Equine Medicine. The M.Sc. program in Small Animal Sciences (in place since 2005) is ongoing.

Major problems encountered by the Establishment

The faculty is experiencing a phase in which a large number of personnel, structural and organisational changes have occurred or are in process.

Difficulties in recruitment of qualified staff

- Since the last reporting period, numerous professorships have been recently filled, leading to changes in research foci and teaching approaches.
- Due to a lack of well-qualified junior scientists especially in clinical subjects (for example swine diseases, poultry diseases) we experience substantial problems to recruit highly qualified professors.
- Rigid legal framework conditions (employment law, science contract law) limit the flexibility in recruiting and keeping qualified scientific staff.

[4] See: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:276:0033:0079:de:PDF

[5] See: https://www.bgbl.de/xaver/bgbl/start.xav?start=%2F%2F*[%40attr_id%3D%27bgbl113s2182.pdf%27]#__bgbl__%2F%2F*[%40attr_id%3D%27bgbl113s2182.pdf%27]__1498629469304

[6] See: http://www.vetmed.fu-berlin.de/einrichtungen/institute/we11/bilder_dokumente/151221-tierschutz-richtlinie-fu-mit-praeambel-final.pdf

[7] For details see Chapter 7.

[8] For information about different programs see Appendix to 9.1.1.

Facilities

- The faculty is still distributed over several campuses, and the existing building stock is maintenance-intense.
- Large lecture hall capacity is still limited in Düppel.
- Various construction projects have been implemented in recent yearsor are in the planning stages.[9]
- The conception of new construction projects including a lecture hall and hygiene facilities for students has been initiated; the implementation timetable depends upon the financial situation of Freie Universität Berlin.

Curriculum Design

- Due to the legal framework provided by the German TAppV, substantial changes to the structure of the curriculum, even if considered necessary, are difficult to implement.
- The regulatory link between available teaching capacity (core-funded staff), curriculum hours and number of students reduces the options to recruit additional staff for teaching or to change the number of incoming students.
- The Establishment favours the flexibility and autonomy for the units (administrative, scientific, teaching); as a result, changes including the development of the curriculum are slowed down.
- The Establishment does not own an agricultural teaching farm; respective curricular aspects have to be organised differently.
- Due to prevailing structures in Germany, the Establishment has only limited means to implement quality control of external internships.

Research

- Freie Universität Berlin is one of the German excellence universities. This is highly beneficial for the faculty and has clearly resulted in the promotion of interaction within and outside the university, but leads to a considerable pressure and increases the scientific gap between research-focussed and teaching / service oriented units.
- Successful acquisition of external funding leads to competition between research and teaching, which, in addition, is intensified due to inflexible position-hiring rules.

Financial Situation

- The Faculty has a global budget which has gives the Dean's Office some flexibility in the setting of priorities; however, this budget currently barely covers the expenses for core-funded personnel.
- Revenues from clinical services (mainly small animal and equine clinic) remain in the Faculty, which is financially dependent on them. The Dean's Office reserves the right, in consultation with the clinics, to adapt the allocation of these funds to meet strategic and operational goals.
- The faculty has made significant efforts in recent years to provide employees in the clinics with improved work contracts and training conditions. This has led to considerable additional costs, which limits the financial flexibility in the coming years.

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

The Establishment is undergoing a new combined process (“Full Visitation”). The Self Evaluation Report follows the requirements as set out in ESEVT Standards for Accreditation (as approved by the EAEVE General Assembly on 12 May 2016).

[9] See also Chapter 2.1.6.

1. OBJECTIVES AND ORGANISATION

1.1. Factual information

1.1.1. Details of the Establishment

Details of the establishment	
Name	Faculty of Veterinary Medicine, Freie Universität Berlin
Address	Oertzenweg 19b, D-14163 Berlin
Phone	+49 30 838 62646
Fax	+49 30 838 462646
Email	dekanat@vetmed.fu-berlin.de
Website	http://www.vetmed.fu-berlin.de/
Establishment's Head (Dean)	Prof. Dr. med. vet. Jürgen Zentek
Vice Dean for Study Affairs	Prof. Dr. med. vet. Marcus Doherr
Vice Dean for Research	Prof. Dr. med. vet. Achim Gruber
Head of Administration	Dr. med. vet. Anna Kosmol

Person(s) responsible for the professional, ethical, and academic affairs of the VTH	
Equine Clinic	Univ.-Prof. Dr. med. vet. Christoph Lischer Dipl. ECVS, Assoc. Dipl. ECVDI (Large Animal)
Ruminant and Swine Clinic	Univ.-Prof. Dr. med. vet. Kerstin E. Müller Dipl. ECBHM, Specialist veterinarian in cattle, Specialist in Ruminant Health (NL)
Animal Reproduction Clinic	Univ.-Prof. Dr. med. vet. Wolfgang Heuwieser Specialist veterinarian in breeding hygiene and insemination
Small Animal Clinic	Univ.-Prof. Dr. med. vet. Peter Böttcher Dipl. ECVS, Specialist veterinarian for small animals
Institute of Poultry Diseases	Dr. med. vet. Dörte Lüschow (acting director) Specialist veterinarian in poultry; Dipl. ECPVS

Executive Board of Freie Universität Berlin	
President of the university	Univ.-Prof. Dr. Peter-André Alt Kaiserswerther Str. 16-18, 14195 Berlin +49 30 838 731 00 praesident@fu-berlin.de
Executive Board	Vice presidents, Univ.-Prof. Dr. Monika Schäfer-Korting vp1@fu-berlin.de

Official authority overseeing the Establishment	
Senate of Berlin, State Chancellery for Science	The governing Mayor of Berlin Michael Müller Bernhard-Weiß-Str. 6, 10178 Berlin +49 30 90227 – 5050 post@senbjw.berlin.de

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

The faculty board approved the new collated document on **Mission | Strategy | Objectives** on 20.07.2017.[10] It is seen as a working document that will be frequently revised.

Mission: Our mandate

- The Faculty of Veterinary Medicine strives for excellence in teaching, research and services.
- We research the fundamental and applied aspects of important veterinary medical and comparative-biomedical topics for humans, animals and the environment.
- We implement our knowledge in excellent teaching and services.

Vision: Our perspective

- We aim to be one of the leading veterinary medical competence centres in Europe.
- We aim to offer first-class teaching to our students.
- We aim to make the best possible use of our capacity to guarantee the prevention and treatment of animal diseases.
- We strive to ensure that teaching and learning develop hand in hand.
- We utilise our human resources at all levels in mutual respect, trust and dialogue.
- We strive for a culture of learning, performance, competence, fairness and quality equally.

Objectives: Our goals

Research

- We promote clinical, fundamental and application-oriented research especially in (i) infection medicine with a particular focus on resistance research, (ii) clinical research and up-to-date medicine and (iii) animal health and welfare, food quality and safety.

Teaching

- We offer excellent training and jointly adapt teaching to meet new challences.
- Our graduates are competent, self-responsible and solution-oriented.

Postgraduate Qualifications

- Lifelong learning is an important part of our mission.
- We provide opportunities for postgraduate master (MSc), doctoral (Dr. med. vet.; PhD) and specialists training as well as continuous education.

Patient Care

- Patients and animal owners are offered comprehensive up-to-date clinical care.
- Complex questions are competently addressed though interdisciplinary cooperation.

Social relevance

- We embrace the social demands of prevention, therapy, animal welfare and food safety.
- We strongly support the concept of “One Health” with all aspects of public, veterinary and environmental health.

Public Relations

- Our activities in research, teaching and services are communicated through the professional channels of Freie Universität Berlin; this results in high visibility and demand for our services.

[10] See also Appendix to 1.1.2.

- The Faculty contributes, in cooperation with all relevant stakeholders, to the strengthening of the profession's status in public.

Financing
- Our aim is to have sufficient core funding for all units; their distribution is task oriented.
- We support acquisition of additional resources as well as their effective utilisation.
- Innovations are promoted and outstanding achievements are rewarded.

Internationality
- We are involved in a broad range of international research groups and partnerships.
- Student and staff exchange and joint research projects are strategic objectives.

Structures and Processes
- Motivated employees form an important basis for successfully achieving our objectives.
- Structured processes allow for the effective resolution of tasks.
- Short pathways ensure transparency in decision making.
- Units work self-accountable, make use of synergies and develop relationships.

Workplace environment
- We offer a safe and pleasant working environment for people and animals.
- The faculty supports a good work-life balance, gender equality, tolerance and freedom in research and teaching.

SWOT analysis

Strengths
- A University of Excellence with an international network, an outstanding personnel development programs and excellent research resources.
- System-accredited university with established quality assurance processes.
- Strong, internationally competitive research.
- High performing animal clinics, high number of patients for teaching and research, strong Infection Research and Veterinary Public Health facilities.
- Regular coordination of strategic objectives with the university.
- High motivation and involvement of our teaching staff, support staff and students.
- Good relationship between student body, staff and administration .
- High percentage of teachers with veterinary training (76% of all teachers).
- VTH organised in services and staffed with a substantial number of specialists.
- Broad scientifically-based curriculum with extensive extramural practical training of students in several fields of veterinary medicine including food production and safety.
- Good library facilities with an extensive bibliographical collection.
- High level of student engagement in extracurricular activities.
- Excellent relationships with other institutions, companies and professionals.

Weaknesses
- Limited opportunities to substantially modify the curriculum due to national legislation.
- Low flexibility in human resources planning specifically for training / specialisation positions.
- Legislative link between core-funded teaching staff and mandatory student admissions.
- Low number of junior research groups.
- Lack of autonomy in management of the Faculty, limited resources in administration.
- Limitations in strategic planning due to budgetary situation.
- Limited space for central service areas including student welfare facilities.

- Centralized support units for fundraising, project acquisition and project administration.
- Difficulties to fill clinical faculty positions with highly qualified scientists.

Opportunities

- Ongoing activities of optimisation of administrative processes, budget allocation and faculty structures can improve efficiency, transparency and visibility.
- Excellent research and clinical infrastructure provides career opportunities for junior scientists.
- Personnel development opportunities and career security increase employee motivation.
- Access to a large number of facilitation, qualification and support programmes increases quality.
- Attracting excellent staff for teaching and research can expand the range of specialised clinical services.
- Development of training activities for lecturers will increase taching quality.
- Increase of permanent education in accordance with the demands of profession.
- Active participation in the vet-agro-food industry increases visibility.
- Enhanced monitoring of the (under)graduate progession provides information needed to further improve the curriculum .
- Development of additional online and blended training modules increases learning.
- Higher visibility of the establishment fosters the public view on the veterinary profession.

Threats

- Dependency on university budget allocations as well as external resources (uncertainty) .
- Restriction on personnel management and on curricular development prevent necessary adaptations.
- High complexity and centralization of administrative processes in the university result in long decision-making processes.
- Shortage of qualified applicants for higher levels scientific and teaching positions result in positions remaining open for longer periods and subjects not fully represented .
- Aging of both academic and support staff creates foreseeable vacancies.
- Increase in the cost of veterinary education and clinical services will provide challenges.
- Increase in the maintenance needs of the older infrastructure need to be covered.
- Further decline in the number of production animal farms in the region.

1.1.3. Summary of the Establishment Operating Plan with timeframe and indicators of achievement of its objectives[11]

A detailed operating plan with strategic themes and objectives, implementation time frame and indicators has been developed by the Faculty for the next 7 years, discussed in the Faculty Council and presented to University Management. Topics covered are finances, professoral appointments, research strategy, further development of the undergraduate and graduate teaching, internationalization, human resource development, promotion of young scientists, gender equality, electronic resources and construction and maintenance. [12]

[11] For more information, see Appendix to 1.1.3.b and Chapter 1.1.6.
[12] Details on the operating plan are provided in Appendix to 1.1.3.a.

1.1.4. Organisational chart of the Establishment

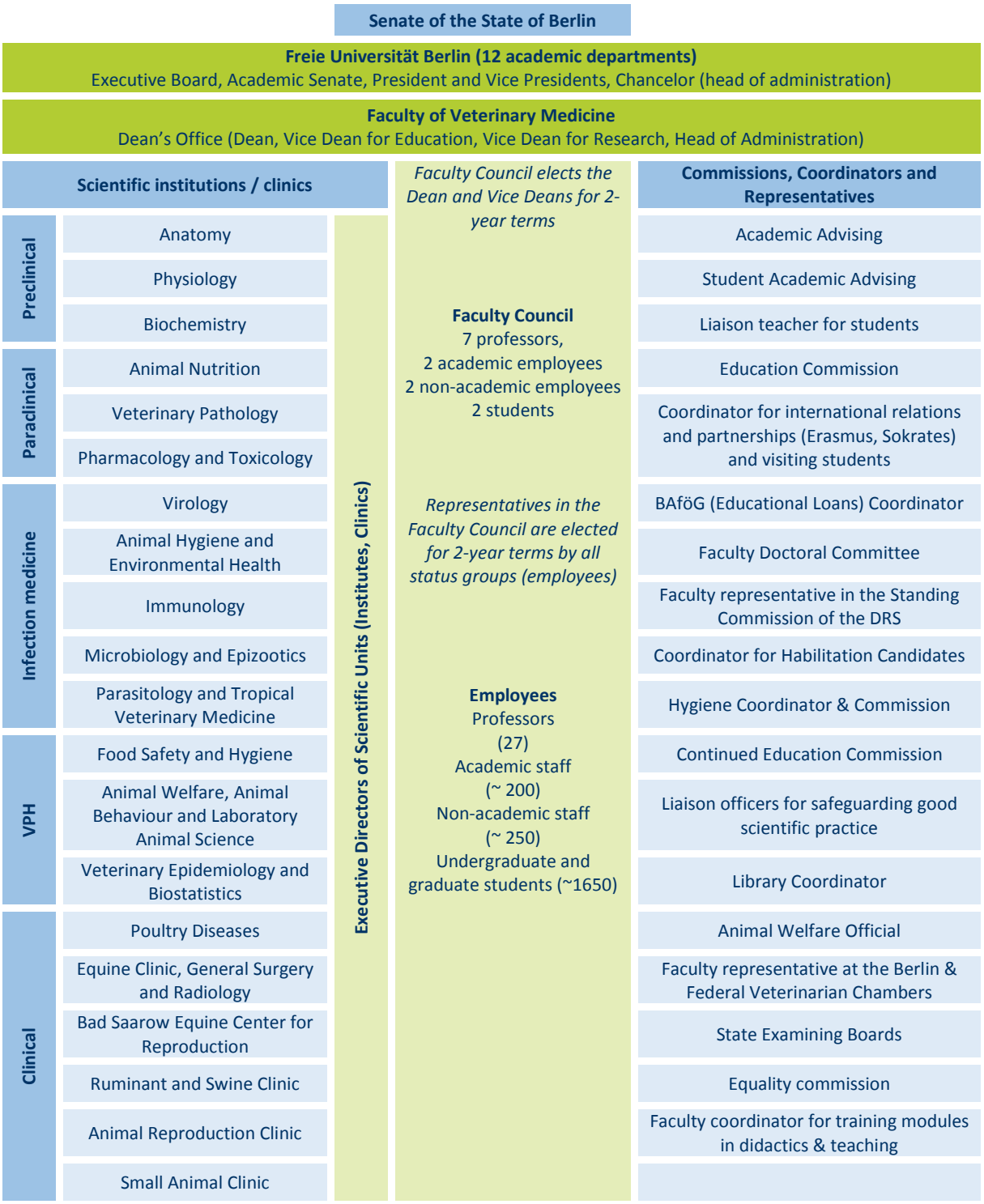

Figure 1 Faculty of Veterinary Medicine Organizational Chart

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.; further information is provided in the Appendix to 1.1.5.

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

The structure and duties of the most important commissions are prescribed in the Berlin Higher Education Act (§ 71, § 72) and the Basic Division Ordinances of Freie Universität Berlin (§ 13; § 14).

Long-term objectives of the State of Berlin and Freie Universität Berlin as part of the target structure plan

All universities in Berlin are invited every four years to scrutinize their structural composition. At Freie Universität, a Structure and Development Planning Commission has been mustered for this purpose. The commission comprises members from all subject fields at Freie Universität. The document, which was last drawn up in 2015, confirms a target structure of 36 professorships at the Faculty.

Faculty Operational and Strategic Objectives

In the Mission|Strategy|Objectives document of 2017 the Faculty's strategic objectives for the next seven years are defined. It was prepared by the Dean's Office with the broad participation from all members of the Faculty Council. In keeping with the point "*The Faculty envisages itself as a learning organisation*", new aspects can be proposed and added after discussion in Faculty Council. By 2024 at the latest, it should be reviewed and updated.
Operational objectives are set out in objective agreements with the University Executive Board every two years. The Dean's Office provides information about objective agreements within meetings of the Faculty Council with strategy and timeframe of implementation. After two years the Establishment must report back to the University Executive Board, which closes the PDCA cycle.[13]

1.2. Comments

- The Establishment has a functional commission structure with good representation by all status groups. Currently perceivable risks are budget uncertainty, existing restrictions imposed by the legal framework (curriculum, staff etc.) and by increasing complexity of administrative processes.[14]
- Faculty appointment procedures in the recent past have conclusively proved that there is an increasing shortage of young researchers entering a university career or applying for faculty positions; this requires joined efforts from all veterinary establishments.
- Creating flexible clinical training positions is difficult due to legal restrictions and limited budgets.

1.3. Suggestions for improvement

- The Establishment will make an effort to streamline and simplify administrative structures and processes and to consolidate the internal organisational structure.
- Transparency of all processes will be further increased, and the processes frequently scrutinized.
- Possible solutions to the lack of junior scientists and suitable applicants for faculty positions will be discussed with the university management and during meetings of the Assembly of German Veterinary Faculties (currently chaired by the Dean of the Berlin Veterinary Faculty).

[13] See PDCA cycle on Strategy and Objective Planning in Appendix to 1.1.3.b as well as process descriptions "Implementing Objective Agreements"
[14] See Chapter 1.1.2

2. FINANCES

2.1. Factual Information

2.1.1. Description of the global financial process of the Establishment

University funds are determined at two year intervals during university contract negotiations with the Senate of the State of Berlin. They are mainly dependent on educational objectives (new students, numbers of students in the standard study period, university degrees awarded), research (external funding expenditure, acquisition of external funding) and equality issues (proportion of women in appointments, diversity, etc.). Currently, the Faculty receives approximately 6.5% of the funds allocated to the University. The budget is agreed between university management and the Dean's Office. Funds are distributed to the individual institutes and clinics by the Dean's Office according to long-term development and strategy planning. Major changes in the budget plan and distrubtion of funds are decided in the Faculty Council. One steering element for budgetary changes are the negotiations with newly appointed university professors that result in target agreements.

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

Area of expenditure	2016	2015	2014	Mean
Personnel costs	€20,876,137.25	€20,220,257.11	€19,795,415.78	€20,297,270.05
Business Needs	€4,412,152.25	€4,606,832.82	€4,694,006.20	€4,570,997.09
Subsidies	€44,877.43	€40,241.00	€35,223.30	€40,113.91
Equipment and technology	€216,495.25	€483,151.34	€495,789.14	€398,478.58
Internal Offsetting	€193,766.21	€193,609.37	€74,899.77	€154,091.78
Total	€25,743,428.39	€25,544,091.64	€25,095,333.19	€25,460,951.07

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

Revenues source	2016	2015	2014	Mean
Revenue	€5,136,960.57	€4,716,689.60	€4,749,443.80	€4,867,697.99
Consumption subsidy	€21,363,849.49	€20,937,601.71	€20,419,955.95	€20,907,135.72
Investment Subsidy	€336,500.00	€541,180.00	€737,033.64	€538,237.88
Total revenues	€26,837,310.06	€26,195,471.31	€25,906,433.39	€26,313,071.59

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

Academic year	Total expenditures	Total revenues	Balance***
2014	€25,095,333.19	€25,906,403.39	€811,070.20
2015	€25,544,091.64	€26,195,471.31	€651,379.67
2016	€25,743,428.39	€26,837,310.06	€1,093,881.67

Table 2.1.4. Annual expenditures during the last 3 academic years from other funds (in Euros)

Area of expenditure	2016	2015	2014	Mean
Research projects	€5,533,075.22	€4,650,475.72	€5,169,629.07	€5,117,726.67
Contract research	€872,056.39	€1,084,544.88	€1,059,031.45	€1,005,210.91
Service areas incl. Further education Master's degree programs	€1,055,679.69	€877,283.72	€260,165.37	€731,042.93
Total expenditures	€7,460,811.30	€6,612,304.32	€6,488,825.89	€6,853,980.50

2.1.2. Degree of autonomy of the Establishment on the financial process

The Faculty has a global budget and is responsible for managing the funds allocated to it. Expenditures for core funded personnel, for administration, disposeables, keeping animals and education are therefore covered.[15]

2.1.3. % of overhead to be paid to the official authority overseeing the Establishment on revenues from services and research grants

Revenues from clinical and scientific services fully remain at the Faculty; there is no overhead deduction. The overhead for research projects depends on the type of project and ranges from 20-30%. For contracted research, all costs (whether direct or indirect) must be invoiced (full costing).[16]

2.1.4. Annual tuition fee for national and international students

Freie Universität Berlin does not charge tuition. Fees for undergraduate and graduate (doctoral) students are € 311,59 per semester. The use of public transport is included in these fees.

2.1.5. Estimation of the utilities and other expenditures directly paid by the official authority and not included in the expenditure tables

Since 2013, expenditures for property management and building maintenance are directly covered by the Engineering and Utilities division of Freie Universität Berlin. The latest figures (from 2012) amounted to approx. €3,130,995.00; 66% of which was property management.

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

Planned building projects (estimated costs in 1000 Euro)

Description	kEuro	Source of funding:
Center for Resistance Research in Veterinary Medicine (start of construction 2018)	€34,000	The Federal Government and the State of Berlin
Meat Hygiene and Food Technology building (start of construction 2020)	€21,000	State of Berlin
Hygiene building for students	€700	Freie Universität Berlin
Renovation of Dean's Office 2nd floor Doctoral Office and Office of Academic Affairs		In the feasibility study
Depot and waste disposal Düppel Süd		In the feasibility study
Small Animal Clinic, Stables and Movement Laboratory		In the feasibility study
Expansion of PC-Pool-A to 60 seats		In the feasibility study
Düppel Campus parking facility incl. routing and access control system		In the feasibility study

[15] For schematic representation of the budget allocation see Appendix to 2.1.2.
[16] For schematic representation of cost distribution see Appendix to 2.1.3.

Planned investment costs – larger equipment (estimated costs in Euro)

Description	Euro	Source of funding:
MRT (Equine Clinic)	€1,190,000	Proportionally from: Appointment funds / central funding / finance faculty
CT (Equine Clinic)	€660,000	Proportionally from: Appointment funds / central funding / finance faculty
X-ray system (Equine Clinic)	€285,338	Proportionally from: Appointment funds / central funding / finance faculty
PACS- image processing (Small Animal and Equine Clinic)	€300,000	Faculty
Total	**€2,435,338.20**	

2.1.7. Prospected expenditures and revenues for the next 3 academic years

Currently, the allocation from the university is approximately €21 million/year. Detailed budget planning for 2018/2019 will be conducted in summer of 2017. We expect an increase of 3.5% in the coming 3 years. Raising personnel costs make up a large part of this increase. The Faculty therefore expects only minor changes in revenue or expenditure in the next three years.

2.1.8. Description of how and by who expenditures, investments and revenues are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The process is described in Figure 2.

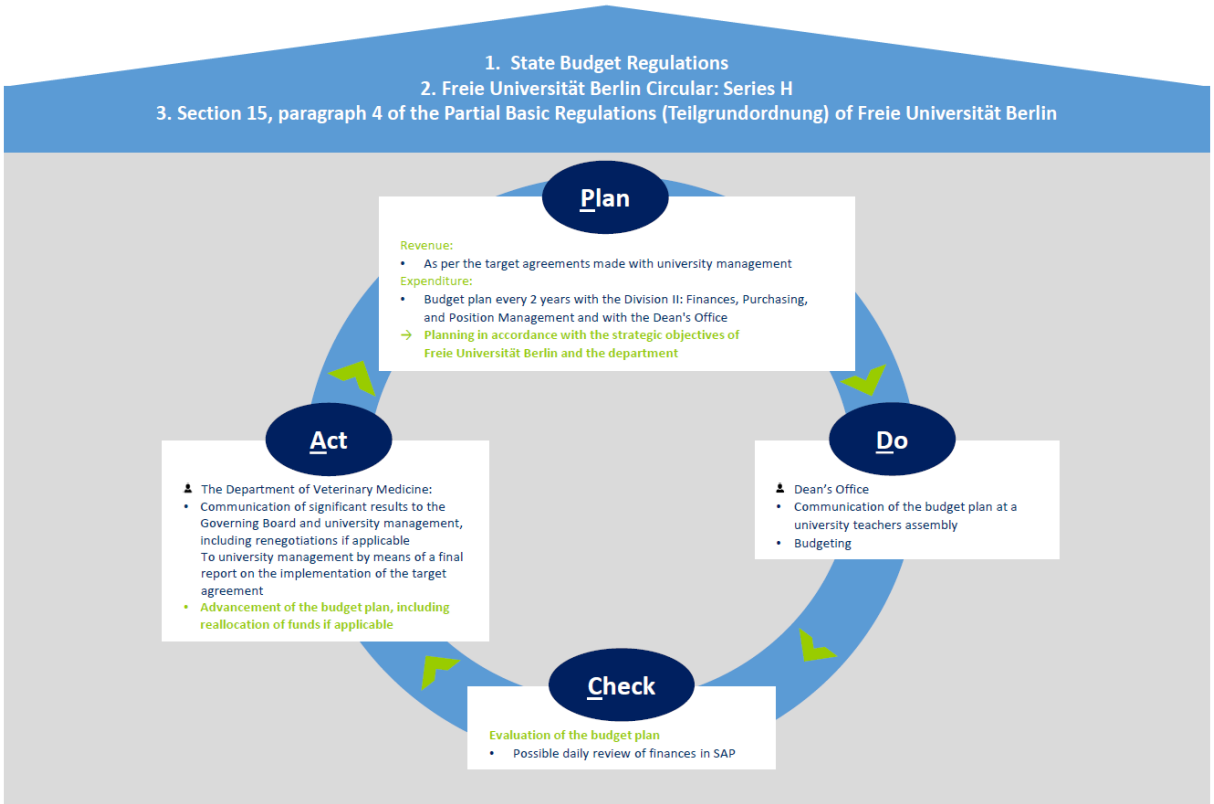

Figure 2 PDCA cycle for budget planning of the Faculty

2.2. Comments

- The total financial revenue of the Faculty and its institutions are considered sufficient to meet teaching needs, to initiate new research activities and to assist in project applications for the securing of external funding. Surplus funds to be used strategically are limited.
- An increase in revenues from clinical and diagnostic service is not considered feasible given the conditions of a veterinary teaching hospital with a focus on high-quality teaching.

2.3. Suggestions for improvement

- The distribution of the revenue from clinical services as well as surpluses from other income sources should be reconsidered.
- A larger proportion of the revenue should remain in the clinics so as to given them independence in personnel planning for clinical services and specialisation.
- A position for a clinical manager for the companion animal clinics should be established (to be advertised in fall of 2017)

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 currulum contents of university studies in veterinary medicine in Germany are described in the German Veterinary Medical Licensure Law (TAppV) and the Federal Veterinary Regulation (BTÄO) which in turn refer to the minimum requirements laid down in regulation 2005/36/EG 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 the ethical basis for a professional attitude committed to the well-being of humans, animals and the environment are taught. At the Establishment, the TAppV, associated Study and Examination regulations and a comprehensive subject-specific learning objective catalogues (with references to "day one skills" of the EAEVE) defines the organizational and content framework of the implemented curriculum in order to meet the educational objectives.

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

The TAppV as a Federal Law (from 2006, last amended in 2016) defines the educational goal, the significant 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. Cornerstones of the TAppV are

- 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 first 4.5 years
- Mandatory extramural practical training: 1,170 hours (for subjects see Table 3.1.4)
- 29 official exam subjects, with fixed curricular hours assigned to each subject area

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.[17] 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 Faculty, which imposes the study and examination regulations. These regulations are subject to the QA processes of Freie Universität Berlin. 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.

Semester plans are prepared by the Study Office with feedback from teachers at the Faculty, and are appraised by the Education Commission, agreed upon by the Faculty Council and transferred to the electronic Student Lifecycle Management System (SLCMS) "Campus Management", the electronic course catalog of Freie Universität Berlin and Faculty's website.[18]

[17] For more information see Appendix to 3.1.2.a.
[18] The process is documented in the Appendix D, No 3.

Subject, organ module and extramural practical coordinators are responsible for the development and coordination of learning objective and exam subject catalogues; they coordinate the process between the relevant subject lecturers and are the first point of contact for the Dean's office, lectures and students. The comprehensive subject-specific learning objective catalogue is available to all students and lecturers on the Faculty website. It is updated annually, reviewed by the educational commission and presented at a Faculty Council meeting. Curricular deficiencies are identified by the following processes: (i) Regular surveys on student satisfaction (every 2 years), (ii) teaching and learning objective evaluations (cyclic every 3 years); (iii) university survey of exmatriculated and recently graduated students (yearly), (iv) regular stakeholder reviews (every 3-5 years). Compiled information is fed back through the Dean's Office to the Education Commission, the Faculty Council and the afore mentioned coordinators. Chances are implemented in accordance with the QA processes on curricular development.

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

Prerequisite for participation in the clinical rotation of the 5th year of study is regular and successful participation in the required course work and extramural internships (EPT) of the pre-clinical and clinical part of the curriculum.[19] Clinical core subjects in the 3rd and 4th years of study are propaedeutics, internal medicine and laboratory diagnostics, surgery and anaesthesia, radiology, ophthalmology, clinical demonstrations, interdisciplinary teaching (see Tables 3.1.1 and 3.1.2) as well as a 4-week EPT in a veterinary practice.

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 in small groups rotate through all clinics including reproductive medicine and poultry, pathology and meat hygiene (a total of 11 weeks, for details see Table 3.1.5).[20] During rotation, students participate in regular clinical duties (including night and weekend services), are actively involved in in-patient and ambulatory work, attend seminars and exercises on practice-relevant topics and compile their own case reports.[21] The aim is that the students apply their acquired knowledge in a problem-based approach and practise recognising clinical problems, delevping an diagnostic and therapeutic plan as well as practice relevant hands-on skills.

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

Intramurally, lectures on meat, milk and slaughter hygiene as well as practical courses in food and milk science are given. During the clinical rotation, students in small groups receive an introduction to meat hygiene, carcass inspection, bacteriological sampling and further tests on carcasses of pigs and cattle. Further practical training on meat and food hygiene as well as public veterinary services is carried out in accordance with TAppV within the framework of several EPT in the 5th year of study (see Table 3.1.4).

[19] A tabular overview of the course of study can be found in Appendix B.
[20] Hours of individual clinics and institutions with contents and periods of rotation see Appendix to 5.1.8.c
[21] See Overview 1 and Chapter 5.1.2.

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

Students must attend at least 6 elective courses (1 course = 1 SWS = 14 hours during one semester) in the preclinical part and 16 courses in the clinical part. At the beginning of the clinical part students select a main track (farming livestock, horses, pets and small animals, VPH or Research) in which they have to complete at least 7 courses. The remaining courses must be selected from other tracks. The Faculty offers a wide range of approximately 200 elective courses per year (approximately 100 per semester) with sufficient number of places available.[22] Within the framework of these events, internal and external lecturers cover topics outside the regular curriculum, as well as intersections on ongoing research projects. Registration is managed via the SLCMS. Distribution takes place in two allocation rounds from 2 weeks before until 2 weeks after the start of classes. The primary track, the preference, place restrictions on individual events as well as special needs (family care, disabilities etc.) are considered. Hardship is taken into account and a subsequent registration for events in SLCMS through the Study Office is possible. If the number of bookings for a course exceeds the number of places available, the admission is based on the afore mentioned criteria.

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

The content and duration of the EPT (see 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 of all German veterinary establishments organise these internships individually; there are no contractual agreements between the veterinary faculties and the training providers. The faculties therefore have no possibility to directly influence the content and quality of internships (see statement of German veterinary training facilities in Appendix to 3.1.8.b); they do however provide the students with learning objective catalogues and evaluation forms. Learning objective catalogues of the Establishment were prepared by the EPT coordinators and are issued to the students with information on the legal framework, all evaluation forms and templates for the required certificates.[23] Evaluations are collected in the Dean's Office, summaries presented to the Education Commission and discussed with the respective EPT coordinator. Due to data protection legislation, assessments of individual training institutions have to remain confidential. Students are assisted in identifying suitable training institutions.[24] Individual process steps are set out in detail in the process descriptions "Evaluation of extra-mural internships" and "Evaluations of agricultural internships". These steps include internship planning and uptake, implementation of extra-mural internships, feedback loops and follow-up.[25]

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 in the SLCMS. Completion of all intra-mural 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 cases reports (see Overview 1). During clinical demonstrations and rotations, students work on patient- or problem-oriented cases (either a hospitalized patient, an outpatient or a clinic-owned animal). They independently write reports in which medical history,

[22] See Appendix to 3.1.7.
[23] See: http://www.vetmed.fu-berlin.de/studium/veterinaermedizin/praktika/index.html
[24] See Appendix to 3.1.8.a.
[25] See Appendix D, No 6&7.

findings, diagnosis, differential diagnoses, therapy recommendations and prognosis are described. In the process, students are encouraged to identity and read original literature and integrate it into their reports. The reports are read and corrected by research assistants, and feedback is provided to the students. In case of shortcomings students are requested to revise their reports.

Semester	Subject	Type of report
6th / 7th semester	Clinical demonstration: small animals	Medical report
6th / 7th semester	Clinical demonstration: horses	Medical report
6th / 7th Semester	Clinical demonstration: ruminants & pigs	Medical report
6th / 7th semester	Clinical demonstration: reproduction	Medical report
7th semester	Milk science course	Milk analysis report
8th semester	Food examination course	Food examination report
9th / 10th semester	Rotation: small animals	Medical report
9th / 10th semester	Rotation: horses	Medical report
9th / 10th semester	Rotation: ruminants & pigs	Medical report
9th / 10th semester	Rotation: reproduction	Case
9th / 10th semester	Rotation: pathology	Autopsy reports
11th semester	Food science and hygiene	Food examination report
11th semester	Milk science	Milk analysis report

Overview 1 Reports to be prepared by students

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

The Processes of the curricular development and communication at the Federal (TAppV) and the University level (education and examination regulation) are described in Chapters 3.1.2. and 3.1.3.

Faculty level (study and examination regulations)
The process of changing study and examination regulations is regulated across the university and documented in "Advancement of degree programs". The need to adapt study and examination regulations results from changes to the TAppV, feedback from student and alumni surveys and input from the Education Commission (see Chapter 1.1.5.), teachers and external experts (Figure 3 and Chapter 11.1.4.). The Dean's Office revises the respective inputs in dialogue with the Education Commission, the chairs of the examination boards, involved teachers, the study office and the program manager for study and teaching. Revised study and examination regulations undergo a multi-stage procedure with a formal and conceptual evaluation, a capacity test and a legal examination (Figure 4 and Chapter 11.1.4.). Once approved by the University they have to be accepted in the Faculty Council and published in the University News to become official. Final regulations are communicated back to all status groups and published on the Establishment website.

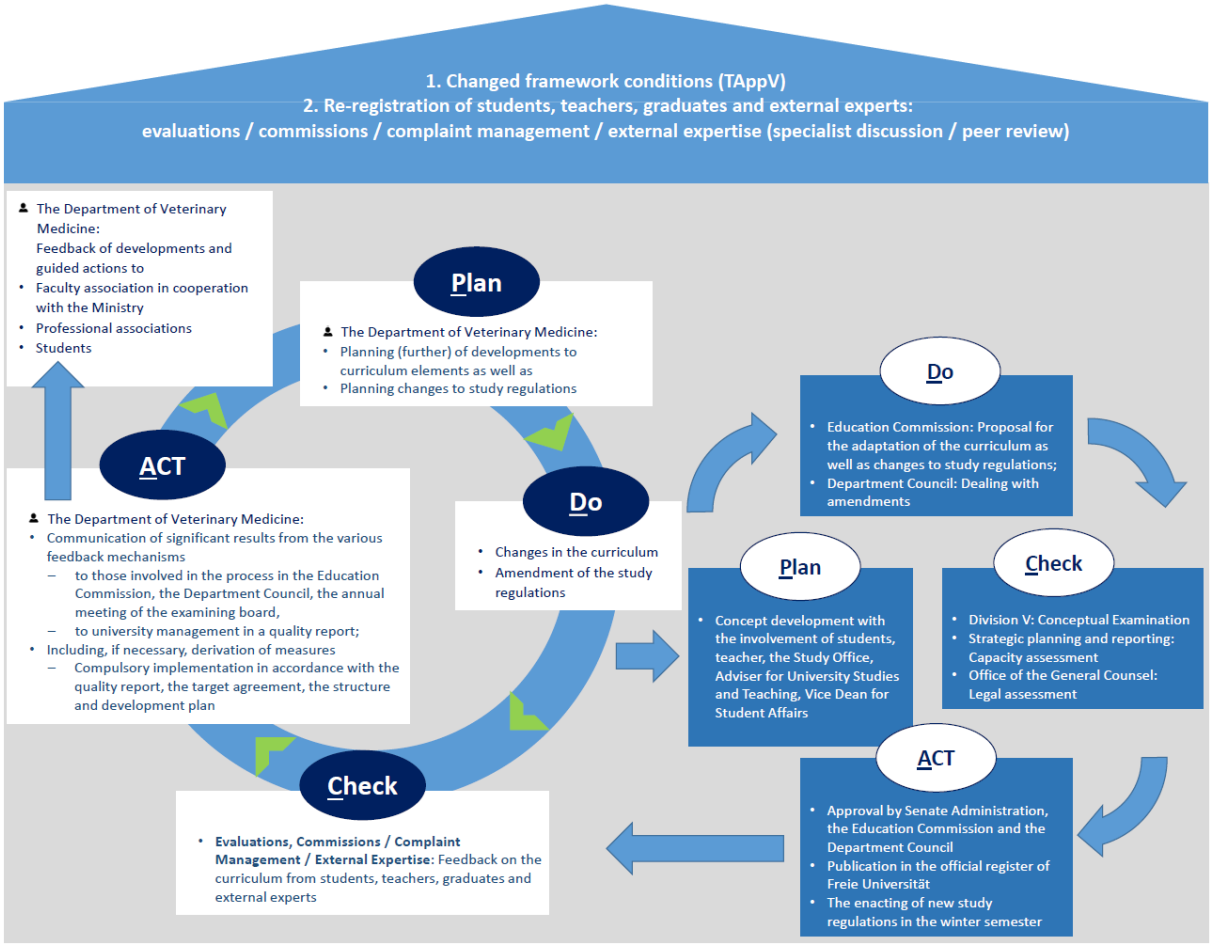

Figure 3 PDCA cycle (continued) advancement of the curriculum

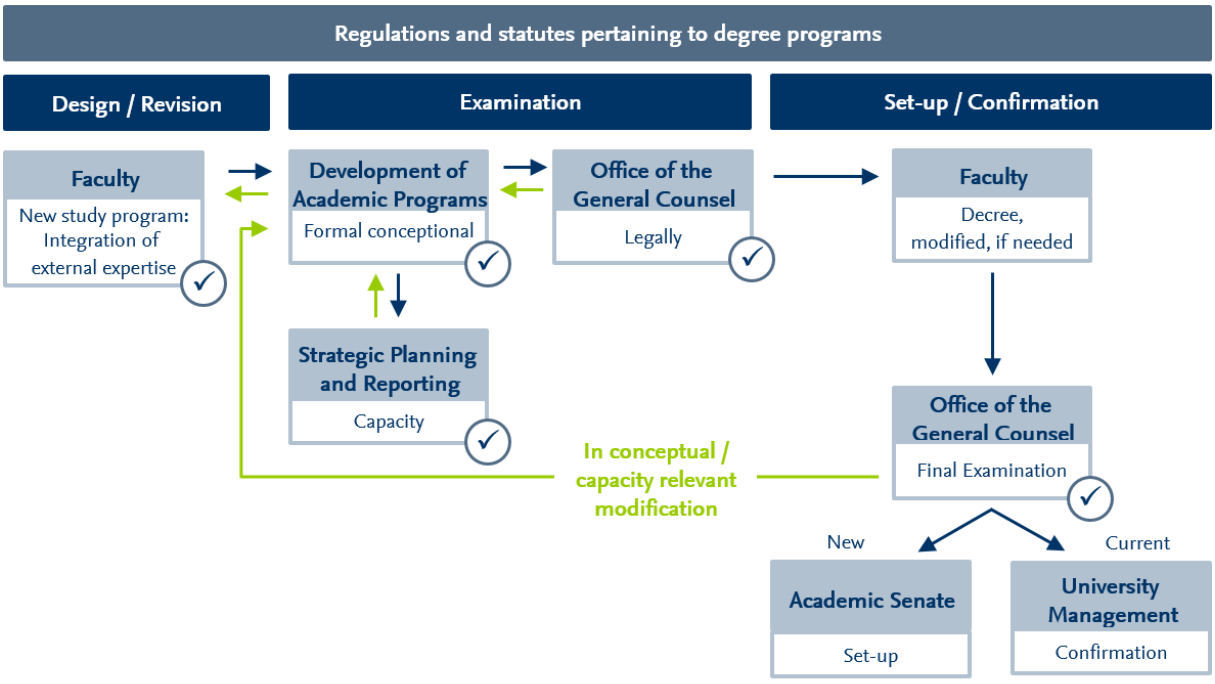

Figure 4 Quality assurance in the (continued) advancement of degree programs (simplified process)

Table 3.1.1. Curriculum hours in each academic year taken by each student
Values contain ALL hours including required elective courses and clinical rotations.

Year	Type of instruction							Total (rounded)
	Theoretical training		Supervised self learning	Supervised practical training			Others (specify)**	
	Lectures	Seminars		Laboratory and desk based work	Non-clinical animal work	Clinical animal work		
1	499.4	79.5	44.5	91.1	80.5	0.0	10.6	805.6
2	163.4	130.3	25.3	64.9	89.3	0.0	10.6	483.8
3	717.7	43.1	46.6	151.6	74.8	46.6	18.6	1098.8
4	693.0	18.6	32.6	158.6	60.6	60.6	18.6	1042.4
5*	0.0	84.6	84.6	84.6	84.6	61.8	19.3	419.5
6	first half reserved for final exams							
Total	2073.5	356.0	233.5	550.7	389.7	168.9	77.6	3850
EPT				320		850		1170
Total								**5020**

* only one semester of instruction; the second is reserved for extramural practical training (EPT)
** This section contains eight elective courses (various subject areas, see Table 3.1.3), one course in SA C&F (Clinical practical training in all common domestic animal species; Veterinary certification and report writing) and one course in SA E (Food hygiene and food microbiology; Inspection and control of food and feed; Food technology including analytical chemistry)

Table 3.1.2. Curriculum hours in EU-listed subjects taken by each student[26]

Values include ALL hours including required elective time and clinical rotations.

SA	Subject	Lectures	Seminars	Supervised self learning	Llaboratory and desk based work	Non-clinical animal work	Clinical animal work	Others (specify)*	Total (rounded)
A	Animal biology, zoology and cell biology; feed plant biology and toxic plants	112.0	0.0	0.0	0.0	0.0	0.0	0.0	112.0
	Biomedical statistics	14.0	0.0	14.0	0.0	0.0	0.0	0.0	28.0
	Chemistry (inorganic and organic sections)	56.0	24.5	0.0	24.5	0.0	0.0	0.0	105.0
	Medical physics	28.0	0.0	0.0	28.0	0.0	0.0	0.0	56.0
B	Anatomy, histology and embryology	70.0	52.5	0.0	42.0	150.5	0.0	0.0	315.0
	Animal ethology; Animal welfare	70.0	28.0	0.0	0.0	0.0	0.0	0.0	98.0
	Animal nutrition	42.0	28.0	0.0	28.0	0.0	0.0	0.0	98.0
	Biochemistry	98.0	8.8	8.8	5.3	5.3	0.0	0.0	126.2
	Epidemiology	42.0	0.0	0.0	0.0	0.0	0.0	0.0	42.0
	General and molecular genetics	56.0	0.0	0.0	0.0	14.0	0.0	0.0	70.0
	Immunology	28.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0
	Microbiology	84.0	0.0	14.0	28.0	0.0	0.0	0.0	126.0
	Parasitology	42.0	0.0	0.0	28.0	0.0	0.0	0.0	70.0
	Pathology	76.3	24.5	0.0	7.0	49.0	0.0	0.0	156.8
	Physiology	84.0	7.0	0.0	35.0	0.0	0.0	0.0	126.0
	Professional ethics	28.0	7.0	7.0	0.0	0.0	0.0	0.0	42.0
B,C	Pharmacology, pharmacy and pharmacotherapy; Toxicology, Therapy in all common species	112.0	0.0	0.0	14.0	0.0	0.0	0.0	126.0
C	Clinical practical training in all common domestic animal species	56.0	0.0	0.0	70.0	0.0	70.0	0.0	196.0
	Diagnostic imaging	42.0	0.0	0.0	0.0	0.0	0.0	0.0	42.0
	Diagnostic pathology	0.0	16.1	16.1	16.1	16.1	0.0	0.0	64.4
	Medicine and surgery including anaesthesiology; Therapie in all common species	499.1	0.0	28.0	14.0	0.0	0.0	0.0	541.1

[26] The assignment of TAppV subjects to EU and EAEVE subjects is provided in the Appendix to Table 3.1.2.b

	Obstetrics, reproduction and reproductive disorders	100.1	0.0	0.0	0.0	0.0	0.0	0.0	100.1
	Propaedeutics of all common domestic animal species	49.2	0.0	0.0	0.0	49.2	0.0	0.0	98.4
C,F	Clinical practical training in all common domestic animal species; Veterinary certification and report writing	0.0	61.8	61.8	61.8	61.8	61.8	12.6	321.6
	Veterinary profession, forensic medicine and certification; Veterinary legislation	28.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0
D	Animal husbandry; Animal production & breeding	70.0	14.0	0.0	0.0	0.0	0.0	0.0	84.0
E	Food hygiene and food microbiology; Inspection and control of food and feed; Food technology including analytical chemistry	168.0	6.7	6.7	90.7	6.7	0.0	6.7	285.5
F	Professional knowledge	18.8	18.8	18.8	0.0	0.0	0.0	0.0	56.4
A -F	Electives (see Table 3.1.3)	0.0	58.3	58.3	58.3	37.1	37.1	58.3	307.5
Total	Total hours including clinical rotations and the minimum number of electives	2073.5	356.0	233.5	550.7	389.7	168.9	77.6	3850

*This section contains eight elective courses (various SA, see Table 3.1.3), one course in SA C&F (Clinical practical training in all common domestic animal species; Veterinary certification and report writing) and one course in SA E (Food hygiene and food microbiology; Inspection and control of food and feed; Food technology including analytical chemistry)

Table 3.1.3. Curriculum hours OFFERED as electives in different subject areas in different course formats during one year.

SA	Subject area	Lectures	Seminars	Supervised self learning	Laboratory and desk based work	Non-clinical animal work	Clinical animal work	Others (specify)	Total (rounded)
A	**Basic Subjects**	42	14	0	42	14	0	0	112
B	**Basic Sciences**	28	574	0	434	112	0	0	1148
C	**Clinical Sciences**	140	112	0	112	84	308	0	756
D	**Animal production**	14	182	0	42	98	112	0	448
E	**Food safety and quality**	28	98	0	14	28	0	0	168
F	**Professional knowledge**	0	196	28	0	14	0	0	238
Total		**252**	**1176**	**28**	**644**	**350**	**420**	**0**	**2870***

- Students are required to take a minimum of 22 SWS (308 hours) of electives

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

Subjects		Minimum duration (weeks)	Year of programme
pre-clinical	Agriculture (genetics, breeding, husbandry, milking techniques, etc.)	2 weeks (70 hours)*	In the 1st year (1st / 2nd semester)
clinical	Clinical training (private practice or clinic; companion animals or production animals)	4 weeks (150 hours)	After the 2nd year (5th /6th semester)
	Clinical training (private practice or clinic; companion animals or production animals)	16 weeks (700 hours)	In the 5th year (9th / 10th semester)
FSQ & VPH	Veterinary inspection offices regarding all issues of Veterinary Public Health	2 weeks (75 hours)	In the 5th year (9th / 10th semester)
	Food hygiene (hygiene control, food monitoring, food examination)	2 weeks (75 hours)	In the 5th year (9th / 10th semester)
	Abattoir, ante and post mortem meat inspection	3 weeks (100 hours)	In the 5th year (9th / 10th 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. Small group clinical rotations in 5th year under academic staff supervision (excl. EPT)

Types	List of clinical rotations (Disciplines/Species)	Duration (weeks)
Intra-mural (VTH)	1. Small animals	2 weeks
	2. Horses	2 weeks
	3. Ruminants, pigs, poultry	2 weeks
	4. Animal reproduction	2 weeks
	5. Pathology	2 weeks
FSQ & VPH	6. Meat hygiene, carcass inspection	1 week
Ambulatory clinics ***(Farm visits during*** *the clinical rotation)*	• Clinic for ruminants and pigs	20.5 hours
	• Clinic for animal reproduction	12 hours
	• Institute for avian diseases	4 hours

Table 3.1.6. Optional courses proposed to students (not compulsory)

There is a range of additional courses suggested to the students in topics such as computer literacy (MS Excel, MS Word, Statistics refresher, Literature search etc.), Animal Experiment Supervisor certificate (FELASA), osteosynthesis, biochemistry and parasitology seminars. In addition, students can enroll in a broad range of open lectures and soft skill classes offered by the University.

3.2. Comments

- The existing legal framework provides a structured veterinary curriculum thoughout 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.
- The introduction of organ-centred teaching (organ modules) and clinical rotations (after the 2007 EAEVE evaluation) substantially improved the curriculum. Efforts are ongoing to further improve these and other study elements such as the interdisciplinary courses.
- Teaching hours in the basic natural sciences (currently outsourced to other faculties in Berlin) were reduced and the teaching focussed on veterinary contents.
- The assignment of subject, organ-module and EPT coordinators and the compilation of a comprehensive subject-specific learning objective and examination topic catalogue significantly improved the coordination between subjects and resulted in greater transparency.
- Regular evaluations of and surveys on student performance and satisfaction, the integration of the Education Commission and other committees in the quality assurance processes lead to a high awareness of quality in teaching.
- Substantial tracking (specialisation) within the undergraduate veterinary curriculum currently is not possible given the German legal legislation on veterinary education.
- Extra-mural internships (EPT) are required but explicitly outsourced to the veterinary profession. The veterinary faculties neither have a legal basis nor the resources to implement a high level of (quality) control.

3.3. Suggestions of improvement

- A transfer of basic natural sciences teaching back to the Establishment is considered but would require additional resources from the university.
- Options for a more pronounced tracking in the clinical part are explored; they could improve clinical training while at the same relieve the clinics (fewer groups of students with longer time in one clinic).
- Together with the Federal Association of Practicing Veterinarians (bpt), further efforts to ensure standardizations and qualtity control of extra-mural clinical training will be undertaken.

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)

The Faculty is distribiuted over 4 sites:[27] (a) Düppel Campus, (b) Dahlem Campus, (c) Mitte Campus and (d) Bad Saarow Equine Center. Düppel Campus (main site) in south west Berlin includes all clinics with stables, a large number of the institutes, the veterinary medical library, the Dean's Office and various research and seminar buildings and the continued education center "Veterinarium Progressum". Dahlem Campus (7 km distance to Düppel; main site of the Freie Universität Berlin) houses the three Institutes of Anatomy, Pharmacology & Toxicology and Animal Nutrition.
The demonstration hall for meat hygiene is still located on the Mitte Campus (in the center of Berlin). The Equine Center (horse reproduction) is located approximately 70 kilometres southeast in Bad Saarow (Federal State of Brandenburg). The Faculty does not have its own agricultural teaching and research facility. Agricultural training is carried out in cooperation with the respective Faculty at Humboldt Universität. All buildings used by Faculty are maintained by Freie Universität Berlin.

4.1.2. Description of the premises for:

-) lecturing
-) group work
-) practical work

The Faculty has a large number of lecture halls, seminar rooms, laboratories and clinic facilities where veterinary medical training is carried out.[28] The lecture halls and seminar rooms are fitted out with up-to-date media technology. Libraries and common rooms in the individual institutes and clinics are available to students for individual study, in particular for rotation students during case work. The equipment available in the rooms matches the requirements of each subject. The laboratories, dissecting and autopsy halls are signposted with safety information and escape route and emergency exit signs in accordance with infection protection law, biomaterial ordinances, genetic engineering law, genetic engineering safety ordinances, occupational safety law and Faculty hygiene rules. In addition, they are equipped with hand washing and hand disinfection facilities, eye washing stations, emergency showering facilities, first aid kits and fire extinguishers.
The Establishment does not have a Skills Lab room or building but follows the concept of a Skills Net in which smaller structures with relevant practical training stations are coordinated and constantly expanded by a Skills Net committee.[29]
Room assignment for the regular courses in the curriculum is done by the study office. In addition, lecturers can view room availability through the internet and request additional bookings to be made by the study office (http://www.vetmed.fu-berlin.de/studium/dozierende/raumbelegung/index.html).

[27] Maps are provided in Appendix C.
[28] Details are provided in Appendix to 4.1.2.
[29] See Appendix to 7.1.6 with section on Skills Net

4.1.3. Description of the premises for housing:

The Faculty has sufficient space to accommodate the animals needed for clinic and teaching activities.[30] These are subject to a number of legal requirements. Animals kept for educational purposes must be registered with the appropriate licensing authority (LAGeSo) for a breeding and keeping permit (§ 11 of the Animal Protection Law). A hygiene concept, a health monitoring program and a safety concept must be included in the application to the licensing authority. Furthermore, the premises must provide suitable and species-appropriate animal care by qualified personnel and supervised by animal welfare officers. Appropriate quarantine facilities must exist, or else, should the need arise, must be available for quick set up. Over and beyond the requirements of animal protection law, the obligations of biomaterial ordinances, of genetic engineering law and of infection protection law must be met and responsible persons have to be appointed. In accordance with the law on genetic engineering, a responsible project leader and an official responsible for biological safety must be named. Should an infection trial be conducted, then those components of infection protection law which relate to safety precautions (S1-S3) have to be observed and a qualified person must assume necessary responsibility. Appropriate records have to be kept and will be checked by the licensing authorities.

4.1.4. Description of the premises for:

-) clinical activities
-) diagnostic services including necropsy
-) FSQ & VPH
-) others

The Establisment has 30 rooms used for clinical training (physical examination & surgery rooms; 27 in Düppel and 3 in Bad Saarow), 22 rooms for diagnostic services including necropsy (20 in Düppel, 2 in Bad Saarow). An overview of the equipment is given below.

Location	Equipment for
Düppel	**Imaging processes:** Sonography (ultrasonic devices with doppler technology, ultrasonic devices for pregnancy diagnostics, portable ultrasonic devices); radiology (stationary/portable x-ray devices); endoscopy; video-vaginoscopy; CT / MRT **Laboratories** equipped for haematology, blood chemistry, serology, quick tests, zytology, fluid diagnostics, synovia tests, urine analysis, spermatology, molecular biology, bacteriology, virology
Bad Saarow	**Imaging processes:** Sonography, endoscopy **Laboratories**: Semen lab, embryo lab, histology, haematology, blood chemistry, quick tests, zytology

Overview 2 Equipment for clinical activities and diagnostic services including necropsy

The testing laboratories at the Institute of Food Safety and Food Hygiene, at the Institute of Poultry Diseases as well as at the Small Animal Clinic are accredited by the German Accreditation Body GmbH (DAkkS) in accordance with ISO 17025:2005. These testing laboratories are subject regular audits carried out by DAkkS which examines technical competence, compliances with standards, guidelines and laws and quality of services. The Institute of Virology (Berlin Equine Virus Lab, BEVL) is designated a World Organization for Animal Health (OIE) reference laboratory.

[30] Details are provided in Appendix to 4.1.3.

The Establishment has 4 premises for FSQ & VPH (2 in Düppel, 2 in Berlin Mitte). The carcass inspection hall on the Berlin-Mitte Campus is equipped with suspension devices and examination tables for post mortems carried out on pigs and cattle, tables for bacteriological examination sampling and tables for conducting further investigations and standard media technology.

4.1.5. Description of the premises for:

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

An overview of the available infrastructure is provided in the Appendix.[31]

4.1.5.1. Study and self-learning

Most institutes and clinics provide individual study areas. Across the four sites of the Establishment, there are more than 800 student workplaces as well as 6 rooms with accommodation for on call students available. The library on Düppel Campus provides a large number of spaces for individual learning including a "quiet zone" (90 workplaces), PC work stations and seminar / group learning rools. Within the library, various Skills Net models are available for individual study.[32] The Faculty has its own PC pool with 40 work spaces which is primarily used for teaching and electronic examinations, and can be used by students when vacant. A second PC pool with 20 computers is primarily used for PC-based courses and statistics refresher classes.

4.1.5.2. Catering

At the three main sites of the Establishment either a canteen or a cafeteria is available where students can purchase hot or cold dishes and drinks:

Campus Düppel

Student Union canteen open Mo-Fr from 09:00 am to 3:00 pm

Campus Dahlem

Student Union cafeteria in Koserstrasse open Mo-Fr from 09:00 am to 3:00 pm

Main University canteens are within walking distance

Campus Mitte

Several coffee machines are available; and the nearby canteen of the Charité (university hospital) is open for all students and University staff Mo-Fr from 10:00 am to 6:00 pm

4.1.5.3. Locker rooms

In total there are over 800 lockers available across the sites of the Establishment. All institutes and clinics where the students must wear protective clothing provide changing rooms and lockers. In addition, there are 48 lockers in the library building and another 48 lockers in the manor house next to the Düppel canteen.

4.1.5.4. Accommodation for on call students

In each clinic there is a common room as a well as a bathroom with a shower and a toilet which are provided for students while they are on-call or while on the night shift.

[31] See list of rooms for self-learning, lockers and accommodation for on call students in Appendix to 4.1.5.
[32] For further details on the library services see Chapter 6.

4.1.5.5. Leisure

At each location, one or more common rooms are available for the students to use. This includes student work spaces and seating facilities on the ground floor at the Koserstraße site (Dahlem) and at the Institute of Veterinary Pathology (Düppel). In the Veterinarium Progressum centre in Düppel, a study room, a social room, a children's playroom, an office for veterinary medical student representatives as well as a kitchen and a bathroom are available. Behind the building, a paved barbecue area with seating has been built for the students. The University Sports Center offers a wide range of sport classes and physical activities for both students and employees. There are more than 120 sports available and around 800 individual events scheduled each semester (www.hochschulsport.fu-berlin.de).

4.1.6. Description of the vehicles used for:

-) students transportation *(e.g. to extramural facilities)*
-) ambulatory clinics
-) live animals transportation
-) cadavers transportation

The Establishment operates 31 vehicles, 15 of those (totalling 96 seats) designated for student transport mainly during ambulatory clinics.[33] Legal requirements for vehicles used for the transport of persons, living animals and carcasses and the corresponding requirements concerning the qualifications of individual drivers, the information chain and documentation requirements as set out in the Animal Protection Transport Ordinances (TierSchTrV), the Internal Market Animal Disease Protection Ordinances, disinfection guidelines and infection protection law are met.

4.1.7. Description of the equipment used for

-) teaching purposes
-) clinical services *(diagnostic, treatment, prevention, surgery, anaesthesia, physiotherapy,*

4.1.7.1. Equipment used for teaching purposes[34]

A large range of text books (available at the library), lecture notes and presentations are used for teaching. Lecture notes and presentations are made available to students on the central learning platform of Freie Universität Berlin (Blackboard). The student organization complies student learning scripts based on lectures and events.[35] In addition, a large number of modern teaching approaches and materials are used by the different lecturers. These include interactive and integrative online lecture notes, e-learning / e-lectures / blended learning, audience response systems, interactive screen experiments, simulation programs, virtual microscopes (Zoomify), virtual dissection halls (CanisPraep; UnguPraep), interdisciplinary case-based learning (QuerVet), peer teaching / peer instruction (SUPPORT mentoring) and models used in the SkillsNet.

4.1.7.2. Equipment used for clinical services

See details provided in Chapter 4.1.4.

[33] For further details on the vehicles see Appendix to 4.1.6.
[34] A detailed list of methods used in various courses is provided in Appendix B.
[35] See: http://www.vetmedfsi-berlin.org/uploads/7/1/0/2/71020557/preisliste_skripten-ag.pdf

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

The continual improvement and the further concentration of infrastructure at Düppel Campus follows the central strategy of the Faculty and the University (see Chapter 2.1.3. and Chapter 2.1.4.). The current annual budget for "small" building maintenance and upkeeping of the properties amounts to between €1,000,000 and €1,700,000. Large construction projects are negotiated and budgeted as part of the target agreements with university management (see Chapter 1.1.6.) and in the context of new professoral appointments (see Chapter 9.1.2.). The objective of the Establishment is to maintain an infrastructure that meets the operational needs of the institutions and clinics. Internal audit visits are seen an important tool carried out within the framework of biosecurity, work safety, energy and environmental management. They are jointly conducted by members of the University occupational safety service, the sustainability & energy management unit, the occupational health physician supervisory team and by a member of the Faculty hygiene commission and an employee representative. The team assesses the required documentation (up-to-date risk assessments, instruction protocols and safety signs), the maintenance schedules, protective equipment, fire prevention, waste disposal and hygiene plans. Action points for optimization are listed in an inspection report. These points are addressed by the respective institutions and the status is reported back to the audit team leader. Based on a 2017 Faculty Council decision, the time between the two internal audit inspections in scientific institutions should in the future not exceed two years.

4.1.9. Description of how and by who changes in facilities, equipment and biosecurity procedures are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Desired construction projects (ranging from small building maintenance to large new constructions) are brought to the Dean's Office by different routes (see Figure 5). There are collected, evaluated together with the institutions involved, presented to the Faculty Council, compared to the strategic plan and processed according to priority. Construction work with expected costs of > €4 million must be approved by the State of Berlin. Details of new and ongoing construction work are discussed and decided during monthly construction meetings with the University Engineering and Utilities division. Ongoing and upcoming construction activities are communicated in the Faculty Council. Larger projects are presented during the annual meeting of the German Veterinary Medical Establishments.

4.2. Comments

- The Faculty is still spread over 4 sites, which generates logistic challenges to all involved.
- The infrastructure is partly outdated; this generates high maintenance needs.
- The internal structure of the Faculty with small but administratively independent units reduces the potential for synergistic / joint use of infrastructure and equipment.
- There is a need for several larger lecture halls at the Düppel Campus which would allow for greater flexibility in the planning of courses (lectures above all).
- New buildings are arranged according to the evaluation system for sustainable construction (BNB certificate), and environmental certification based on ISO 14001 will soon be replaced by an EMAS certification (Eco-Management and Audit Scheme).
- Hygiene facilities (changing rooms, showers, lockers) for students are split between the sites and in some instances require renovation or replacement.
- Larger construction projects take considerable time to plan, finance and implement.
- New professoral appointments represent opportunities to implement improvements / renewals of the infrastructure.

4.3 Suggestions for improvement

- There are plans for new buildings for various institutions which would lead to a reduction in the number of locations and simultaneously improve of infrastructure available for teaching at Düppel Campus. Further lecture halls and student hygiene buildings are of high priority.
- Strategic decisions to merge institutions into larger units (centres) are periodically evaluated and will be enacted when considered feasible. Priority is given to the further development of the animal clinics (companion animals, production animals).

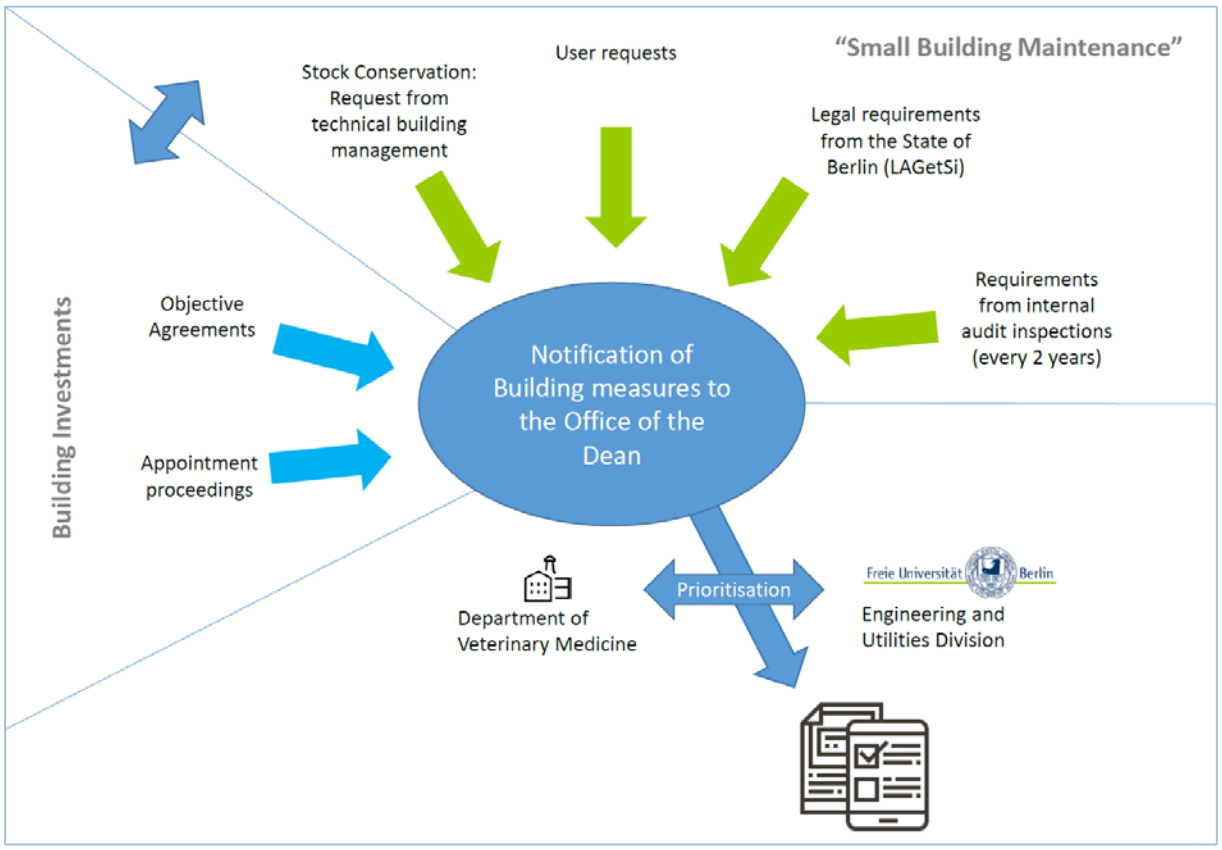

Figure 5 Process of building maintenance and expenditure

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

The Faculty has an objective to ensure that the implemented curriculum meets the educational objectives according to legal requirements. Practical exercises on animals and material of animal origin of high educational value, and institutes and clinics are provided with sufficient resources to ensure that animals and material of animal origin are available for teaching. The use of animals for teaching purposes requires special animal welfare approval and must be coordinated with the regulatory authorities according to the EU Directive 2010/63/EU. In order to carry out practical training while respecting animal welfare issues and at the same time ensure that Day One competences are taught, innovations in teaching have been steadily introduced. This includes the multiple use of clinic-based animals in demonstrations and hands-on teaching, the use of privately-owned animals, the development of a cadaver donation programme for small and large animals to be used for anatomical coursework and the use of material derived from abattoirs. In addition, the ongoing expansion of the Veterinary Skills Net and the development of new blended learning approaches in interdisciplinary case-based learning are innovative pillars in the context of “refinement” and “reduction”.

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

Based on the German TAppV, 1,170 (23%) of the 5,020 hours for veterinary education are allocated to mandatory extramural practical training; 850 of those are designated to clinical EPT. As stated in Chapter 3.1.8, the Establishment has limited influence on the scope and quality of the EPT.

Intramurally, the specific course content related to relevant “Day One Skills” is coordinated with institutes and clinics, and laid down in the subject-specific learning objective catalogues. The number of independent analyses conducted and skills practiced on animal patients as well as the preparing of detailed reports and participation in on-call and emergency services is stipulated within the scope of training modules for clinical and practical subjects. The implementation of an adequate practical training is the responsibility of the respective clinics and institutes in which the subjects are taught. The subject coordinators especially for the relevant clinical subjects, namely propaedeutics, internal medicine and surgery, animal reproduction and herd health, coordinate the learning objectives between the subjects and institutions. Necessary changes are identified through existing feedback mechanisms (inspection of animal welfare statistics, patient numbers, evaluations, student surveys etc.) and discussed within the Dean’s Office, the educational commission and the institutions involved.

Non-clinical animal work

Non-clinical animal work is primarily taught and practiced in the subjects related to Anatomy, Physiology, Pathology, Animal Welfare and Laboratory Animal Science.[36]

Clinical animal work

The core animal species clinics (ruminants & swine, equine, small animals) equally contribute to teaching in propaedeutics, internal medicine and surgery. The attendance of all practical courses as well as the clinical rotations, embedded ambulatory excursions and handling of cases including report writing is mandatory. Students' successful attendance is recorded Student Life-cycle Management system (SLCMS "Campus Management"). Clinical teaching comprises three formats:

- **Special propaedeutics**: In small groups of maximum 15 students and at least two instructors, students practise the handling of the respective animal species on an animal itself, including the general clinical examination and special examinations of the organ systems.
- **Clinical demonstrations:** Animal patients of the clinic with internal and/or surgical diseases, reproduction disorders and case studies of animal population-related diseases are presented and discussed. In each clinic, two students are assigned to a case for examination and writing a report. The medical report is reviewed by lecturers and, in case of deficiencies, discussed with the students.
- **Clinical rotation**: Students are integrated into the daily clinic routines. They examine animal patients that are assigned to them and present examination results during the clinical rounds. In the Animal Reproduction Clinic, students learn milking techniques and attend to milkings. Students on rotation are involved in admitting animal patients and accompany them during their stay in the clinic for diagnostics, therapy and inpatient treatment. Students on rotation either aid or independently carry out tasks under the guidance of the supervising veterinarian. In addition to the daily routines they become involved in weekend and emergency services. For each clinic, students on rotation work through cases in a problem-based approach and prepare medical reports that are assessed. In addition, they attend journal clubs, exercises on x-ray image interpretation, patient anaesthesia, surgical hygiene, and assist in surgical procedures.

Other elements of clinical hands on training

- **Laboratory diagnostics** including the examination, evaluation and interpretation of laboratory results (blood values, microscopy etc.) is taught in the sixth semester in the scope of laboratory coursework and applied during clinical demonstrations 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 prophylactical herd health care as well as foundation and practice courses in a computer-based herd programme. During the clinical rotation, each group takes part in at least four ambulatory visits to livestock farms (2x ruminant animals, 1x reproduction, 1x poultry). During the visits in a dairy herd, methods introduced before in seminars are practically applied in a small group teaching setting. Students are instructed on the extraction of sample material (blood, urine). The lab results are evaluated during the second herd visit and linked to the herd health. Quality of herd management is ascertained through the evaluation of animal-based measures, stable hygiene, feed, as well as the interpretation of laboratory results and evaluation of herd data with the software programme HERDE/ZMS. Ambulatory farm visits of the Ruminant and Swine Clinic focus on treatment procedures in a large-scale agricultural enterprise using electronic documentation and address issues such as calf health or treatment of claw diseases. In the Animal Reproduction

[36] Examples of non-clinical animal work are provided in the Appendix to 5.1.2.

Clinic, students learn to examine animals in different stages of reproduction. Herd health issues of various aetiologies such as calf diseases, dystocia, fertility disorders, metabolic deficiencies and mastitis are discussed.

- The **Institute of Poultry Diseases** cooperates with several operations (egg-producing poultry farm, broiler farm, small holder hobby farm, raptor center) that are regularly visited by groups of students during clinical rotations. Here, students acquire principles pertaining to livestock care, sampling and autopsies.
- In the Equine Clinic, students have the possibility of voluntarily accompanying veterinarians on ambulatory rounds to **equine sporting events** (racing and tournament settings). From the fifth semesters onwards, interested students can take part in rounds beyond being in rotation.
- In addition, clinics offer interested students from the fifth semester onwards the possibility to participate **voluntarily** in **clinical activities**, accompany rounds or complete their curative EPT in the clinics. Selected students can work in night and weekend services for pay.
- Within the framework of a **Skills Net concept**, students are given the possibility, both under supervision and independently, to practise and consolidate relevant clinical skills on models. The spectrum of Skills Net models available at the Faculty is continuously expanded.

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

For both historical (location in West Berlin) and economic reasons, the University does not operate its own agriculatural training farm.

Basic agricultural training is organised in cooperation with Humboldt University, along with training in animal breeding, animal assessment and animal keeping. In addition to lectures, practical exercises on animal identification, registration and assessment of horses, dairy cattle, beef cattle, sheep and goats are offered, and students visit large farms (agricultural cooperatives). Introduction to farming and agricultural economics is provided within the framework of the mandatory agricultural EPT. This is coordinated by the agricultural Faculty of Humboldt University - preferably in four officially recognised agricultural training facilities (Eichhof, Almesbach, Gross Kreutz and Haus Riswick). Alternatively, students can organise that EPT on private farms that are qualified for apprentiship training. They have to prepare a report on the daily work, which is reviewed by the EPT coordinator for accuracy and completeness.

At the Faculty, several clinics have service contracts with large farming operations, and students either during their rotations or on a voluntary basis attend the ambulatory and routine visits to these farms.

The **Ruminant and Swine Clinic** has care contracts with large farming businesses (dairy cattle, intensive and extensive beef cattle, sheep and goat farming), and students are offered to attend in the weekly activities on livestock care (hoof care, lame cow treatment, work in the calves stable). In addition, students frequently participate in collecting data in the contect of scientific projects on claw health, dairy herd health and intensive farming (KlauenFitNet, PräRi, Veredelungsland Sachen), and are involved in consultations within the framework of herd health management. Such activities comprise on-site visits, air quality measurements in the stable, sampling as well as collecting data on health disorders for cattle, swine, small ruminants and camelids. Students especially interested and actively engaged have the opportunity to attend visits to commercial bull fattening enterprise with 30,000 bulls where a project related to the reduction of the use of antibiotics is ongoing.

The **Animal Reproduction Clinic** has cooperation agreements with eight commercial agricultural holdings (insemination stations) that are travelled to on regular cycles. Three such holdings are visited on a weekly basis, another three every month, and the final once or twice a year in the context of coursework. Students are involved in all these ambulatory visits.
In the **Bad Saarow Horse Centre**, practical training in reproductive medicine, breeding, genetics and animal assessment takes place.

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

All animal clinics offer general consultations from Mo-Fr during regular working times and specialists consultations on specific days, and the equine and small animal clinics provide a 7/24 emercency service all year round.[37]

The **Small Animal Clinic** offers a 7/24 emergency service with 2 veterinarians on site from 8 a.m.- 4 p.m. (weekends: 1 or 2 vets), one veterinarian and 2-3 students from 4 p.m. to 8 a.m., and one internal medicine senior and one surgery senior vet on call during night time and on weekends.
The **Equine Clinic (Düppel)** offers the 7/24 emergency service with at least one veterinarian and one student assistant on site, a second veterinarian on site until 9 p.m. and afterwards on call, and a surgeon always on call.
The **Ruminant and Swine Clinic** offers night-time and weekend emergency services with one veterinarian on call, one veterinarian on standby and one senior veterinarian in background service.

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

	Aquisition	Storage	Disposal
Anatomy	Since 2016, material is acquired through an animal cadaver donation programme (animals euthanized for medical reasons by written consent of the owners) along with donation documents from clinics, veterinary practices and experimental animal facilities	Unfixed material in deep-freeze for in-situ seminars and exercises in the summer semester Fixed animals in tubs (or on racks in formalin) for dissection exercises in the winter semester Plastinated animals and animal body parts, bone preparations etc. (Anatomical collection or dissection hall)	All carcasses and biological waste is securely collected, stored in cooling chambers at 4°C and picked up once a month for rendering. Disposal occurs according to national regulations.
Pathology	Animal cadavers and body parts from routine dissections	Cadavers and body parts are fixed in formalin, macerated or plastinated.	All cadavers and biological waste is securely collected, stored in cooling chambers at 4°C and picked up twice a week for rendering. Disposal occurs according to national regulations.

[37] For details on poening times of all clinics see Appendix to 5.1.4

5.1.6. Description of the group size for the different types of clinical training (both intra-murally and extra-murally)

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.

Exercise	Semester	Group size (max.)
Physics exercises	1	10
Anatomy dissection course	1, 3, 4	6
Histology exercises	1, 4	22
Chemistry practicum	2	10
Anatomy seminar / In-situ demonstrations	2, 3, 4	20
Special Animal Breeding	2	40
Biochemistry practicum	3	7
Physiology practicum	4	12
Exercises for animal feed science	4	25
Clinical propaedeutics	4	25
Animal nutrition course	**5**	25
Clinical propaedeutics	**5**	8
Virology Practicum	6	12
Microbiological course	6	12
Parasitological exercises	6	8
Patholog. Exercises on organ course blocks	6, 7, 8	8
Pathological-anatomical demonstrations	7, 8	20
Food examination course	7, 8	20
Milk testing course	7	30
Galenics practicum	7	30
Clinical rotation	9, 10	16-18

Overview 3 Groups sizes in the practical courses

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-murally and extra-murally)

Students are involved in hands-on clinical activities as much as possible within the intramural core curriculum (see 5.1.2. and 5.1.3.). In addition, they are encouraged to participate in clinical work on a voluntary basis. For the clinical EPT, a list of learning objectives has been developed to provide guidance to both students and training veterinarians on the scope of skills to be covered.

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

Students are assigned cases during clinical demonstrations (4th year) and clinical rotations (5th year) for which they have to compile and analyse information and write reports. During rotations, they also attend clinical rounds and journal clubs in which critical reflection of cases and their management are emphasized. This is intended to deepen a student's exposure to scientific thinking,

promote information literacy and presentation skills, and provides a look into scientific working methods. Periods for individual study during the clinical rotation are shown in the curriculum.[38]

A wide rage of Blended / E-Learning moduls especially in anatomy, histology/embryology, physiology, pathology as well as animal reproduction are already available to stipulate self-directed and critical learning. In the context of interdisciplinary teaching (QuerVet), further blended learning cases are currently developed.[39]

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

All information pertaining to the admitting of an animal patient, 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, the last one in 2015.

Clinic	Managing animal patients
Institute of Poultry Diseases	Vetera
Equine Clinic (Düppel)	Vetera
Equine Clinic (Bad Saarow)	Vetera
Ruminant and Swine Clinic	Vetera + medical records, barn register
Animal Reproduction Clinic	Vetera + index cards
Small Animal Clinic	Vetera

Overview 4 Systems used for managing animal patients

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

Both student training and animal experiments according to German animal welfare legislation require either notification or permission from the relevant authority. Learning outcomes and knowledge gains are weighed against the strain inflicted on the animal in each case. In case of teaching, it must be demonstrated that the learning outcomes can not be achieved through alternative methods, i.e. without using animals. If animals are used for educational purposes, it must be documented that the least strainful 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 reviews by animal welfare officers and relevant authority. 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 four times per year.
In the institutions where animals are either temporarily or permanently kept or bred for teaching and scientific research, employees must be regularly educated, and on-site inspections from animal welfare officers will take place to ensure that housing and handling comply with animal welfare

[38] Curricula for rotations in individual clinics/institutes with time periods and subjects covered can be found in the Appendix to 5.1.8.c.
[39] A list of E-Learning/Blended learning modules with some descriptions can be found in the Appendix to 5.1.8.a.

requirements. Animals that are the property of the university and were used in educational training can be given to private animal owners if the owners can document that they have the skills nedded for handling and caretaking. For agricultural livestock this requires the consent of the regional veterinary authority.
As mentioned before, a veterinary and scientific Skills Net has been developed and is expanding in an effort improve hands-on clinical training while reducing or refining the use of live animals. Newly developed models are reported during regular Skills Café meetings.

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 Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The use of animals for educational purposes is justified in the animal testing application by way of entries pertaining to species and number. The animal welfare officers review and comment on each project that requires a permit. The relevant authority in Berlin (Regional Office for Health and Social Affairs (LAGeSo)) reviews the information in the approval procedure. General interest issues pertaining to animal welfare are discussed within the Faculty's animal welfare board, which is made up of the animal welfare officers, researchers, facility directors and animal keepers. Resolutions and recommendations from the animal welfare board are communicated within the Establishment and also to the University management. Circumstances pertaining to the housing, handling and use of animals is also regularly (most often weekly) discussed in the individual animal keeping places, among the reviewing of other working processes.

In general, the number of animal patients seen in the respective clinics and the number of animals and material of animal origin available for teaching within the responsibity of the respective institution or clinic. The executive directors monitor the numbers over time and make adjustments whenever seen necessary. Deficiencies, if they occur, are reported to the Dean's Office by various pathways and discussed there and in the Education Commission. Solutions are sought together with the respective institutions.

5.2. Comments

- All clinics now use the same patient information system; this will allow for the rapid extraction of number of patients 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 mandates us to reduce the number of animals used in teaching to the necessary minimum.
- For agricultural training the Faculty depends on training sites provided by the Humboldt University.

5.3. Suggestions for improvement

- Recording of number of patients actually seen and treated by students will be improved so that more accurate statistics can be provided.
- With the continued further development of the SkillsNet and systematic involvement of models in teaching, achieving First Day Competences while at the same time reducing the use of live animals in teaching will be consistently worked towards.
- The Faculty currently is exploring options to formalise collaborations with one or more large-scale production animal farms in the region to be used for agricultural training (EPT) as well as ambulatory visits and herd health teaching.

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

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Cattle	37	27	26	**30**
Small ruminants	66	46	50	**54**
Pigs	31	41	41	**38**
Companion animals	92	104	98	**98**
Equine	51	42	36	**43**
Poultry & rabbits (incl. birds, rodents)	221	223	220	**221**
Exotic pets	0	0	0	**0**
Others (specify)	0	0	0	**0**

*Since July 2016, an animal cadaver donation programme for accepting cadavers of animals euthanised for medical reasons and with written consent of the animal owner is in place. Aside from animal cadavers and body parts, a large number of fixed preparations, bone preparations, cleansed preparations, plastinates, sheet plastinates, corrosion preparations, anatomical models, as well as x-ray and CT scans are used in anatomy coursework.[40]

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

Species	AY* (2015/16)		AY-1 (2014/15)		AY-2 (2013/14)		Mean	
	Number of animals used in teaching*	Actual animal population*	Number of animals used in teaching*	Actual animal population*	Number of animals used in teaching*	Actual animal population*	Number of animals used in teaching*	Actual animal population*
Cattle	47	58	47	58	51	58	**48**	**58**
Small ruminants	38	31	36	31	38	31	**37**	**31**
Pigs	24	302	25	302	26	302	**25**	**302**
Companion animals	35	0	35	0	35	0	**35**	**0**
Equine	21	39	21	39	21	39	**21**	**39**
Poultry & rabbits (incl. birds, rodents)	153	18	154	18	92	18	**133**	**18**
Exotic pets	0	0	0	0	0	0	**0**	**0**
Others (specify)	30	30	30	30	30	30	**30**	**30**

*Total number per year

[40] Details on the number of anatomical preparations and models can be found in Appendix to Table 5.1.1.

Table 5.1.3. Number of patients seen intra-murally**

Species	AY* (2015/16)		AY-1 (2014/15)		AY-2 (2013/14)		Mean	
	ambulatory	hospitalised	ambulatory	hospitalised	ambulatory	hospitalised	ambulatory	hospitalised
Cattle	16	136	19	265	24	220	**20**	**207**
Small ruminants	34	84	37	117	37	128	**36**	**110**
Pigs	9	308	15	300	9	285	**11**	**298**
Companion animals	8682	1572	9157	1173	8215	1209	**8685**	**1318**
Equine	1545	1264	1340	1171	1249	1162	**1378**	**1199**
Poultry & rabbits (incl. birds, rodents)	5444	783	1461	733	1522	408	**2809**	**641**
Exotic pets	504	88	306	95	308	65	**373**	**83**
Others (New World / Old World camelids)	12	27	9	24	14	20	**12**	**24**

** Each patient has to be officially recorded in the electronic patient record system of the Establishment 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.

Table 5.1.4. Number of patients seen extra-murally**

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Cattle	6389	6022	5.529	**5980**
Small ruminants	604	624	586	**605**
Pigs	30	26	22	**26**
Companion animals* **	0	0	0	**0**
Equine* **	0	0	0	**0**
Poultry & rabbits (incl. birds, rodents)	0	0	0	**0**
Exotic pets	0	0	0	**0**
Others (New World / Old World camelids)	30	13	5	**16**

** Each patient has to be officially recorded 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.

*** There is no ambulatory clinic in companion animals and equine. In the context of external equestrian events, veterinarians of the equine clinic treat a certain number of patients per year off-site. Interested students in the final year can attend in these event visits.

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

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Cattle	50	50	50	**50**
Small ruminants	50	50	50	**50**
Pigs	50	50	50	**50**
Companion animals	70	70	70	**70**
Equine	30	30	30	**30**
Poultry & rabbits (incl. birds, rodents)	30	30	30	**30**
Exotic pets	70	70	70	**70**

The number of patients listed in tables 5.1.3 and 5.1.4 reflect the total number of animals treated in the clinics or being present on visited premises. Not all of these patients can be individually examined and treated by a student. That number at current is not available from the clinical information system (VETERA).

Table 5.1.6. Cadavers used in necropsy

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Cattle	31	35	28	**31**
Small ruminants	41	51	43	**45**
Pigs	20	30	24	**25**
Companion animals	333	313	294	**313**
Equine	57	82	53	**64**
Poultry & rabbits (incl. birds, rodents)	746	793	935	**825**
Exotic pets	45	50	33	**43**
Others (specify)	0	0	0	**0**

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

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Cattle	303	299	298	**300**
Small ruminants	32	31	27	**30**
Pigs	15	16	15	**15**
Poultry & rabbits	13	13	1	**9**
Others (specify)	0	0	0	**0**

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

Species	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	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.[41] Abattoirs have to meet conditions provided by the TAppV including an EU registration.

[41] An overview of the extramural pratical internships (EPT) is given in Table 3.1.4.

6. LEARNING RESOURCES

6.1 Factual information

6.1.1. Description of the main library of the Establishment

The Veterinary Library is part of the library system of Freie Universität Berlin but operated by the Faculty and located on the Düppel Campus. It uses the electronic library system of the University. The Faculty library has a total of 7.85 FTE in personnel, holds approx. 165,000 monographs, journals / periodicals and university publications, provides online access to a broad range of additional literature, and in addition is a great resource for students with individual as well as group learning facilities and several Skills Net modules.[42]

Literature that currently is not part of the holdings of Freie Universität Berlin can be ordered free of charge through the interlibrary loan service. Requests to purchase new books can can be submitted via the Primo library portal[43] to the Faculty library and are, as a general rule, fulfilled.

6.1.2. Description of the subsidiary libraries

Approximately 15,000 monographs and periodical volumes are held in hand libraries in the respective instituts and clinics.

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

The University units ZEDAT (Central IT services) and CeDiS (Center for digital media services) provide a comprehensive range of up-to-date IT technology and services including data storage, MS Exchange Email services, web and other server capacity, Campus user accounts for students and staff with single-sign on, VPN and EduRoam capability, Internet and WLAN services, the SLCMS, Blackboard and Campus Management systems, the website CMS system, Blogs and Wikis, E-Examination capability (electronic examination center with 155 places) as well as a range of licensed software packages that all are available to the Faculty (see Figure 6). Most of the services are accompanied by training opportunities organized by the Center for Continuing Education of Freie Universität Berlin.[44]

At the Faculty, 6 technical staff members provide on-site first and second level hardware and software IT and database management support. The most important services made available for teaching in addition to those listed above are:

- **3 PC pools** used for teaching as well as by students (A pool: 40 PCs, B pool: 10 PCs, C pool: 20 PCs). Printing in the pools is available for a fee.
- **Patient record system** (Vetera; see Chapter 5.1.9.) that is used in all clinics and enables students in clinical training to access patient records.

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

Blended learning formats have become increasingly important in conveying content to students in a flexible and repeatable way, and the University strongly supports the development and implementation of such formats through technical support and funding. Blended learning courses currently available at the Faculty have been described in Appendix to 5.1.8.a. and further courses are

[42] Details on the library structure and resources are provided in the Appendix to 6.1.1.
[43] https://fu-berlin.hosted.exlibrisgroup.com/primo_library/libweb/action/search.do?&vid=FUB&
[44] For details see Appendix to 9.1.4.

currently under development. Outstanding examples of this teaching format include the anatomical exercises (in-situ demonstrations), physiology and pathology e-learning modules and the case-based blended learning project (QuerVet).

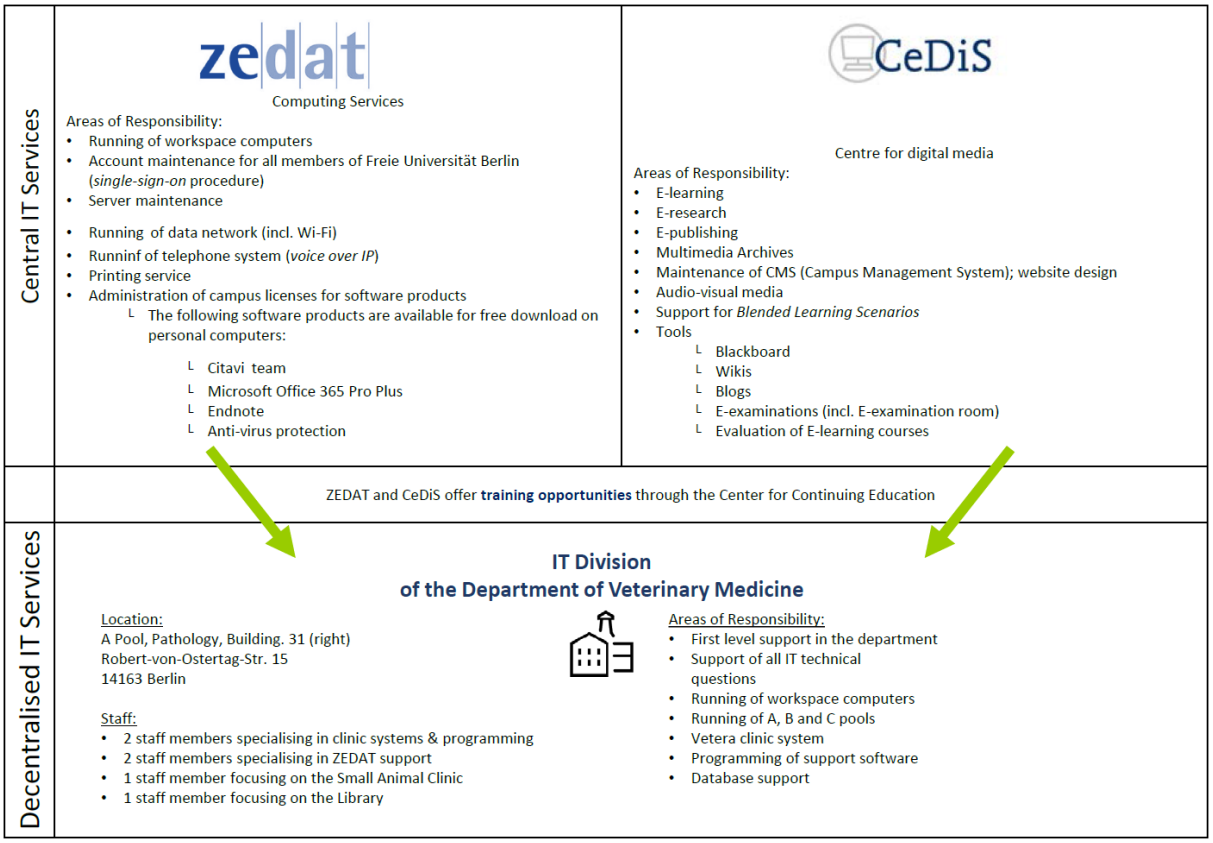

Figure 6 Schematic representation of the IT support at Freie Universität Berlin

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

University online resources are accessible to all students and employees of Freie Universität Berlin through the Campus user account either on local PC workstations, personale mobile devises (WLAN, EduRoam) or from home through a VPN client connection.

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 from ZEDAT at time of immatriculation. Access to almost all University IT resources and systems is possible via Single Sign-On. Instructions are provided on the website of the ZEDAT. There is a help desk and telephone helpline for questions relating to central e-learning resources. 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 Faculty IT staff and the staff of the Study Office. The Study Office provides introductions to the most important features of Blackboard, Campus Management, the electronic course catalogue, Eduroam and VPN connections during the introduction week for incoming first year students. Instructions for using the library and its literature search facilities are also provided in the introduction week by the library staff. Techniques for literature searching are directly incorporated into the curriculum in various subject-specific courses. In addition, free trainings in literature research are offered on a regular basis. A summary of relevant

IT services with instructions is compiled in the study guide that is handed out to all first-semester students.

6.1.7. Description of how and by who the learning resources provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The library runs a survey each year to determine the literature needs of each institution as well as the staff and students. In addition, requests to purchase new monographs can be submitted online. Subject representatives decide on the relevant titles / monographs to be used for their teaching. The head librarian is responsible for the development and maintenance of literature holdings. He works closely with the Dean's Office, the library representative and the Faculty institutions. The library representative[45] is a professor and member of the Faculty and is elected by the Faculty Council. The head of the library and the library representative report to the Dean's Office and Faculty Council. Changes in central IT infrastructure and services are communicated by the University to the Faculty and all users either electronically or by mail. Extensive innovations and especially investments in digital teaching are agreed upon and communicated within the framework of the target agreements between the Faculty and management of Freie Universität Berlin.

6.2. Comments

- The IT infrastructure available to the Faculty is broad, technically advanced and well supported. Most of it is centrally maintained and free of charge.
- It is seen as an advantage that the Faculty maintains its own on-site Library and IT support.
- The library is well equipped, provides access to a large number of relevant monographs and periodicals, and is perceived as a good learning resource.
- Since 2017 the library in collaboration with the Skills Net lends out learning boxes to students.
- The Faculty is characterised by a high level of activity in the field of e-learning. Support for the creation of digital learning materials from CeDiS is outstanding and well received.

6.3. Suggestions for improvement

- The library's appeal as a student learning resource should be extended by providing additional Skills Net models as well as by expanding access to PC workstations.
- The students have expressed, both in student satisfaction survey and in the Education Commission, the need for additional information and training in information literacy and literature research. This is evaluated and will be implemented when considered feasible.

[45] See Appendix to 1.1.5 on commissions and representatives

7. STUDENT ADMISSION, PROGRESSION AND WELFARE

7.1. Factual information

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

Information about the veterinary education in Germany and at the Faculty is provided here: (i) the national application and information platform for medicine, veterinary medicine, dentistry and pharmaceutics[46], (ii) the Faculty website with information on the profession, short profiles provided by faculty members, a brochure "Working as a Vet" and guidance for applications, admissions and course of study, (iii) the Online Student Subject Selection Assistant (OSA) of Freie Universität Berlin[47] that also provides information about the curriculum, day-to-day student life, perspectives, job summaries and application methods, as well as a large number of interviews with teachers and students, (iv) public events such as the annual study information days of the University ("inFU:tage"), the "Long night of Science", the National Boys Day and the Faculty "Open Campus" day. In 2017 the University initiated a new "Student Marketing" project with the aim to strategically expand marketing activities nationally and internationally.

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 (i) the higher education entrance qualification, (ii) meeting the admission requirements of "Hochschulstart" and (iii) those of the Veterinary faculties (Establishments). 40% of all slots are filled directly with applicants on the basis of their final high school grades (20%) or special admission regulations (20%). The Establishments can establish rules for the selection of the remaining 60% out of the available applicant pool. The Faculty invites all applicants with a high school grade of > 2.5 (scale from 1 (best) to 6 (worst)) and Berlin as first preference to take an on-site MC test. In winter term 2016/2017 "Hochschulstart" forwarded data on 739 applicants for the approx. 105 available slots (i.e. 60% of the entry slots per year). Ranking of those students is based on high school grades and the test results. The test was specifically developed for admission to veterinary training and includes one section on personality traits and a second section with questions on interests and preferences (e.g. previous work with animals, interest in biology, rural life etc.). It was developed by veterinary experts and professional talent analysts at Freie Universität Berlin and has since been adopted by other German veterinary schools. For the test, job profiles for veterinarians working in the areas of farm animals, companion animals, public veterinary services, industry, research and teaching, as well as working abroad were defined. The applicants are profiled, the congruence to these job profiles is scored and used for the ranking. The selection process of the Faculty meets the requirements of skill testing systems in recruiting processes (DIN 33430).

7.1.2.2 Policy for disabled and ill students

Disabled and ill applicants can apply for a reduction in the waiting period and / or grade requirements. In the case of disabilities, the first choice of University is respected. Once admitted, students with disabilities or chronic illnesses can contact the central Office for Students with Special Needs at Freie Universität Berlin.[48] They support students in providing means to reduce

[46] https://zv.hochschulstart.de/index.php?id=41
[47] http://www.osa.fu-berlin.de/vetmed/start/start
[48] See: http://www.fu-berlin.de/en/service/behinderung/index.html

disadvantages so that the students can participate in courses, exams and internships. In addition, measures to ensure barrier-free accessibility to all facilities are implemented by the University. Special Services for Students with Disabilites offered by the University include:

- Representatives for Employees with Disabilities
- Services for Blind and Visually Impaired Students
- Counseling for Students with Disabilities offered by the AStA (=General Students Assembly)
- Counseling for Students with Disabilities offered by the Student Union
- Counseling for Students with Disabilities – Self-help Group

7.1.2.3 Composition and training of the selection committee

Oral selection interviews were replaced 10 years ago by the written, computer-assisted degree entrance test (see Chapter 7.1.2.1.). The test underwent a quality check in 2015 conducted by the Institute for Competency and Ability (IKOBE). This, amongst others aspects, includes technical capacity, compliance, item and reliability testing, cross-compliance, gender fairness, relevance of reference profiles on the basis of test results as well as comments on the test design. The procedure was evaluated as satisfactory and only minor adjustments made. This evaluation and adjustment is routinely carried out every 3 years.

7.1.2.4 Appeal process

Students not admitted to the degree program receive a rejection letter from "Hochschulstart". It is possible to appeal against this notification before the administrative court of Berlin within one month.

7.1.2.5 Advertisement of the criteria and transparency of the procedures

The procedures and requirements are available to view in both German and English on the websites of Hochschulstart, Freie Universität Berlin[49] and the Faculty[50], and the Study Office can be contacted should questions pertaining to applications or admissions arise.

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 Establishment adapts the number of admitted students to the available educational resources and the biosecurity and welfare requirements

Limit to the number of students admitted each year

Currently the number of students admitted each year is limited to approx. 180 (varying from 175-185). This number is annually recalculated by the University administration on the basis of the Berlin Capacity Regulation (KapVO). 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; these have to be adjusted to the student numbers by the Establishment.

Number of government-funded student places

All student places are government-funded as there are no tuition fees at German Public Universities.

[49] http://www.fu-berlin.de/en/studium/bewerbung/bachelor/dt-hzb/hochschulstart-dt/index.html
[50] http://www.vetmed.fu-berlin.de/studium/studieninteressierte/zulassung-veterinaermedizin/index.html

Extra students admitted to the undergraduate veterinary course

It is not possible to admit extra students due to the legally binding capacity limitation.

Changes foreseen in the number of students admitted annually

No changes in the total number of students admitted annually are foreseen in the near future.

7.1.5. Description of:

7.1.5.1 The progression criteria and procedures for all students

The TAppV as well as the study and examination regulations of the Faculty regulate the monitoring of students. Successful participation in all practical courses (exercises, seminars, electives, demonstrations, rotations etc.) is documented in the SLCMS "Campus Management" (see Chapter 3.1.9.). Students can check their status in the SLCMS. Once eligible, students are invited by the State Examination Office to take the respective examinations. The sequence of exams is laid out in the TAppV and the examination regulation.

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

General academic advising is carried out by the Center for Academic Advising and Psychological Counselling of Freie Universität Berlin. Specific advising regarding the veterinary curriculum is available by the Faculty study office and the chairs of the examination boards. Examination progress is monitored by the State Examination Office (LaGeSo). Students not sufficiently progressing are invited by the LaGeSo to a counselling led by the chair of the respective examining board.

7.1.5.3 The rate and main causes of attrition

As part of the QA process the Faculty annually compiles key figures on academic progress in a quality report which is discussed with the University management. The following table is derived from the 2016 quality report and presents the study cohort progression from the 1st to the 3rd semester for the last three years. The number of students remaining is constant at over 90%.

Degree program	Students in 1st semester				Students in 3rd semester			Cohort remaining		
	WiSe 12/13	WiSe 13/14	WiSe 14/15	WiSe 15/16	WiSe 13/14	WiSe 14/15	WiSe 15/16	Cohort 12	Cohort 13	Cohort 14
Veterinary Medicine	176	183	175	185	166	170	164	94%	93%	94%

Overview 5 Cohort Development (number of those beginning a course of study in a cohort in proportion to those still studying in the 3rd subject-specific semester)

Based on exmatriculation surveys regularly conducted by the University, 74% of former veterinary students indicated that they continued to study after leaving Freie Universität Berlin. This indicates that a large proportion of exmatriculations is due to transfers to other Universities; most likely other veterinary establishments.

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 chair of the examining board, and are excluded from further veterinary studies in Germany. A student may lodge an objection in writing within one month with the chair of the examining board. If this is rejected the action may be brought before the administrative court of Berlin.

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

The examination process including critera for expulsion are laid out in the TAppV and repeatedly communicated to students.

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, ..).

A broad range of services related to registration (immatrication office, study office), teaching administration (study office), mentoring and tutoring, careers advice, listening and counselling, assistance in case of illness, impairment and disability are available both at the University and the Faculty.[51] The University also offers assistance in the form of counselling, short-term loans and subsidies. 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 (for example concerning 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 teachers, students can address their concerns to the respective contact points at the Faculty or University.

Studying with Children

Pregnant students and students with childcare responsibilities will be granted preferential registration for elective and required courses as well as for scheduling clinical rotations, and individual study and examination plans will be defined together with the chairs of the examination boards. 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. The Faculty has two parent-child rooms (Library and Student Association Facility) as well as breast-feeding and diaper changing rooms.[52] Childcare facilities are available for students at the University day care centers (care times from 7:30 am - 6:30 pm) and four day care centers operated by the Student Union; however, spaces are on high demand.

7.1.7. Prospected number of new students admitted by the Establishment for the next 3 academic years

Enrolment numbers in the coming years are expected to remain at 175-185 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, communicated to staff, students and stakeholders, implemented, assessed and revised

See also Chapter 7.1.2.

[51] Details on the individual services can be found in the Appendix to 7.1.6.

[52] http://www.vetmed.fu-berlin.de/einrichtungen/zentrale/bibliothek/allgemeines/kinderzimmer/index.html.

Intended or expected changes in the number of incoming students, changes in the number of students progressing through the study phases, reasons for attrition etc. are identified through regular meetings with University management in the context of QA, by surveys and feedback from the study office, the State examination office, the chairs or the examination boards the veterinary profession. They are discussed in the Deans' Office, the Education Commission and with responsible individuals. Decisions taken by the respective body are communicated back through the Faculty Council, direct communication with stakeholders and the Faculty website.

Table 7.1.1. Number of new veterinary students admitted by the Establishment

Type of students	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Standard students	185	175	183	**181**
Full fee students	n.a.	n.a.	n.a.	**n.a.**
Total	**185**	**175**	**183**	**181**

* The last full academic year prior to the visitation

Table 7.1.2. Number of veterinary undergraduate students registered at the Establishment

Year of programme	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
First year	191	178	186	**185**
Second year	167	173	170	**170**
Third year	177	190	184	**184**
Fourth year	177	176	176	**176**
Fifth year	175	176	164	**172**
Sixth year	171	160	161	**164**
Total	**1.058**	**1.053**	**1.041**	**1.051**

* The last full academic year prior to the visitation

Table 7.1.3. Number of veterinary students graduating annually

Type of students	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Standard students	157	156	167	162
Full fee students	n.a.	n.a.	n.a.	n.a.
Total	**157**	**156**	**167**	**162**

Table 7.1.4. Average duration of veterinary studies

The average duration of study for graduating students in 2015/16 was 11.7 semesters.

Duration	% of the students who graduated on AY* (2015/16)
+ 0**	86.0
+ 1 year	8.3
+ 2 years	2.5
+ 3 years or more	3.2

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

Table 7.1.5. Number of postgraduate students registered at the Establishment

Programmes	AY* (2015/16)	AY-1 (2014/15)	AY-2 (2013/14)	Mean
Interns	26	n.a.	n.a.	26
EC Residents	36	35	38	36
German Veterinary Specialist Trainees	45	43	34	41
PhD students	104	90	85	93
Others: Dr. med. vet	538	411	302	417

7.2. Comments

- The Faculty is subject to a regulated but transparent central selection procedure for applicants.
- The number of admitted students is externally determined and depends on the curriculum (required hours and structure) and the teaching capacity of the core funded academic staff. There is not flexibility for the Faculty, and recruiting additional teaching staff would result in more student to be centrally admitted.
- The progression of students (mainly cohort success, time to degree and reasons for attrition) is closely monitored in the University QA processes and annually discussed with university management
- There is a broad range of information and support activities available both at the University and the Faculty.
- Comprehensive student-level monitoring of study progress is hindered by the separation of data on study progression (enrolment in courses registered in the University SLCMS) and examination progression (recorded by the State examination office).
- Decisions about pregnant students attending courses that might pose a risk to the unborn child are currently taken by the respective institutions, resulting in inconsistances.
- Child-care facilities for small children near the campuses are subject to limited availability.

7.3. Suggestions for improvement

- Options for limiting capacity and thus reducing the number of students to be admitted while retaining teaching staff numbers are evaluated to ensure an optimal student-teacher ratio.
- An initiative is taken to electronically exchange study and examination data at student level between University and the State Examination Office to improve student monitoring.
- A brochure providing all relevant information on “Students with Children” is currently in development.

8. STUDENT ASSESSMENT

8.1. Factual information

8.1.1. Description of the global student's assessment strategy of the Establishment

The process of veterinary student's assessment is regulated by the TAppV (section 2) and the Etsablishments supplementary examination regulation[53], coordinated and supervised by the State Examination Office (LAGESO, Berlin Senate Division for Health and Social Affairs), and implemented by the Faculty. The aim of the examinations is to determine whether students have acquired the knowledge and skills required for further studies and for practicing as a professional veterinarian.
The process of creating study and examination regulations is described in Chapter 3.1.10.
The veterinary examination process is divided into two parts, the preclinical part (first 4 semesters) and the clinical part (which starts in the 5th semester and ends with the final exams in the 11th semester). The prerequisite for advancing to the clinical study period is the successful completion of all parts of the preclinical part. The prerequisites for participation in the final examinations in the 11th semester are passing the all preceding examinations, completion of all required courses as well as all extramural internships (EPT).
The format of the subject-specific examinations is decided by the subject coordinator and specified in the examination regulation. The broad content is provided by the TAppV; details are specified in the subject-specific learning objective and examination topic catalogue. The latter are provided by the subject coordinators. Exams are offered and supervised by members of the preclinical or clinical examination boards. These have to be sufficiently qualified for the subject (lecturers with a doctorate or equivalent degree), are proposed by the Faculty Council and confirmed by the State Examination Office for a period of four years.
In addition to the official (State) examinations, a large number of in-term assessments of learning performance are in place, including entry and exit attestations, clinical discussions and written tests and reports and homework assignments to assist in recording successful completion of relevant courses (e.g. seminars, exercises, clinical demonstrations and rotations).

Pregnancy
Students must inform the State examination board of a pregnancy. A specific study and examination plan is determined together with the chair of the examination board. No examinations are scheduled in a period from 6 weeks before expected delivery until 8 weeks after childbirth.

8.1.2. Description of the specific methodologies for assessing:

-) theoretical knowledge;
-) pre-clinical practical skills;
-) clinical practical skills

In accordance with the TAppV, the examinations may be written (assay of multiple choice), oral, practical or in a combination of these formats. The supplementary examination regulation defines the form of the examination, the examination components and time in the course of study. Examinations typically take place when courses are not in session. Students register for examinations through the State examination office and are invited to each examination in writing. Examinations groups for oral and practical tests are generally made of 4 (minimum 2) students. Examinations are organised and conducted by the Faculty. Results are reported to the State examination office. The first repeat examination takes places not earlier than three weeks after the first failed examination. The second repeat examination is scheduled approx. one year after the first attempt.

[53] The examination regulation with details on format and timing of exams is provided in Appendix.

8.1.2.1 Theoretical knowledge

Theoretical knowledge is identified primarily in oral or written (MC) examinations. Examination subjects in which both theoretical knowledge and practical skills are examined can be split into several examination components.

8.1.2.2. Pre-clinical practical skills / 8.1.2.3. Clinical practical skills

Practical skills are primarily assessed in combined oral-practical formats. The preparation of an experiment or compilation or a case report often is a mandatory element of the examination.

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

The use of different examination formats, partially in combination, allows for the examination of learning objectives corresponding to the level of training and for the assessment of theoretical and clinical skills and Day One competences. This is to ensure that the substantive specifications of the TAppV and of Article 38 in Guidelines 2005/36/EG concerning educational objectives as well as the EAEVE Day One competences have been achieved.

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

8.1.4.1 Ensuring the advertising and transparency of the assessment criteria/procedures

The Faculty website contains all the relevant legislation, information on examination periods and leaflets on conducting the veterinary examination and final exams during 11th semester. Detailed information on the structure, content and evaluation criteria for examinations are listed in the subject-specific learning objective and examination topics catalogue.

8.1.4.2. Awarding grades, including explicit requirements for barrier assessments

For each examination topic, student receive a mark between 1 (very good) and 5 (fail). Each official exam has to be passed (mark 4 or better). These marks and the grade point average for each examination section are detailed in the corresponding certificates.

8.1.4.3. Providing to students a feedback post-assessment and a guidance for requested improvement

The examination results of an oral, practical or combined examination are logged by the examiner(s), reported to the student immediately after the completion of the examination and justified in a short feedback report. Written examinations are evaluated within three weeks and results communicated to the students in adherence to data protection guidelines. All results are transferred to the State examination office.

8.1.4.4. Appealing

An appeal may be filed with the chair of the examining board and, if not accepted, the administrative court of Berlin (see also Chapter 7.1.5.4.).

8.1.4.5. Quality Assurance

The State examinations office compiles an overview of subject- and student cohort-specific examination results at least once a year to be analysed by the Dean's Office and the respective examination board. Summaries are presented to the ecucation commission. In case of obvious inconsistances or visible trends, reasons and measures are discussed and implemented by the respective commissions or individuals.

8.1.5. Description of how and by who the student's assessment strategy is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The process is equivalent to that described in Chapter 3.1.10. for study regulations.

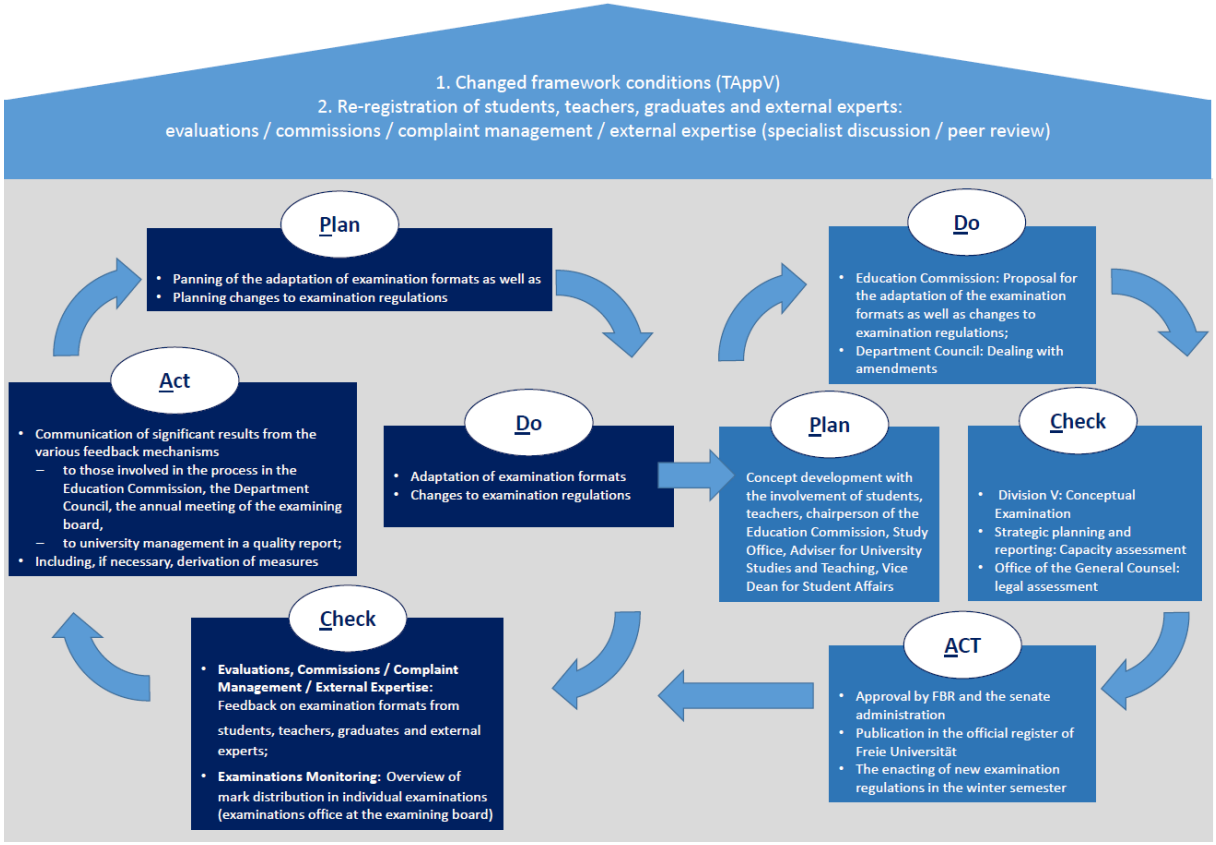

Figure 7 PDCA cycle Adaptation of examination formats / (further) development of examination regulations

8.2. Comments

- Merging study progression and examination success data at the individual student level currently is not possible due to data protection concerns raised by the State examination office.
- The burden on students and examiners is very high owing to the large number of complex oral and practical examinations that are scheduled during semester breaks.
- Subject representatives are annually invited to evaluate their examination procedures. Changes to the examination formats and their dates are subject to the corresponding PDCA cycle.
- At present, parts of the the final exams in internal medicine and surgery are planned to be moved forward to the 3rd and 4th years, and for other subjects MC examinations are in development.

8.3. Suggestions for improvement

- Efforts are ongoing to merge the databases of study progression and examination results so that full student-based progession monitoring can be accomplished.
- Methods of conducting high quality oral and written examinations are presented during introductory training sessions mandatory for all lecturers, and they are encouraged to attend further training modules and utilize the respective services of Freie Universität Berlin.

9. ACADEMIC AND SUPPORT STAFF

9.1. Factual information

9.1.1. Description of the global strategy in order to ensure that all requested competences for the veterinary programme are covered and that staff are properly qualified and prepared for their roles

Faculty employees are selected through a structured selection processes with the objective to recruit the best candidates, and are highly qualified in their area of responsibility (see appointment procedure in Chapter 9.1.2. and work position placement procedure in Chapter 9.1.3. The Dean's Office, together with the respective institution, monitors the teaching staff development and identifies subject areas in which (additional) expertise is required. If necessary, the strategic plan will be adapted accordingly. All staff involved in teaching has to attend mandatory basic and voluntary advanced training and development programmes in educational matters.

Mandatory training for all teaching staff at the Faculty

Academic training: The Faculty offers mandatory introductory modules on teaching methods. The "Basic Course in Teaching" is offered at the beginning of every semester and addresses the topics on teaching and didactics, E-Learning and examinations. During an annual "Day of Teaching" impulse lectures and workshops on specific topics in the field of teaching are offered.[54]

Quality management training: In partnership with Freie Universität Berlin, an E-Learning course in "Quality Management in Teaching" was established. Participation in the course is mandatory for all staff involved in teaching.

Biosecurity, Hygiene and Animal Welfare: New employees who work in laboratories and/or animals receive safety and animal welfare instructions from their supervisors. Employees must sign an agreement to participate in the training, which is repeated annually. The same also applies to the respective hygiene precautions against infection and biological substance directive, and fire safety regulations and training. Further information can be found in Chapter 4.1.9.

9.1.2. Description of the formal programme for the selection, recruitment and training to teach and assess students (including continuing education) of the academic staff

All posts within the Faculty are to be publicly advertised in accordance with section 94 (1) of the BerlHG. All applicants must go through an application procedure that involves the participation of the staff Council, women's representative board and the representatives of the severely disabled, in order to ensure procedural neutrality and thus the best selection.[55]

All scientific employees of the Faculty must have completed their university studies or have an equivalent qualification. All members of the examination boards must have at least three years of teaching experience and a doctorate or equivilant degree (see Chapter 8.1.1.). For permanent academic staff, teaching qualification plays an important role in the selection process. Participation in training programmes for teacher training and the submission of teaching-evaluation results are important parts of the applicant selection process. In addition, a doctorate and, for veterinarians, an additional qualification (specialization) is required. The appointment procedure of scientific and scientific support staff, with the exception of the professorial posts (= appointment), is identical.[56]

[54] A description of the programme can be found in the Appendix to 9.1.1.
[55] A detailed description of the process can be found in Appendix to 9.1.2.a.
[56] The steps of the selection procedure are illustrated in the Appendix to 9.1.2.a.

With regards to the selection of professors (= appointment), public demonstration lessons and a teaching assessment are required. In the case of the public teaching, applicants will be evaluated primarily by students using a standardized evaluation form. The results of the evaluation are relevant for final selection process.[57]

The University guide for the application process[58] clearly defines the process and criteria and constitutes an important part of the quality assurance of the procedure. Target agreements with new professoral staff are intended to facilitate the further development of their academic and teaching profile. Since 2005, lecturers at the Freie Universität Berlin have been committed to regularly taking part in new approaches to teaching and mentoring. Since 2014, the University offers the qualifications programme "SUPPORT" for its teaching staff, which 43 employees of the Faculty have already completed.[59] Futher academic staff development programmes can be found in Appendix to 9.1.2.c. The State Veterinary Chambers require that all registered veterinarians attend at least 20 hrs of continued education per year, and the Faculty encourages all staff to attend continued education activities of at least 12 hours within three calendar years (4 hours per year on average).

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

All employees assisting in scientific research of the Faculty are qualified in their area of responsibility. Animal keepers, caretakers, administrative staff, receptionists and technical staff in most instances have at least an apprentiship certificate with three years of training. Freie Universität Berlin offers apprenticeship training positions in 13 areas of skilled occupation. At the Faculty, veterinary assistants, animal keepers, livestock farmers (specialising in beekeeping), and professional grooms are trained, currently totalling 40 trainees.

9.1.4. Description of the formal programme for the appraisal, development, promotion criteria and procedures, supporting and mentoring of both academic and support staff

Freie Universität Berlin has an extensive staff development approach that also is addressed in the target agreement with the University management (see Chapter 1.1.3.). This includes the introduction of annual appraisal meetings in which career options and qualification needs are identified. The Faculty employees have access to an extensive network of information offices and service units with a multitude of contact persons.[60] The University human resources division is currently developing a centralised web portal in which a comprehensive information can be easily accessed.

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

Secondary employment is strictly regulated and must be indicated to and approved by the university administration prior to the beginning. In the case of full-time primary employment, secondary employment of more than 8 hours / week is not possible. In addition, secondary employment may be refused if there is concern that it may conflict with the regular employment.

[57] Further information regarding the professoral selection procedure can be found in the Appendix to 9.1.2.b.
[58] http://www.fu-berlin.de/service/zuvdocs/weitere-fu/berufung/index.html
[59] A description of the programme can be found in the Appendix to 9.1.1.
[60] A short description of what is available to employees can be found in the Appendix to 9.1.4.

9.1.6. Description of the formal programme of the Establishment for the assessment of teachers by students and its outcome

Freie Universität Berlin's guidelines (in the version of 30 March 2012) form the legal basis for all evaluations at the university. The Faculty, based on stablished QA processes, has implemented a course assessment (evaluation) system using (a) a standardized lecturer evaluation form provided by the University and (b) a learning objective achievement form developed by the Faculty. For the subjects listed in the TAppV as well as the courses on organ-centered modules, the both evaluations are implemented in 3-year cycles in accordance with an evaluation plan decided by Faculty Council. [61] For newly-appointed teaching staff, the lecturer evaluation is mandatory in the first year teaching. The analysis of the evaluation is carried out by the teaching and study advisor, provided to the respective lecturers and reported to the Dean's Office according to the evaluation guidelines. It must be noted that lecturer evaluations may only be sent to their respective lecturer. For these, the Dean's Office may carry out anonymous analysis for monitoring purposis only. The learning objective evaluations are screened in the Dean's Office and forwarded to the responsible lecturers with an offer to discuss findings. The individual process steps, guidelines and parties involved in the preparation, implementation and analysis of the evaluation are described in the process description "Evaluating Teaching".[62]

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

The Faculty does not expect a change in the nominal position plan in the next 3 years, ie. the number of academics and academic assistants will remain stable.

9.1.8. Description of how and by whom the strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The establishment is committed to recruit highly qualified academic and support staff though processes laid out by the University. The number of staff positions (all levels) assigned to the respective institutes and clinics is assessed regularly by the Deans office. Vacant permanent positions are evaluated and potentially reallocated based on the strategic plan of the Establishment. All position announcements are checked by the Faculty and the University administration.

Professor positions

For vacant professor positions, the Deans office together with an ad-hoc working group / search committee assesses the requirements based on the strategic plan of the Faculty as well as the availability of viable candidates. The Faculty Council has to approve the position description and requirements before this is forwarded to the University administration for advertisement. Applicants are screened by the search committee and candidates invited to an interview and lecture. External letters of references are requested. The committee drafts a report with recommendations that has to be approved by the FBR, the University and the Berlin Senate before negotiations can start. Professor positions can be filled either with immediate tenure or as tenure track positions. In all cases, target agreements are signed between incoming professors and the University, and the number of staff positions, facilities, equipment and annual budget available to the incoming professor are fixed for five years. For tenure track positions, an ad-hoc committee is established at

[61] See http://www.vetmed.fu-berlin.de/studium/qualitaetssicherung/evaluationen/evaluationsplaene/Evaluationsplan_StaExVetMed.pdf

[62] See Appendix D.4 and Appendix to 11.1.5.c.

the end of the tenure period to assess the progress and recommend promotion. This has to be approved by the Faculty Council, the University administration and the Berlin Senate.

Permanent academic staff

For vacant positions, the institute chair drafts an announcement specifying the areas of responsibility and requirements of the candidates. This is checked in the Deans office against the strategic plan of the Establishment and has to be approved by the Faculty and University administration. The selection process is handled by the respective institute or clinic in agreement with University regulations. New academic staff members are introduced during a Faculty Council meeting.

Non-permanent academic staff and support staff

For vacant positions, the institute chair drafts an announcement specifying the areas of responsibility and requirements of the candidates. This has to be approved by the Faculty and university administration. The selection process is handled by the respective institute or clinic in agreement with University regulations.

Table 9.1.1. Academic staff* of the veterinary programme

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

Type of contract	2016	2015	2014	Mean
Permanent (FTE)	53.8	55.5	52.8	54.0
Temporary:				
Interns (FTE)**	0.0	0.0	0.0	0.0
EC residents (FTE)	15.5	15.8	11.3	14.2
Veterinarians in specialist training (FTE)	10.3	11.6	9.4	10.4
PhD students (FTE)	0.5	0.5	1.0	0.7
Doctoral students (FTE)	13.5	13.7	11.0	12.7
Practitioners (FTE)	0.0	0.0	0.0	0.0
Specialised veterinarians (FTE)	6.8	5.2	5.5	5.8
Diplomate (FTE)	6.5	1.0	6.0	4.5
Others: PhD, MSc, other qualification goals (FTE)	24.0	22.0	23.5	23.2
Total (FTE)	130.8	125.3	120.4	125.5

*All staff included in this table must have received a training to teach and to assess undergraduate students. Practioners involved with EPT are not included in this table.
** Interns do not have any teaching responsibilities and are not included in this table. The number of interns is presented in Chapter 10.1.1.

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

Type of contract	2016	2015	2014	Mean
Permanent: FTE (%)	41.0 (76%)	41.8 (75%)	37.5 (71%)	40.1 (74%)
Temporary core funded: FTE (%)	58.5 (76%)	57.3 (82%)	57.3 (85%)	57.7 (81%)

Table 9.1.3. Support staff of the veterinary programme

Type of contract	2016	2015	2014	Mean
Permanent (FTE)	188.1	187.4	184.0	186.5
Temporary (FTE)	39.6	40.2	37.8	39.2
Total (FTE)	**227.7**	**227.6**	**221.9**	**225.7**

Table 9.1.4. Research staff of the Establishment

All academic staff included in table 9.1.1. is responsible for teaching and research tasks.
Staff employed in third-party funded research projects is responsible for research and does not have any teaching responsibilities. Research staff in third-party funded research projects is included in the table below.

Type of contract	2016	2015	2014	Mean
Academic staff	47	43	37	**42**
Support staff	4	3	14	**7**
Student employees *	5	4	4	**4**
Total (FTE)	**56**	**50**	**55**	**54**

* 1 student FTE corresponds to 80 hours per month

9.2. Comments

- The number of employees and especially teaching staff is considered sufficient; increases would result in more students to be admitted, thus providing challenges with respect to class sizes, lecture rooms and infrastructure.
- The fact that lecturer evaluations could not be viewed by the Dean's Office provided an obstactle to QA processes. This was reported back to University management, and in 2017, the respective University guidelines were adapted.

9.3. Suggestions for improvement

- The Faculty plans to develop a welcome package for incoming staff that clearly outlines responsibilities but also highlightes the various support programs available at the University and Faculty.
- In its target agreements with the University management[63], the Faculty has agreed to review the institutional structure and propose measures to improve allocation of resources based on teaching and research needs.
- Negotiations are ongoing with University personnel to develop a contractual model for interns and veterinarians in specialization programmes without formal teaching obligations so that these positions are not counted towards teaching staff FTE (which would result in higher student admissions).
- In the coming years, the advancement of junior scientists towards habilitation and a university career will be one of the most important challenges veterinary medicine in German-speaking areas has ever faced. For this purpose, a university-wide approach to the advancement of young scientists, and especially young female scientists, needs to be developed.

[63] See Appendix D.1.

10. RESEARCH PROGRAMMES, CONTINUING AND POSTGRADUATE EDUCATION

10.1. Factual information

For details of our postgraduate programmes and continuing education system, see Appendix to 10.1.

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

Research oriented teaching is among the prime principles of Freie Universität Berlin. At the Faculty, several teaching formats assure a close and direct integration of our complex research activities in virtually all fields of veterinary sciences in undergraduate and graduate teaching. Approx. 50 elective courses related to research are offered to the 5th to 9th semester[64] to spark and strengthen interest in principles of science and a scientific career, both from intramural institutions and regional research institutions such as the Friedrich-Löffler-Institute (Federal Research Institute for Animal Health), the Robert-Koch Institute (Federal Research Institute for Biomedicine), the Federal Institute for Risk Assessment (BFR) and the Leibniz Institute for Zoo and Wildlife Research (IZW). Almost 400 students per year complete voluntary and mandatory student internships (practicals) at Faculty institutions.[65] are Several student research assistant positions are available each year, and the Faculty maintains an exchange of undergraduate students with research programs of cooperating universities, e.g. the Cornell University Leadership Program for Veterinary Students, the Cambridge University Research Summer School and Kansas State University Research Program.

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

Graduate students (Dr. med. vet., Ph.D.) and postgraduate clinical trainees are involved in undergraduate student teaching as teaching assistants whenever possible. They integrate state of the art knowledge in all aspects of their own training into undergraduate mandatory or elective courses, seminars, and practicals involving patient care. When core-funded they have formal teaching responsibilities of 2 (half-time) or 4 (full-time contracts) credit hours per week. In combined weekly activities such as journal clubs and clinical rounds / case discussions undergraduate students are exposed to research questions. Conflicts in case management are not perceived since the number of cases available for teaching is sufficient and undergraduate and post graduate students are often provided with cases of different levels of severity and complexity.

10.1.3. Description of how undergraduate students:

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

The importance of evidence-based decision making and lifelong learning is emphasized throughout the curriculum. This includes early exposure to biostatistics, research and clinical question formulation, bibliographic research and critical reading. During the clinical phase, students are repeatedly asked to write case reports. In order to make undergraduate students closely familiar with the concept of lifelong learning, they are regularly invited to join elements of continuing education events which they join on an individual basis, depending on interest and availability.

[64] For a detailed list of electives please see Appendix to 3.1.7.
[65] For details please see Appendix to 10.1.1.

-) are initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers;

A seminar on literature research is mandatory for each student in the frame of clinical rotations during the 9th and 10th semester. In addition, the library staff offers monthly seminars that focus on (a) handling of literature search tools, (b) intellectual property, plagiarism, correct citation formats, introduction to EndNote and (c) introduction to MS Word with correct formatting and appropriate citation tools. Additionally, a MS Excel course is offered every other month. The courses are open for undergraduates and graduate students, staff and faculty. Information and dates are published on the website of the library.[66]

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

see 10.1.1

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

Based on requirements of the German State Veterinary Chambers, all veterinarians have to attend at least 20 hrs / year of accredited (by the German Academy for Veterinary Cont. Education) continued education courses.[67] Needs of the profession and community are communicated to the Chamber and the Faculty by various means. Continued education courses are offered by institutions of the Establishment, by societies such as the Berlin Veterinary Society[68], the national Society of Small Animal Surgeons, the Pathology Group of the German Veterinary Society, or during larger continued education conventions (DVG Congress, bpt Congress, Leipzig Veterinary Congress).

10.1.5. Prospected number of students registered at post-graduate programmes for the next 3 academic years

The Faculty expects a stable number of 60 PhD students (20 incoming / leaving per year), 400 Dr. med. vet. Students (120 new / leaving per year), 25 MSc students in Small Animal Science and 36 MSc students in Equine Medicine.

10.1.6. Description of how and by who research, continuing and postgraduate education programmes organised by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

All programmes with relevance to research training, continuing and postgraduate education are subjects to approval by the Faculty Council, as required by the Berlin Law on Higher Education. Decisions by the Faculty Council are supported by advisory committees on each specific subject, e.g., separate advisory committees for the Dr. med. vet. programme, the DRS Biomedical Research Graduate School committee, the continuing education committee and the undergraduate education committee. University-accredited degree programs such as the two postgraduate MSc programs undergo regular evaluations in line with University QA requirements.[69] Information on these programmes is communicated within the commissions and to internal and external stakeholders such as the University management.

[66] http://www.vetmed.fu-berlin.de/einrichtungen/zentrale/bibliothek/termine/Seminar-zu-Literaturrecherche_-Literaturverwaltung-und-Formatierungen-in-MS-Word.html
[67] http://www.tieraerztekammer-berlin.de/tierarzt.html
[68] http://www.vetmed.fu-berlin.de/einrichtungen/sonstige/btg/index.html
[69] See Accreditation Certificates in Appendix to 10.1.6

10.2. Comments

- A major research focus of the Faculty for the next decades will be on antimicrobial resistance in a new research facility termed "TZR"(Veterinary Center for Resistance Research)[70]; this will have a significant impact on topics addressed in undergraduate and graduate education.
- Students are encouraged to actively engage in research topics, however, in the German veterinary education writing a scientific thesis is not foreseen. A large proportion of undergraduate students will pursue a doctoral degree (Dr. med. vet., PhD).
- A substantial number of specialization and continued education opportunities are provided by the Faculty

10.3. Suggestions for improvement

- Incentives are needed to encourage young scientists and especially women to remain in science. The Faculty, together with the University and other stakeholders, is currently identifying reasons and will propose measures to provide attractive career paths.

Table 10.1.1. Numbers of students registered in postgraduate clinical training programmes

Interns	2015/16*	2014/15	2013/14	Mean
Companion animals	18	n.a.	n.a.	18
Equine	8	n.a.	n.a.	8
Production animals	n.a.	n.a.	n.a.	n.a.
Total	26	n.a.	n.a.	26

European College Residents	2015/16*	2014/15	2013/14	Mean
ECVCN: Veterinary and Comparative Nutrition	1	1	1	**1**
ECVP: Veterinary Pathologists	7	7	10	**8**
EVPC: Veterinary Parasitology	1	1	1	**1**
ECVPH: Veterinary Public Health	5	5	5	**5**
ECVS: Large Animal Surgery (Equine / Ruminants)	3 / 2	3/ 2	3 / 2	**5**
ECEIM: Equine Internal Medicine	4	4	4	**4**
ECBHM: Bovine Health Management	3	3	2	**2.7**
ECAR: Animal Reproduction	4	4	4	**4**
ECVS: Small Animal Surgery	2	2	2	**2**
ECVIM: Veterinary Internal Medicine - Companion Animals	2	2	2	**2**
ECVO: Veterinary Ophthalmologists	1	1	2	**1.3**
Total	**36**	**35**	**38**	**36.3**

* The last full academic year prior to the Visitation

[70] http://www.vetmed.fu-berlin.de/forschung/tzr/index.html

Over 50 veterinarians (graduate students, junior staff members tc.) are registered either independently or in parallel in various German Veterinary Chamber specialisation programmes.[71]

Table 10.1.2. Numbers of students registered at postgraduate research training

Degrees	2016	2015	2014	Mean
PhD	104	90	85	93
Dr. med. vet.	538	411	302	417
Total	**642**	**501**	**387**	**510**

Approx. 80 Dr. med. vet. dissertations and 15 to 20 PhD theses are accepted per year.

Table 10.1.3. Numbers of students registered at other postgraduate programmes (including any external/distance learning courses)

Programmes	2016	2015	2014	Mean
Small Animal Science (MSc)	65	75	88	**82**
Equine Medicine (MSc)	33	32	-	**33**
International animal health (MSc)	-*	13	13	**13**

* The International Animal Health Master programme was discontinued in 2015/16.

Table 10.1.4. Numbers of attendees at continuing education courses provided by the Establishment

Courses[72]	2016	2015	2014	Mean
Total	9,294	3,680	1,061	4,678

Table 10.1.5. List of the major funded research programmes in the Establishment which were on-going during the last full academic year prior to the Visitation (2016).

The Faculty over the last 3 years had an average annual expenditure of 6.85 Million EUR from funded research projects.[73]

[71] For details see Appendix to Table 10.1.1.
[72] For details on courses offered at the Faculty see Appendix to 10.1.4.
[73] A list of major research projects is provided in the Appendix to Table 10.1.5.

11. OUTCOME ASSESSMENT AND QUALITY ASSURANCE

11.1. Factual information

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

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

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

Freie Universität Berlin's quality management system follows clearly defined principles, is based on decentralisation (delegation of responsibility to the faculties) and fully embedded in the University management system. It was founded on a common understanding of quality of studies and teaching that was defined in a University-wide discussion process in 2012.[74] As described in the Introduction, Freie Universität Berlin successfully passed the procedure of system accreditation in 2016 and received the seal of the German Accreditation Council. The University thus is certified to have a high level quality management system as well as suitable QA devices and processes in place that ensure the high standard of its degree programmes. The Establishment is fully integrated into this QA system.

-) 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;

The QA system in place distinguishes between processes of strategy development (Double Loop: Are we doing the right thing?) and process-orientated quality assurance procedures (Single Loop: Are we doing it right?). Overarching objectives defined in the regulatory framework for strategy development are operationalised and implemented through defined single loop processes (target agreements between the University management and the faculties; development of new degree programmes etc.). Feedback systems such as evaluations and standardised quality monitoring approaches allow to check the processes and close the control circuits. The individual quality targets of the University related to studying and teaching are clearly presented in the so-called target and operationalisation matrix.[75] Processes, participants, documents of the quality management system and the turnus are specified. The results of the QA procedures are fed back into the corresponding circuits. In the further developmentof processes, stakeholders are involved at various levels. Which internal and/or external participants have to be involved in the specific process is defined in the respective process description.

The interaction between the PDCA-circuits and the interfaces are illustrated by the following QA cycle:

[74] See Appendix to 11.1.1.a.

[75] See: http://www.fu-berlin.de/service/zuvdocs/weitere-fu/prozessdokumentation/ziel_operationalisierungsmatrix.pdf

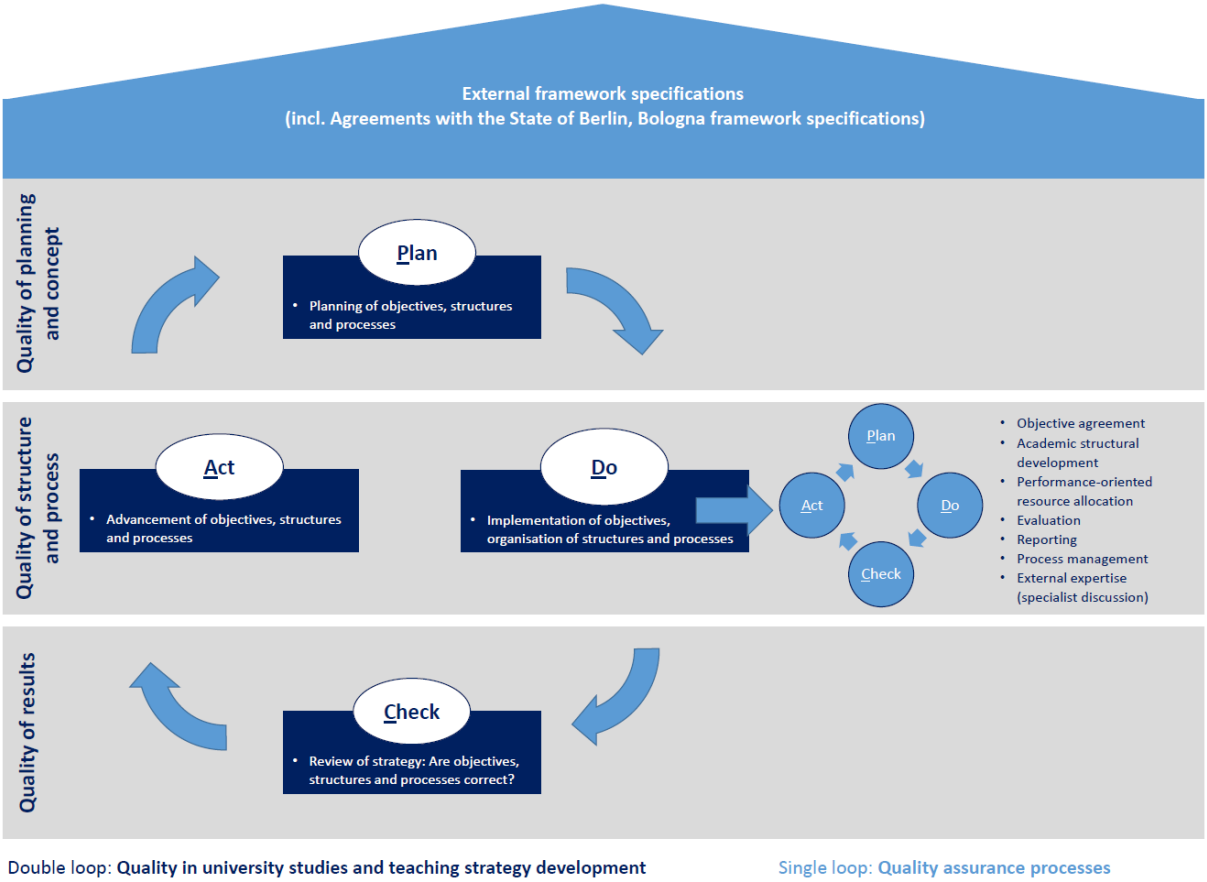

Figure 8: Quality management for university studies and teaching loop control system

Individual process descriptions depict the respective processes and provide an understanding of work flows, interfaces and responsibilities, taking into account the documents relevant to the process and (legal) requirements. The documentation of the relevant processes in the field of studying and teaching[76] aims to (a) make processes clear and transparent, (b) maintain knowledge independent of the individuals involved and (c) ensure the continuous improvement of the process and process outcome quality. All relevant documents are published in the process portal[77] of Freie Universität Berlin and on the Faculty website.[78] A brief desciption of selected QA processes is given in Appendix D „Written Assessment procedures for QA".

Examples for processes applied at the Faculty level are:

Process type	Process description
Key processes	**Organise and manage international student mobility** • Organise and manage Erasmus exchange studies (incomings) • Organise and manage Erasmus exchange studies (outgoings)
Support processes	**Evaluations** • Evaluation of teaching (decentralised survey) • Evaluation of student satisfaction (decentralised survey) • Evaluation of extramural practicals • Evaluation of agricultural practical

Overview 6 Overview of the governing board's process descriptions

[76] An overview of processes related to stydying and teaching is provided in the Appendix to 11.1.1.b.
[77] See: http://www.fu-berlin.de/sites/prozessmanagement/ (only accessible in the Intranet)
[78] See: http://www.vetmed.fu-berlin.de/studium/qualitaetssicherung/prozessbeschreibungen/index.html

In the framework of decentralisation of processes, QA requirements and processes related to specific degree programs are within the responsibility of the respective Faculty, represented by the Dean's Office and the Faculty Adviser for University Studies and Teaching. Tasks of the Advisers for University Studies and Teaching include:

- Preparation of Faculty-specific data, analyses and evaluation results for monitoring as well as the preparation of the annual quality report on studying and teaching (to be used for target agreements), and the development and implementation of indicated measures
- Planning and execution of decentralised evaluations (teaching), preparation of the cumulative results and supporting the implementation of the teaching qualification programme
- Coordination and documentation of procedures for the integration of external expertise into the development of the Faculty degree programmes
- Support and coordination of curricula development
- Support with the analysis, development and communication of suggestions for further development of the teaching and audit-related processes, as well as service and support offers (process documents)
- Contact point for the University coordination office of internal accreditation

The further development of study programmes is carried out with the involvement of internal stakeholders (Dean's Office, Adviser for University Studies and Teaching, Study Office, Faculty Council, university lecturers, students) as well as external stakeholders (see details on expert discussion in Chapters 3.1.10. and 11.1.4.).

-) is compliant with ESG Standards.

Freie Universität Berlin was positively evaluated and accredited by the agency AQAS. The University takes both external and internal standards and guidelines into account in the operationalising and implementation of quality targets. This includes in partiular:

- European Standards and Guidelines for Quality Assurance in Higher Education
- Qualification framework for German university degrees (21.04.2005)
- Rules for the accreditation of degree programmes and system accreditation (dated 23.02.2012)
- Recommendations for quality improvement of teaching and studying (scientific Council, 2008)
- Berlin Higher Education Act (dated 03.06.2011)
- Evaluation guidelines of Freie Universität Berlin (dated 30.03.2012)

The study subject specific further development of the University QA system within the Establishment is carried out in accordance with the 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.

All general information on the quality management of Freie Universität Berlin[79] and the Faculty of Veterinary Medicine[80], as well as the results of the central evaluations, are published on the website. The documents relating to work (PDFs of the process documentation and the target and operationalisation matrix) are downloadable from Freie Universität Berlin's Intranet.

[79] See: http://www.fu-berlin.de/sites/qm/

[80] See: http://www.vetmed.fu-berlin.de/studium/qualitaetssicherung/index.html

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

The Faculty follows an open communication culture. In addition to formally-defined communications processes within the Dean's Office, the Education Commission and the Faculty Council there are institutionalised communication routines such as meetings of all Faculty lecturers, Faculty-wide retreats and topic-specific workshops that contribute to transparent planning and decision processes and ensure the broad participation and understanding of the participants in studying and teaching. Both in the Education Commission and the Faculty Council, topics related studying and teaching processes are a permanent item on the agenda. In most instances, the Vice Dean for Study Affairs informs about current activities. The minutes[81], once approved, are accessible on the University intranet. Further communication routines at Freie Universität Berlin in which issues of quality management are regularly discussed are:

- Regular University meetings of all Vice Deans for Study Affairs
- Quality discussions (University Executive Board, Dean's Office, central university administration)
- Vice Dean for Study Affairs routines (University Vice President and Dean's Office)
- Meetings of the University advisory board for quality assurance
- Meetings of the University academic senate and commission for academic affairs

The Faculty website was restructured according to target groups during a relaunch in 2016. In addition to patient owners and the interested public, prospective and current students, doctoral candidates, current and future employees and alumni can find all relevant information on institutions, studying & teaching, training and development, research, dates and news.[82] The content is updated by the Veterinary Library (dates and news), the Adviser for University Studies and Teaching and the Study Office (studies and teaching), the continuing education committee (training and development), the Dean's Office and the Faculty IT staff.

11.1.4. Description of the QA processes not yet described in the other 10 Standards

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

All relevant QA processes have been described in the respective Standards (Sections) of this report. Examples of PDCA cylces (a) describing the QA system of the Freie Universität Berlin and the implementation at the Faculty level, (b) quality reporting on studies and teaching, (c) implementation of surveys/evaluations and (d) obtaining external expertise and carrying out a specialist discussion can be found in the appendix to 11.1.5.a to 10.1.5.d.[83]

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

The University-specific QA system is implemented at the Faculty through specifically adapted processes. The Faculty Advisor for University Studies and Teaching communicate the procedures to the Dean's Office, the Faculty Council, the Education Commission and other relevant target groups.

[81] The minutes are stored in the internal area and are only available on Freie Universität Berlin's Intranet; http://www.vetmed.fu-berlin.de/einrichtungen/zentrale/dekanat/intern/index.html
[82] http://www.vetmed.fu-berlin.de
[83] See Appendix to 11.1.5.a-d.

The Faculty-specific further development of QA devices and procedures is coordinated and monitored by the Vice Dean for Study Affairs together with Adviser for University Studies and Teaching. The involvement of the Faculty's students and lecturers, the Education Commission and the Faculty Council is mandatory. All processes and results are communicated to the respective commissions and individuals through meeting minutes, in writing and through the Faculty website.

11.2. Comments

- The QA processes (cycles) implemented in recent years have increased the administrative workload; however, they provide the necessary tools to analyse processes in teaching, to identify problems and to address them in a targeted manner.
- The inclusion in Freie Universität Berlin's quality assurance system guarantees a high QA standard and ensures that these processes are also maintained in the long term.

11.3. Suggestions for improvement

- Continued implementation of the QA processes and broad communication of their results will result in smoother operation in the future and acceptance by all stakeholders.

12. ESEVT INDICATORS

12.1. Factual information

Calculated Indicators from raw data		Establishment values	Median values[84]	Minimal values[85]	Balance[86]
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.12	0.16	0.13	-0.01
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.61	0.87	0.59	0.02
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	1.41	0.94	0.57	0.84
I4	n° of hours of practical (non-clinical) training	940.00	905.67	595.00	345.00
I5	n° of hours of clinical training	1019.00	932.92	670.00	349.00
I6	n° of hours of FSQ & VPH training	285.50	287.00	174.40	111.10
I7	n° of hours of extra-mural practical training in FSQ & VPH	250.00	68.00	28.80	221.20
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	62.52	70.48	42.01	20.51
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	4.48	2.69	0.46	4.01
I10	n° of equine patients seen intra-murally / n° of students graduating annually	16.11	5.05	1.30	14.81
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	24.41	3.35	1.55	22.87
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	–	–	0.22	–
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	41.42	15.95	6.29	35.12
I14	n° of equine patients seen extra-murally / n° of students graduating annually	–	–	0.60	–
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	2.16	1.33	0.55	1.61
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.06	0.12	0.04	0.01
I17	n° of companion animal necropsies / n° of students graduating annually	1.96	2.07	1.40	0.56
I18	n° of ruminant and pig necropsies / n° of students graduating annually	0.63	2.32	0.97	-0.34
I19	n° of equine necropsies / n° of students graduating annually	0.40	0.30	0.09	0.31

[84] Median values defined by data from Establishments with Approval status in April 2016

[85] Recommended minimal values calculated as the 20th percentile of data from Establishments with Approval status in April 2016

[86] A negative balance indicates that the Indicator is below the recommended minimal value

I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	5.42	2.05	0.69	4.73
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.20	0.20	0.06	0.13
I22*	n° of PhD graduating annually / n° of students graduating annually	0.63	0.15	0.09	0.54

* Indicators used only for statistical purpose

12.2. Comments

- **Indicator 1:** In 2016 several previously vacant faculty and lecturer positions were filled; the FTE numbers therefore have increased and will stay at that higher level in the next years.
- **Indicator 4:** excludes 250 h of mandatory EPT in a State or Regional Veterinary Office with activities related to issues of Veterinary Public Health; Food hygiene (hygiene control, food monitoring, food examination); Abattoir, ante and post mortem meat inspection; these are included in Indicator 6.
- **Indicator 5:** includes 700 hours of mandatory EPT in veterinary practice
- **Indicators 10-13: patients seen intra-mural** = 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 (mobile) ambulatory services.
- **Indicator 18:** The number of ruminant and pig necropsies is comparably low, mainly due to the structure of the regional animal production and recently changed legal requirements and restrictions: the BVDV-status (now notifiable) reduces the travel / transport of cattle from farms to clinics and ultimatively to pathology. Diagnostic dissections in the context of infectious and production diseases (especially in large farms) are performed by the State reference laboratory which is more than one hour away (Frankfurt / Oder). Requests for individual animal dissections have dropped due to economic considerations and animal disease control issues. Furthermore, milk price developments have major impact on the structure of dairy cow operations. Pig numbers are also associated with regional farm structures and the peculiarities of Berlin.
- **Indicator 21: specialised veterinarians** = number includes both EC diplomates and vets within a German vet specialist training
- **Indicator 22: n° of PhD graduating annually** = number includes both Dr. med. vet. (unstructured programme) and Ph.D. (structured programme) students

12.3. Suggestions for improvement

- In the process of filling the currently vacant faculty positions for poultry and for swine diseases the Establishment plans to place more emphasis both in education and research in the areas of population medicine, herd health and antimicrobial resistance.
- It is planned to further strengthen the collaboration with the larger professionally managed production animal herds in the region; thereby increasing the access to production animals for teaching and possibly also carcasses for pathology.

GLOSSARY

ABK ..... Ausbildungskommission (Education Commission)
BMEL ..... Bundesministerium für Ernährung und Landwirtschaft (Federal Ministry for Food and Agriculture)
bpt .....Bundesverband praktizierender Tierärzte (Association of Veterinary Practitioners)
BTÄO..... Bundes-Tierärzteordnung (Federal Veterinary Regulation)
CeDiS ..... Center für Digitale Systeme (Center for Digital Systems)
DAkkS ..... Deutsche Akkreditierungsstelle GmbH (German Akkreditation Institution)
DRS .....Dahlem Research School
DVG .....Deutsche Veterinärmedizinische Gesellschaft (German VeterinarySociety)
EAEVE ..... European Association of Establishments for Veterinary Education
EBVS ..... European Board of Veterinary Specialization
EPO .....Ergänzende Prüfungsordnung (examination regulation)
EPT.....Extramural Practical Training/Internship
FBR ..... Fachbereichsrat (Faculty Council)
KELDAT .....Kompetenzzentrum für E-Learning, Didaktik und Ausbildungsforschung der Tiermedizin (Competence center for E-Learning, didactics and educational research in veterinary medicine
LAGeSo .....Landesamt für Gesundheit und Soziales (State Office for Health and Social Affairs)
OIE ..... World Organisation for Animal Health
PTT..... Progress Test Tiermedizin (Progress test in veterinary medicine)
RvO .....Robert-von-Ostertag-Haus (Robert von Ostertag building)
SLCMS.....Student Lifecycle Management System
StO ..... Studienordnung (education regulation)
SWS.....Semester week hours (1 SWS = 14 hours within one semester)
TAppV .....Verordnung zur Approbation von Tierärztinnen und Tierärzte (German Veterinary Medical Licensure Law)
VPH..... Veterinary Public Health
VSN .....Veterinary Skills Net
VTH .....Veterinary Teaching Hospital
ZEDAT ..... Zentraleinrichtung für Datenberarbeitung (Central University IT Unit)

LIST OF APPENDICES

All appendices listed below can be found in the document Appendices of the Self Evaluation Report for the European Association of Establishments for Veterinary Education.

- Current academic staff, qualifications, their FTE, teaching responsibilities and departmental affiliations
- Units of study of the core veterinary programme (including clinical rotations, EPT and graduation thesis)
- Maps of the Establishment and the intra-mural and extra-mural facilities used in the core veterinary programme
- Written assessment procedures for QA
- List of scientific publications from the Establishment's academic staff in peer reviewed journals during the last three academic years

- German Veterinary Medical Licensure Law
- Study Regulations for Veterinary Medicine
- Regulations for the preclinical and clinical examinations in Veterinary Medicine

- Appendix to 1.1.2.: Mission| Strategy|Objectives of the Faculty of Veterinary Medicine at Freie Universität Berlin
- Appendix to 1.1.3.a: Strategic Operating Plan of the Faculty
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- Appendix to 11.1.1.c: Quality Management for University Studies and Teaching Loop Control System
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