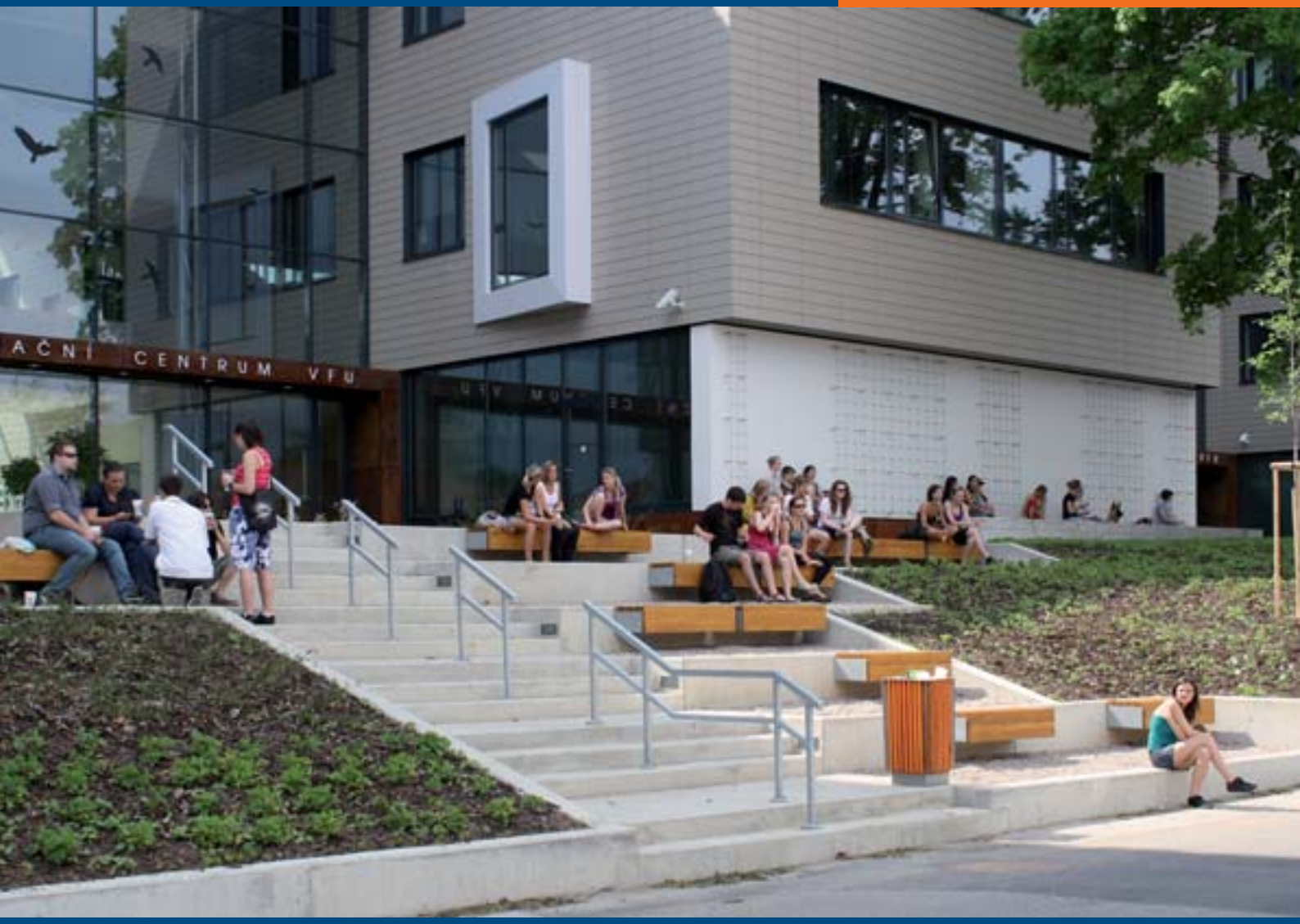
Evaluation of Veterinary Training

STAGE I



The Self-evaluation Report

University of Veterinary and Pharmaceutical Science Brno
Czech Republic

2013

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Stage I

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CONTENT

INTRODUCTION

The University of Veterinary and Pharmaceutical Sciences Brno was founded in 1918 by virtue of Act No. 76/1918 Coll., on the Establishment of the Czechoslovak State Veterinary University in Brno, and focused on veterinary medicine training. In 1975, two education tracks were established at the school: College of Veterinary Medicine and College of Veterinary Hygiene. In 1990, two faculties were created at the school to accommodate the two tracks of veterinary education, namely, the Faculty of Veterinary Medicine (FVM) and the Faculty of Veterinary Hygiene and Ecology (FVHE). In 1991, the Faculty of Pharmacy (FaF) was founded at the school. In 1994, the school gained university status (composed of 3 faculties) and started using the name "University of Veterinary and Pharmaceutical Sciences Brno" (UVPS Brno).

Through its Faculty of Veterinary Medicine (since 1993) and Faculty of Veterinary Hygiene and Ecology (FVHE) (since 1995), UVPS Brno has been a member of the European Association of Establishments for Veterinary Education (EAEVE). Both veterinary faculties of the University of Veterinary and Pharmaceutical Sciences joined a system for an international comparison of their study programmes to the European veterinary training standard within the system of international evaluation organized by EAEVE.

In 1995, the University of Veterinary and Pharmaceutical Sciences Brno underwent an international evaluation of veterinary training, held between November 27 and December 3, 1995. The two faculties were advised of the conclusions drawn from the international evaluation at a meeting held in Brussels on October 28, 1996. In light of the fact that in 1996, the Czech Republic was not an EU member state yet, the report had the nature of mere recommendations for a further conceptual focus of the Faculty of Veterinary Medicine and Faculty of Veterinary Hygiene and Ecology's study programmes. The Faculty of Veterinary Hygiene and Ecology amended its study programme in line with the recommendations stemming from the Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno of 1996. Report on the implementation of evaluation recommendations by the Faculty of Veterinary Hygiene and Ecology was drawn up and sent to EAEVE. Following the meeting of the Education Board on March 8-9, 2002, it was decided that the Faculty of Veterinary

Our hearts beat for animals

Hygiene and Ecology of the University of Veterinary and Pharmaceutical Sciences meets the requirements stipulated by Directive No. 1027/78/EEC. Both faculties were thus placed on the prestigious List of Evaluated and Approved Institutions by EAEVE.

In 2002, veterinary training at the University of Veterinary and Pharmaceutical Sciences became a part of the accession process for the Czech Republic's preparation for entry into the European Union. The University of Veterinary and Pharmaceutical Sciences was assessed with a view to the quality of education permitting access to a profession subject to specific regulation, i.e., veterinary medicine in this particular case, and with a view to mutual recognition of qualifications upon the Czech Republic's entry into the European Union. The Czech

Training in diseases of dogs and cats

Republic's assessment in terms of veterinary training was conducted by a special expert team of the European Union, set up and acting in accordance with instructions from the European Commission. The experts visited the University of Veterinary and Pharmaceutical Sciences and assessed the quality of veterinary education it has been providing. The expert team elaborated a final report in which it noted that the study programmes of both the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology UVPS Brno were compliant with EU requirements applicable to veterinary education, and its graduates were fully qualified veterinary surgeons, authorized to establish a clinical practice upon graduation.

In 2004, the University of Veterinary and Pharmaceutical Sciences Brno underwent the second international evaluation of veterinary education organized by EAEVE. The evaluation was based on EU Directives Nos. 78/1027/EEC and 78/1026/EEC, as well as EAEVE's Standard Operating Procedures for the evaluation of veterinary faculties adopted by the EC Advisory Committee on Veterinary Training in 2000 (Evaluation of Veterinary Training in Europe – Standard Operating Procedures, 2002). The expert team visited the University of Veterinary and Pharmaceutical Sciences in October 18-23, 2004. The final report noted that the teaching at the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology was compliant with requirements stipulated by EU legislation with regard to veterinary training. The study programmes of both faculties cover all the subjects prescribed by EU directives. The results outlined in the final report show that the study programme of FVM focuses on veterinary medicine practiced on livestock but ought to be more market-oriented in the future, i.e., with a greater focus on hobby (companion) animals. The study programme of FVHE was pointed out as an example of how differentiation ought to be applied in veterinary training; the study programme is based on traditional veterinary medicine focusing on livestock, and complemented by a thoroughly conceived teaching of food hygiene, thus truly giving effect to the "from stable to table" concept (Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, 2004). The report was approved by the Joint Education Committee of the European Association of Establishments for Veterinary Education and Federation of Veterinarians of Europe. The University of Veterinary and Pharmaceutical Sciences was advised of the conclusions from the international evaluation at a meeting in Brussels on April 8, 2005; the conclusions are contained in the Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno.

As a result of the international evaluation, the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology remained on the prestigious List of Evaluated and Approved Institutions by EAEVE.

Changes in veterinary training since the last evaluation in 2004

1. Mission and objectives

The following changes took place with regard to the University's objectives and veterinary training:

- the University elaborated its Long-term Plan for 2011-2015 which contains the University's mission, objectives and priorities, including veterinary training,
- every year, the University drafts a Long-term Plan Update which specifies the University's objectives and priorities, including veterinary training, for the respective year,
- every year, the University drafts its Institutional Plan containing specific performance indicators for the given year,
- every year, the University drafts an annual report on its activities and their evaluation which contains information on the University, changes at the University and results attained by the University,
- every year, the University conducts an assessment of the quality of training and other academic endeavors

in the area of veterinary medicine which contains the satisfaction of verbal and numerical indicators of quality of veterinary training,
- every year, the University conducts an analysis of its condition, including its strengths and weaknesses (new weaknesses, persisting weaknesses, rectified weaknesses), opportunities and risks,
- a strategy of veterinary training containing the development of veterinary training and including the graduate's competences in all the areas of veterinary practice was formulated. A differentiated focus of training on two basic tracks was formulated: first, with a focus on clinical veterinary medicine with a strong emphasis on hobby (companion) animals (dogs, cats, horses, birds, reptiles, mammals), the second with a focus on food hygiene and livestock (in particular cattle and pigs) (veterinary hygiene and ecology track).

2. Organisation

The most important changes in the University's organization were as follows:
- the University's original organization structure consisting of the Rectorate, Faculty of Veterinary Medicine, Faculty of Veterinary Hygiene and Ecology, Faculty of Pharmacy and other work locations (for instance, the Agricultural School Farm), remained unchanged, but new work facilities have been set up within the Rectorate:
- CEITEC – Central European Institute of Technology, focusing on pathobiological research in collaboration with a large research centre of several universities and research institutes in the Czech Republic,
- ICRC – International Clinical Research Center, focusing on clinical collaboration with St. Anne's University Hospital in Brno (FNUSA) (a human hospital) and a strategic partner, the U.S. Mayo Foundation for Medical Education and Research (Mayo Clinic); research focuses on cardiovascular, neurological and oncological illnesses in humans,
- the Faculty of Veterinary Medicine retained its structure consisting of sections, clinics and departments, and created a symmetrical structure with larger organizational groupings of departments and clinics within this structure,
- the Faculty of Veterinary Hygiene and Ecology retained its structure of sections and departments and a working location for the entire faculty; the structure of departments within this system was changed,
- Veterinary Training Board was established at university level in order to manage and oversee the quality of veterinary training.

3. Finance

As regards the financing of the university and veterinary training, the following changes occurred:

Training in equine diseases

- standard financing of educational activities by the state was increased but continues to fall below the requisite cost of veterinary training,
- the University switched to multi-source financing, i.e., the activities of the University and veterinary training are financed out of several sources. This financing method offers opportunities for further fund-raising in addition to standard financing of educational activities provided by the state. However, multi-source financing also increases the administrative burden multifold in terms of accounting since every source is subject to different economic management under the law,
- during the previous period, the University changed teachers' salaries (with base salaries increased by as much as 20%); nonetheless, compared to the income of veterinary surgeons – practitioners, the salary increase continues to be inadequate,
- during the previous period, the University managed to raise an immense amount of funds for structural modernization of buildings and facilities for veterinary training.

4. Curriculum

The curriculum of veterinary training follows two basic track differentiations, specifically, Veterinary Medicine (FVM) and Veterinary Hygiene and Ecology (FVHE). The curriculum of veterinary training was modernized in 2012.

The curriculum is based on Directive No. 36/2005/EC, on the recognition of professional qualifications, as well as EU directives regulating food safety in particular, experience presented at meetings of the European Association of Establishments for Veterinary Education (EAEVE), requirements set out in EAEVE's Principles and Process of Evaluation of Veterinary Training in Europe and recommendations contained in the 2005 report on the international evaluation of UVPS Brno, Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, as well as the veterinary training traditions of UVPS Brno.

In accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno and other European trends in veterinary training in 2005, the following changes to the curriculum were made:

- focus of the curriculum in the Veterinary Medicine differentiation track was modified in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno whereby the emphasis within the differentiation of the curriculum was placed on veterinary medicine of small animals and horses; focus of the curriculum in the Veterinary Hygiene and Ecology differentiation track was modified in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno whereby the emphasis within the differentiation of the curriculum was placed on food hygiene and veterinary medicine of livestock;
- in both tracks, subjects forming the core curriculum, subjects specific for the different tracks, compulsory and elective subjects were defined,
- the individual subjects within the curriculum were arranged in a logical sequence,
- the total number of periods in the curricula of both tracks was reduced in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno; students do not have more than 29 periods per week, 5 exams per term, and the difficulty of the exams is also taken into account,
- the total number of periods in core subjects was reduced in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, in particular in the individual core subjects (physics, chemistry, biology, zoology, botany),
- in animal production subjects, the number of period was reduced in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, in animal nutrition (earlier on), animal husbandry, animal hygiene, and the number of periods in ethology and animal welfare was increased,
- the total number of periods in clinical training was increased and clinical training included in earlier phases of the curriculum; students gained greater access to clinics even outside teaching hours (to surgeries, participation in working with hospitalized patients, night duty with students being able to spend the night, etc.),
- in food hygiene, direct teaching of veterinary examination of animals in abattoir operation and meat and organs following slaughter in the abattoir was introduced (contractual arrangements), whereby the number of bodies and organs examined by every student

Training in diseases of birds, reptiles and small mammals

increased considerably. Training at the Meat and Fish Technology Workshop at the University was expanded, and teaching at a Dairy Pilot Technology Plant at the University was introduced. HACCP training was introduced,

- the different focus in the two tracks of veterinary training was strengthened,
- the curriculum now stresses the teaching of competences (day one skills) in particular in clinical subjects and food hygiene subjects,
- extramural practical training at clinics and in veterinary practices, during activities pursued by state veterinary administration bodies, in laboratory diagnostic institutes, during veterinary inspection and supervision at abattoirs, greatly exceeds the recommended 6-8 weeks;
- in the 6th year, the curriculum maintains a module system whereby 6th year students may choose their clinical specialization and thus the focus of clinical exams within the final state examination, in the 6th year, the curriculum of the Veterinary Medicine track places a greater emphasis, in accordance with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno and in accordance with the shift in focus of private clinical veterinary practice towards small animals mainly, on a subject composition oriented on hobby (companion) animals (the scope of modular training in Dogs and Cats Diseases, Equine Diseases, Avian, Reptile and Small Mammal Diseases). In the 6th year, the curriculum in the Veterinary Hygiene and Ecology differentiation track places a greater emphasis, in line with the 2005 Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno and with a view to the need to incorporate veterinary medicine into the supervision and inspection of food safety and livestock, on a subject composition oriented on livestock (the scope of training modules in Diseases of swine and ruminants, and in Hygiene and technology of meat and meat products, Hygiene and technology of milk and dairy products, Veterinary protection of public health),
- compulsory and elective subjects in both tracks of veterinary training were rearranged,
- the University was accredited by the Ministry of Education, Youth and Physical Education for the teaching of veterinary medicine in both track differentiations and in both Czech and English.

5. Quality and evaluation of training

The following changes were made in the training programme:

- the level of coordination and management of veterinary training was increased (Veterinary Training Board, meetings at management levels of the University, faculties, sections, departments and clinics),
- the quality of teaching was improved (improved premises, operational aspects, equipment of departments and clinics, responsibility for a specific subject was defined (director of studies for each subject), rules and conditions for teaching and examination in every subject were laid down), the quality of practical training was improved and a greater emphasis placed on day one skills (DOS),
- a domestic legislative amendment was successfully put forward (Act on Veterinary Care), whereby as of 2008, students may perform qualified veterinary activities under the supervision and liability of a veterinary surgeon starting from the 4th year; as a result of this change, it

Training in the diseases of ruminants

was possible to improve practical training in particular at the university clinics, and students are able to be more involved in clinical cases,

- a further form of learning, problem-based learning, was introduced in a number of subjects,
- students enjoy better access to specialized literature (a new modern university library was created, and textbooks, books, journals and other learning materials purchased for the library).

The following changes were made or noted in the area of teachers' environment:

- access to literary sources was expanded through the building of a new university library,
- teachers enjoy greater access to specialized and science databases,
- the quality of the environment in which the teachers teach was improved (remodeling and creation of offices and teaching facilities, improved quality of devices at clinics and departments), the improvement of teachers' teaching competences is encouraged (language courses, computer skills courses, courses aimed at the acquisition of authorization for special activities, as well as presentation skills).

As regards the examination system, the following developments took place:

- an increase in the number of examination methods employing written or computer-based examination (tests).

The following changes were made in the area of quality and evaluation of training:

- the level of coordination of veterinary training at the University was increased through the establishment of the Veterinary Training Board which focuses on the management of veterinary training and evaluation of the quality of veterinary training, and newly also changes to the curriculum are approved by the science councils at both faculties concurrently,
- evaluation of quality of veterinary training within the University (by the Veterinary Training Board) was introduced,
- the evaluation of veterinary training at management levels, i.e., University management, Rector's Advisory Board, Dean's Advisory Board, meetings of department heads, at the level of sections, departments and clinics, in science councils and the academic senate, was expanded
- System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine at the University was designed,
- teachers were evaluated at individual basis, with an impact on salaries (scope of teaching, quality and quantity of scientific work),
- evaluation of the quality of training by students was used,
- veterinary training was evaluated by the national Accreditation Board of the Ministry of Education at the level of the individual undergraduate study programmes and accreditation was granted, at the level of the individual postgraduate study programmes and accreditation was granted, and at the level of the faculties, with a favourable outcome,
- authorization to grant the Diploma Supplement Label was obtained.

The following changes took place in the area of student welfare:

- an increase in hostel accommodation rate – up to 90% of applications are granted,
- expansion of facilities for refreshments and boarding of students on campus,
- rest zones were established where students can spend time during the day between individual blocks of classes,
- sports options were expanded (the range of sports on offer was expanded),
- options for students to pursue their interests were expanded (activities within the student organization, hunting association, cynology club, equestrian club, student May Day celebrations, student cinema, student drama club, student international cuisine day, ball, photo contests, etc.).

Training in swine diseases

6. Buildings and facilities

As regards buildings and facilities serving for veterinary education, the following changes were made:

- fundamental remodeling, modernization or construction of most of the buildings, operating facilities and facilities for veterinary education throughout the campus (Pavilion of Swine Diseases, Centre for Avian Medicine (under construction, to be extended), Equine Orthopaedic Centre and Hippodrome, horse stables, outdoor enclosures for horses, Pavilion of Pathobiology, Department of Animal Genetics, Pavilion of Morphology and Physiology, Pavilion of Department of Pharmacology and Pharmacy, Pavilion of Food Hygiene and a Dairy Pilot Technology Plant, Building of Department of Meat Hygiene and Technology and Meat and Fish Technology Workshop, Fatstock Abattoir, Building of Department of Animal Nutrition, Department of Animal Husbandry & Animal Hygiene, Research Stables of Department of Animal Nutrition, auditorium, Study and Information Centre of the University, Building of Centre of Information Technologies, Building of Institute of Lifelong Learning and Informatics, Building of Accomodation and Canteen Centre, Building of Department of Internal University Property Management, Reception Building, Waste Water Treatment Plant, sewage and waste disposal systems, central park, central parking lot, certain roads within the campus, garages, Cynology Centre and dog enclosure, large-scale cowshed for dairy cows at the Agricultural School Farm and others);
- the number of lecture halls at the University was increased and the original ones were refurbished,

- rooms for team work were modernized and their capacity increased,
- facilities and laboratories for student practical trainings were modernized and their capacity increased,
- an extensive remodelling of the pathological autopsy room was carried out and the pathology department operation modernized, the anatomy autopsy room and other autopsy facilities at the University were remodelled and modernized,
- clinical operations were concentrated into two large clinical centres – Clinics for Small Animals and Clinics for Large Animals (consisting of four specialized clinics), the operation of the clinics was modernized in terms of both equipment and organization (for instance, an intensive care unit was established), and 24-hour service was strengthened (night duty with student participation), as was the availability of veterinary surgeons at the clinics; the system of computer records of patients at the clinics was modernized,
- two clinical laboratory centres corresponding to the way the clinics are structured into two large clinical pavilions were created, specifically, the Small Animal Clinical Laboratory and the Large Animal Clinical Laboratory,
- the abattoir on campus was remodeled and modernized,
- the Meat and Fish Technology Workshop were modernized and a Dairy Pilot Technology Plant established,
- an extensive remodeling of the University's waste water treatment plant and sewage system was carried out, and a new system of waste disposal introduced,
- a new bilingual (Czech and English) orientation plan, signage and designation of buildings at the University was created in order to facilitate orientation and, as a new objective, to encourage a bilingual environment at the University because of the high number of foreign students,
- digitalization of passportization of buildings, operating facilities and the entire campus was carried out.

7. Animals and materials used in the teaching process

As regards patients, animals and other teaching materials for veterinary training, the following changes were made:

- in anatomy, the teaching materials increased the emphasis on pet (companion) animals which corresponds to the markedly growing preference for pet (companion) animals in veterinary practice,
- pathological morphology gave more room to pathohistology in its teaching materials which is in line with the practical training trend, i.e., a growing interest in pathohistological diagnostics,
- in animal production, some of the facilities at the University's Agricultural School Farm were modernized (a large-scale cowshed for dairy cows, pasture grazing of Limousine breed cattle, etc.), and the efficiency of animal rearing has been increased (pig rearing at the Agricultural School Farm); horses are now kept on campus for teaching purposes (5 horses), pheasants are reared at the Agricultural School Farm, quality improvements were made in the keeping of fallow-deer in

Anatomy training

Microbiology training

a game park at the School Agricultural Farm, beekeeping was introduced onto the campus,

- in food hygiene, contractual arrangements were made for students for the teaching of veterinary inspection at an abattoir (abattoir in Tišnov), and the quantity of raw materials and foodstuffs of animal origin used in the teaching process was increased,
- in clinical training in the area of out-patient and in-patient care at the University's clinics, a range of patients representing all the important animal species is procured; all the clinics provide emergency care;
- development of the ambulatory (mobile) clinic, the activities of which were expanded in particular in the areas of reproductive disorders, gynaecology and obstetrics;
- the quality of teaching materials relating to the diseases of game, fish and bees was improved,
- the University was accredited by the Ministry of Agriculture for using animals for teaching and research.

8. Library and learning resources

As regards the library and learning resources in veterinary training, the following changes were made:

- a new and modern university library, a modern reading room and computer centre for students were created within the Study and Information Centre serving the entire University,
- the number of copies of textbooks, lecture notes, books and other learning materials for students in the library, including those in English, was increased,
- students enjoy a greater access to specialized and scientific databases,
- students now have access to the university computer network at the student hostels,
- a retro-cataloguing of the book stock was conducted; the process involved both the stock of the university library and the stock in the libraries of the University's individual departments and clinics,
- a new university archive accredited by the Czech Ministry of Interior was established,
- the optic-fibre network at the University was modernized.

9. Admission of students

As regards the admission of students for veterinary training:

- the University introduced veterinary training in English, and thus admits foreign students (in particular from European countries) who now represent a fairly high percentage of veterinary medicine students,
- the University adopted measures to address the issue of high drop-out rate while maintaining the quality of education in both tracks; however, despite those measures, the drop-out rate did not decline.

10. Teachers and staff

As regards teachers and support staff for veterinary training, the following changes were made:

- the number of teachers who teach in English increased greatly,
- the extent of research activities leading to scholarly publication by teachers increased greatly,
- the number of teachers attending science conferences abroad increased greatly,
- teachers have greater opportunities to obtain extra pay for research, professional veterinary activities, teaching in English, work on development and other projects at the University.

11. Life-long (continuing) education

As regards life-long (continuing) education, the following changes were made:

- the number of courses with both a professional and special-interest focus, provided by the University, was increased,
- University of the Third Age, i.e., courses for seniors on veterinary topics, was established,
- the University holds summer courses in collaboration with foreign universities or for foreign participants (Summer School of Surgery, Summer School of Exotic Medicine, Summer School of Food Hygiene),
- in collaboration with the University of Vienna, the University established Training Centre for Avian Medicine,
- in the last two years, the University has served as an EU Training Centre – Better training for Safer Food (with a focus on meat and meat products),
- the University runs an electronic database, Vettox, which can be accessed by veterinary specialists and which provides information and advice in the area of first aid and in cases of acute and chronic toxicoses in animals.

12. Postgraduate training

As regards postgraduate training, the following changes were made:

- postgraduate education (whereby the PhD. degree is obtained) is organized at the faculties, individual clinics and departments and closely relates to scientific and research activities and specialized veterinary activities of the departments and clinics; the students enjoy access to information sources, patients, animals, biological material, as well as the operations of clinics, laboratories and other facilities necessary for research. In order to expand the scope of research in post-graduate education, teaching duties of doctoral students were minimized,
- the University was accredited by the Ministry of Education, Youth and Physical Education for teaching veterinary medicine at post-graduate level in both tracks, both in Czech and in English,
- the number of graduates of EBVS course at the University increased,
- the University held a meeting of the European College of Veterinary Public Health (in 2011).

13. Research

As regards research, the following changes were made:

- students now have greater opportunities for involvement in work on grant projects of grant agencies won by a department or a clinic of a faculty,
- a new system of student research management was created at the University, by setting up a new Internal Grant Agency with allocated funding; it allocates grants to students for projects submitted by them.

Training at the University's Fatstock Abattoir

Students spend their breaks and leisure time in the central park

Important decisions made during the past period

The most important decisions made during the past period with regard to veterinary education include the following:

- drafting of the University's strategy- the Long-term Plan, its annual updates and performance evaluation,
- formulation of a veterinary training strategy aimed at the development of the graduate's competences in all areas of veterinary practice, and formulation of the different tracks with a focus on clinical veterinary medicine, with a strong emphasis on pet (companion) animals (Veterinary Medicine track), and a focus on food hygiene and livestock (Veterinary Hygiene and Ecology track), respectively
- establishment of the Veterinary Training Board at the University,
- restructuring of the system of departments and clinics at FVM, whereby larger organizational units were formed,
- involvement in large CEITEC and ICRC projects,
- modernization of the veterinary education curriculum,
- creation of a system of evaluation of the quality of veterinary training,
- extensive remodeling, modernization or construction of buildings, operating facilities and facilities for veterinary training at a huge financial cost,
- support to and increase of the level of clinical training and hygiene training of students (premises, facilities, equipment, organization, etc.),
- creation of a new, modern Study and Information Centre (university library, modern reading rooms, computer centre for students),
- creation of a multi-source system for research and publication activities,
- international openness of the University (a great increase in the number of students studying in English, a great increase in student mobility, teacher participation in science conferences, organization of international summer courses, serving as an international training centre),
- creation of a new system of organization of student research at the University.

The main issues impossible to resolve at present include the following:

- lack of state funding of veterinary training,
- low remuneration of teachers in terms of base salaries due to inadequate state funding,
- low remuneration of post-graduate students,
- limited options for modernization of equipment out of state funding;
- high drop-out rate in veterinary study;
- unequal male/female ratio in veterinary study;
- inordinately growing legal regulation and an inordinate administrative burden which places constraints on efficiency in the pursuit of many of the University's endeavours.

OBJECTIVES

1.1 Factual information

1.1.1 Mission of the University

The mission of the University of Veterinary and Pharmaceutical Sciences is to provide university education and undertake scientific, research and other creative activities, as well as specialized activities in the areas of veterinary medicine, veterinary hygiene and ecology, food safety and quality, and pharmacy, and to pursue other activities in order to fulfill the mission of UVPS Brno as an academic institution.

1.1.2 Strategic goal of the University

The strategic plan of the University of Veterinary and Pharmaceutical Sciences is to develop its status as an internationally recognized university with a specific professional focus on veterinary medicine, veterinary hygiene and ecology, food safety and quality, and pharmacy, providing quality education, conducting excellent research and pursuing professional activities at the highest standard of expertise, operating as an open university establishing itself both in the national and in the European university

The graduation ritual includes the throwing of hats up in the air

space, enjoying academic autonomy, employing efficient methods of financing and modernizing its buildings, technology and equipment so as to meet current requirements placed on comparable universities in developed countries.

1.1.3 Long-term Plan of Educational and Scientific, Research, Development, Innovation and Other Creative Activities of the University of Veterinary and Pharmaceutical Sciences for 2011–2015 (LTP UVPS, or Long-term Plan)

The University of Veterinary and Pharmaceutical Sciences Brno has a Long-term Plan of Educational and Scientific, Research, Development, Innovation and Other Creative Activities of the University of Veterinary and Pharmaceutical Sciences for 2011–2015 (LTP UVPS).

LTP UVPS is based on a legislative framework provided in particular by national law, Act No. 111/1998 Coll., on Universities and Amendments to Other Acts (Act on Universities), as amended, and its implementing guidelines, Act No. 130/2002 Coll., on Support to Research, Experimental Development and Innovation out of Public Funds, and Amendments to Certain Related Acts, as amended, government decrees, decrees and guidelines of the Ministry of Education, Youth and Physical Education, and further by legal regulations regulating veterinary activities and veterinary training, in particular Act No. 166/1999 Coll., on Veterinary Care and Amendments to Related Acts, as amended, and its implementing guidelines, as well as Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications, which sets forth requirements on the education of veterinary surgeons and pharmacists that are subject to specific regulation.

LTP UVPS follows up in particular on the previous Long-term plan of Educational and Scientific, Research, Development, Innovation, Artistic and Other Creative Activities for Universities for 2006-2010, results and recommendations derived from the international evaluation of veterinary faculties and contained in the Report adopted by the Joint Education Committee of the European Association of Establishments for Veterinary Education (EAEVE) and the Federation of Veterinarians of Europe (FVE), results and recommendations drawn from the accreditation process at the individual faculties, conducted by the national Accreditation Board of the Ministry of Education, Youth and Physical Education, and finally, results and recommendations from the process of accreditation concerning the study programmes and individual courses conducted by the Accreditation Board.

LTP UVPS follows the structure and instructions provided by the Ministry of Education, Youth and Physical Education, and contains the University's mission, strategic goals, premises, strengths and weaknesses and priorities for the respective period. Priorities are the legal status of the University, its international, national and regional work, quality and relevance (educational activities, scientific and research activities, specialized veterinary and other activities), openness (internationalization in education, international cooperation, collaboration with the practice sector, life-long education, care of the University's history, promotion and marketing of the University), efficiency and financing (University management, funding of education, funding of science and research, funding of the University's other activities, investment financing).

Students at a lecture in a lecture hall

LTP UVPS represents an official document setting forth the University's overall objectives. LTP UVPS was drawn up by the Rector and reviewed and approved by the University's Management, the Rector's Advisory Board, the University's Science Council, Executive Council and the Academic Senate. LTP UVPS was reviewed and approved by the Ministry of Education, Youth and Physical Education. LTP UVPS is a document of approximately 80 pages and is available at the web pages of UVPS Brno.

1.1.4 Update of LTP UVPS for the respective year

LTP UVPS is a strategic document covering a period of 5 years and is updated and specified annually. Every year, UVPS Brno thus prepares a LTP UVPS Update for the respective year (therefore, since 2011, 2011 update of LTP UVPS, 2012 update of LTP UVPS and 2013 update of LTP UVPS were drawn up). The document conforms to a structure stipulated by the Ministry of Education, Youth and Physical Education and is drawn up in accordance with the Ministry's instructions (for instance, the 2013 update is a document of 14 pages). The LTP UVPS update contains specific objectives and the manner in which they are to be attained with a view to the priorities defined in LTP UVPS for the year concerned.

LTP UVPS represents an official document setting forth the University's overall objectives for the respective year. The LTP UVPS update is drawn up by the Rector and reviewed and approved by the University's management, the

Rector's Advisory Board, the University's Science Council, Executive Council and the Academic Senate. The LTP UVPS update is reviewed and approved by the Ministry of Education, Youth and Physical Education, and is available at the webpages of UVPS Brno.

1.1.5 Institutional Development Plan of UVPS Brno for the respective year (IP UVPS Brno)

The LTP UVPS Update for the includes the Institutional Development Plan of UVPS Brno for the respective year (IP UVPS Brno) (for instance, IP UVPS Brno for 2013 is a 13-page document). IP UVPS Brno contains specific performance indicators, both verbal and numerical, for the respective year, and defines initial and target values. IP UVPS Brno thus sets forth indicators for the respective year for instance in the areas of the University's international work, veterinary training, support facilities for the University's veterinary activities, conditions applicable to special workplaces at the University, in the area of science, research and publication, with regard to the extent of specialized veterinary activities, the University's international openness, in the area of university management and funding, and in the area of modernization of buildings, technologies and equipment. IP UVPS Brno contains activities designed to attain the performance

Preparation for classes

indicators for the respective year. An assessment of the conformity of IP UVPS Brno with LTP UVPS and its update for the respective year is carried out, as is an assessment of the conformity of IP UVPS Brno with LTP UVPS and its update for the respective year by the Ministry of Education, Youth and Physical Education.

IP UVPS Brno is drawn up by the Rector, and reviewed and approved by the University's management, the Rector's Advisory Board, the University's Science Council, Executive Council and the Academic Senate. IP UVPS Brno is reviewed and approved by the Ministry of Education, Youth and Physical Education, and is available at the webpages of UVPS Brno.

1.1.6 Annual Report on Activities and Evaluation of Activities of UVPS Brno in the respective year (AR UVPS Brno)

The status of fulfillment of LTP UVPS and the LTP UVPS Update for the respective year, as well as IP UVPS Brno for the respective year, is covered by the Annual Report on Activities and Evaluation of Activities of UVPS Brno in the respective year (AR UVPS Brno). AR UVPS Brno is drawn up in accordance with the structure prescribed and instructions issued by the Ministry of Education, Youth and Physical Education, and contains the following information on the University for the respective year: basic information on the university, its organizational structure and bodies and their staffing, the mission, vision and strategic plan of the University, legal framework for the University's activities (amendments to internal regulations), accredited study programmes at the University, interest in study and admission, number of students and success rate, number of graduates and their employability, students with special needs, student accommodation, sports and leisure time activities of students, social arrangements for students (scholarships etc.), study and information centre for students, PhD. programme, life-long education, number of academic staff and other employees of the University, habilitation and professorial process, social arrangements for teachers and employees, premises of the University, equipment, information technologies, activities at the clinics (specialized veterinary activities) and other specialized activities, activities of the Agricultural School Farm, scientific and research efforts (institutional research, specific university research, research based on grant and other projects, contractual research with companies and institutions, ICRC research, CEITEC research), publication output (in particular publication in "impact factor" science journals), science and specialized conferences organized by the University, cooperation with the practice sector, international cooperation, internal and outside quality assurance, national and international excellence of the University, development of the University, financing of the University, strengths and weaknesses of the University. AR UVPS Brno further contains an assessment of performance of LTP UVPS and the LTP UVPS Update for the respective year, and an evaluation of IP UVPS Brno for the respective year, as well as an evaluation under the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine at UVPS Brno for the respective year, as well as Student Training Quality Assessment.

AR UVPS Brno represents an official document on the University's activities during the respective year. AR UVPS Brno is drawn up by the Rector and reviewed and approved by the University's management, the Rector's Advisory Board, the University's Science Council, Executive Council and the Academic Senate. AR UVPS Brno is then reviewed and approved by the Ministry of Education, Youth and

Physical Education, and is available at the webpages of UVPS Brno.

1.2 Comments

1.2.1 Achievement of plans and goals

UVPS Brno has a comprehensive system in which strategic and specific goals of the University are defined and their achievement assessed.

The University's plans are outlined in the Long-term Plan of Educational and Scientific, Research, Development, Innovation and Other Creative Activities of the University of Veterinary and Pharmaceutical Sciences for 2011–2015 (LTP UVPS), plans specified for the respective year are outlined in the LTP UVPS Update for the respective year (LTP UVPS Update), and it includes the Institutional Development Plan of UVPS Brno for the respective year (IP UVPS Brno) which sets forth specific performance indicators for the respective year, and defines their initial and target values.

Treating a dog

The status of achievement of the plans set forth in LTP UVPS, LTP UVPS Update and IP UVPS Brno, as well as a further evaluation of activities in the respective year, is covered by the is covered by the Annual Report on Activities and Evaluation of Activities of UVPS Brno in the respective year (AR UVPS Brno) which also includes an assessment of veterinary training by students. The University's System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine evaluates veterinary training in the respective year in terms of facilitation of veterinary training, and an overall evaluation is included in the AR UVPS Brno for the respective year.

The documents show that the goals set for veterinary training are being achieved. For instance, according to the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine for 2012, all of the 25 verbal indicators (with a number of sub-indicators) and all of the 50 numeric indicators of veterinary training quality have been met.

1.2.2. Main strengths

The University has the following strengths:

- adequate quality of education in the areas of veterinary medicine, veterinary hygiene and ecology within the meaning of EU Directive No. 2005/36/EC, on the recognition of professional qualifications, and meeting further requirements placed on veterinary education by European institutions,
- clinical facilities on campus with numerous patients representing all important types of animals, organized by animal species (dogs, cats, horses, birds, reptiles, small mammals, pigs and ruminants), which facilities provide out-patient, surgical, intensive and in-patient care, and modern and well equipped facilities of the Small Animal Clinic, Avian and Exotic Animal Clinic, Equine Clinic, Ruminant and Swine Clinic,
- a traditionally strong position in the teaching of food hygiene, in particular in the food hygiene educational track thanks to the number of subjects, laboratory work, activities in the Meat and Fish Technology Workshop, the Dairy Pilot Technology Plant, at the University's abattoir and at an abattoir in Tišnov under contract; the existence of a modern Hygiene Clinic is also significant,
- quality study conditions for the students in the modern Study and Information Centre offering a great quantity of literature, journals and access to specialized databases and databases of scientific literature,
- a significant level of integration of teaching between the veterinary faculties, whereby the relevant capacities of core subjects can be concentrated at the respective faculty for which premises, equipment, materials and staffing are fundamental in terms of its professional focus,
- extraordinary interest in the study, with the number of applications exceeding the possibilities of UVPS Brno severalfold,
- study programmes in Veterinary Medicine and Veterinary Hygiene and Ecology accredited by the national Accreditation Board of the Ministry of Education,
- implementation of an accredited Master's programme in Veterinary Medicine in English, implementation of an accredited Master's programme in Veterinary Hygiene and Ecology in English,

- quality practical training at clinics, workstations and abattoirs, laboratories, but also at the Agricultural School Farm in Nový Jičín and other facilities of UVPS Brno,
- specialized facilities for research and education using highly pathogenic microorganisms, pathogenic microorganisms, parasites, genetically modified microorganisms, radioisotopes, hazardous chemical substances, addictive substances, pharmaceuticals and precursors, and for experimenting on animals,
- a system of doctoral programmes offering quality doctoral education,
- research activities supported by grant work from grant agencies, institutional support for research institutions, specific university research of the University and contractual research conducted with organizations, institutions and businesses,
- participation in excellent research under large-scale projects involving multiple Brno universities and research institutes and hospitals, CEITEC (Central European Institute of Technology) and ICRC (International Clinical Research Center),
- successful publication activities on the part of UVPS Brno, in particular in "impact factor" journals,
- the University's own journal, Acta veterinaria Brno, included in the Web of Science database, and a marked foreign interest in publication concerning the journal,
- growing mobility of student and academic staff not only within Europe but also toward the United States of America,
- concentration of educational and research facilities of the University on the single campus of UVPS Brno whereby unique conditions are created for the collaboration between the faculties and individual facilities within the University in the area of veterinary education and research,
- Agricultural School Farm in Nový Jičín where practical training, research and specialized activities can be pursued in the fields of veterinary medicine, veterinary hygiene and ecology in animal breeding context,
- a unique university campus creating comprehensive prerequisites for veterinary study,
- the ongoing new construction, remodeling and modernization of buildings on the campus of UVPS Brno in order to secure premises conforming to the growing requirements applicable to quality veterinary training and research.

1.2.3. Main weaknesses

The following facts may be deemed to be weaknesses:

- the high financial cost of veterinary training which leads to a lack of funds at the University,
- lower remuneration of teachers and other university staff compared to the remuneration of veterinary surgeons, in particular in private veterinary practice, caused by the

Production of dairy products

limited funding of education provided by the Ministry of Education, Youth and Physical Education,
- teaching overload of some of the academic staff,
- a higher drop-out rate,
- teaching overload of some of the facilities, in particular clinics,
- lack of state funding for the modernization of technical equipment,
- another of the University's weaknesses are also the declining opportunities for teaching in the area of food animal diseases caused by diminishing opportunities for access to food animal breeding facilities on the part of their owners,
- the necessity to remodel and modernize some of the buildings on campus, in particular the Centre for Avian Medicine annex, the Building of Veterinary Public Health & Animal Welfare Department and Department of Biology & Wildlife Diseases, and completion of the Student Cafeteria and Student Locker Centre, and relocation of the University Car Transport and Campus Maintenance Centre,
- frequent and fundamental amendments to laws and related legal regulations with relevance in particular for legal relations, public procurement, capital expenditure projects and economic arrangements for the University's operation.

1.3 Suggestions

The University has been achieving its strategic plans and objectives in the area of veterinary education. Nonetheless, there are factors capable of restraining the University's positive development in the area of veterinary education.

Factors constraining the development of UVPS Brno lie outside its control. The following facts pose risks:

Practical training

- a further limitation of support to university education in the state budget of the Czech Republic, while the financial costs of veterinary training continue to grow, could paralyze quality development of veterinary training at UVPS Brno should the level of statutory financing decline,
- change of the legal environment and economic conditions in the Czech Republic with regard to the options of obtaining further extra funding from the veterinary activities performed, study programmes taught to self-payers in English, and other,
- changes in European and national financial programmes that would reduce mobility available to students and academic staff,
- inadequate support from the Ministry of Education, Youth and Physical Education for building alterations and construction at UVPS Brno,
- a significant increase in the scope of administrative documents of the University required by laws and other regulations in the legal, management, economic and administrative areas constrain the University's own activities.

ORGANISATION

2.1 Factual information

2.1.1 Details of the University

Name of university:	University of Veterinary and Pharmaceutical Sciences
Address:	Palackeho 1-3, Brno 61242, Czech republic
Telefon:	+420 541 562 000
Fax:	+420 549 250 478
E-mail:	rector@vfu.cz
Website:	www.vfu.cz
Title and name of head of university:	Prof. MVDr. Vladimír Večerek, CSC., MBA

2.1.2 Structures showing the University in relation to the ministerial structure and others

The University of Veterinary and Pharmaceutical Sciences is one of 26 public universities in the Czech Republic, a single university in the Czech Republic which provides veterinary education, and one of two which provide pharmaceutical education.

The Ministry of Education, Youth and Physical Education is the authority of competent jurisdiction governing universities in the Czech Republic, in particular with a view to the allocation of funding and legal compliance.

The Accreditation Board of the Ministry of Education is the body overseeing the quality of universities: it assesses how education is provided at universities, in particular in terms of the quality of study programmes and other conditions related to education. Every study programme implemented by a university must be accredited by the Accreditation Board of the Ministry of Education. Prior to accreditation, the university must prepare accreditation materials and documentation which is subsequently assessed by the Accreditation Board and accreditation is then granted for a specific number of years.

2.1.3. University governance

UVPS Brno is a university consisting of three faculties. The University is managed by the Rector to whom three Vice-rectors deputizing for him are subordinated – the Vice-rector for Strategy and Development, the Vice-rector for Science, Research and Foreign Relations, and the Vice-rector for Education. Economic management and administration is entrusted to the Bursar. Self-governance at the University is conducted through the University's Academic Senate. The Executive Council of the University attends in particular to matters of economic management. Issues re-

Building of Rectorate

lated to activities in the areas of science and education are addressed by the University's Science Council. Veterinary training at the University is coordinated and its quality supervised by the Veterinary Training Board. For the sake of a more efficient management of the University, the Rector establishes advisory bodies, in particular the Management of UVPS Brno, Rector's Advisory Board, and other advisory bodies of the Rector (expert commissions and councils).

Meeting of the University's Science Council

The Rector manages the Rectorate which consists of the Rector's and Bursar's sections. The Rector's section is managed directly by the Rector and consists of departments in charge of administration and management – Rector's Secretariat, Law Department, Human Resources Department, Department of University Projects Administration, Department of Surveillance, Security, Work Safety, Health and Fire Protection, Department of Internal Audits, Department of Public Relations and Department of Quality Evaluation. The Rector further manages other work facilities, namely, CEITEC – Central European Institute of Technology, UVPS Brno and ICRC UVPS Brno.

The Bursar's section is managed by the Bursar and comprises individual organization units taking care of the economic and administrative running of the University – Bursar's Secretariate, Economic Department, Department for Labour and Wages, Department of Investment and Property Management, Department of Administration Documents, Department of Estate management and Building Service, Department of Transportation. The Bursar further manages other work facilities, namely, the Centre of Information Technologies, Accommodation and Canteen Centre on the campus of UVPS Brno, Kaunic Student Residence Hall in Brno, Nový Dvůr Accommodation and Canteen Centre and Hustopeče Centre.

Through his Vice-rectors, the Rector manages facilities that serve the entire University. The Vice-rector for Education manages the Secretariat of the Vice-rector for Education, Institute of Lifelong Learning and Informatics, Department of Foreign Languages and History of Veterinary Medicine, a Department of Sports and Physical Education. The Vice-rector for Science, Research and Foreign Relations manages the Secretariat of the Vice-rector for Science, Research and Foreign Relations, as well as the Study and Information Centre (Central Library, Acta veterinaria Brno journal). The Vice-rector for Strategy and Development manages the Secretariat of the Vice-rector for Strategy and Development, Agricultural School Farm Nový Jičín and Institute of Wildlife Ecology.

The Rector is nominated by the academic community of the University and elected by the University's Academic Senate. The proposal based on the election made is then submitted to the Ministry of Education, Youth and Physical Education, and subsequently to the Czech president through the Ministry of Education. The president appoints the proposed candidate as rector for a period of 4 years. One and the same person may serve as rector for a maximum of 2 consecutive terms of office.

A Vice-rector is nominated by the Rector, the proposal is discussed by the University's Academic Senate, following which (no approval is required) the Rector appoints the Vice-rector for a 4-year term of office.

The Bursar is appointed by the Rector.

Members of the Academic Senate are elected by the academic community of the University (teachers and students) by way of elections for a 3-year term.

Members of the University's Executive Council are appointed for a 2-year term by the Minister of Education, Youth and Physical Education in consultation with the Rector.

Members of the Science Council of the University are nominated by the Rector, every member so nominated must be approved by the Academic Senate of the University, and the members are subsequently appointed for a 4-year term (expiring concurrently with the Rector's term of office). One third of the members must come from outside the University.

Heads of the individual departments and facilities are selected by way of a selection process and appointed by the Rector.

UVPS Brno cooperates with the veterinary profession which is in turn involved in activities pursued by various bodies of the University. Collaboration at the level of sate medicine and veterinary hygiene involving the State Veterinary Administration (SVS) and Regional Veterinary Administrations is particularly significant (SVS's representatives serve on the University's Science Council), at the level of private veterinary practice, with the Chamber of Veterinary Surgeons of the Czech Republic (KVL CR) (KVL CR has its seat on campus, in the University's building), at the level of veterinary pharmaceuticals, with the Institute for State Control of Veterinary Biologicals and Medicines (which has a representative on the Science Council of the University), the Veterinary Research Institute in Brno (VÚVeL) (its representatives are the University's staff), with state veterinary diagnostic institutes, Associations of Veterinary Surgeons, in particular those specializing in the diseases of cattle, pigs,

small animals, horses (organizing of educational events for veterinary surgeons), and the Association of Veterinarians of the Czech Republic (a UVPS representative is involved in the Association), breeders of hobby (companion) and food animals, food processing companies.

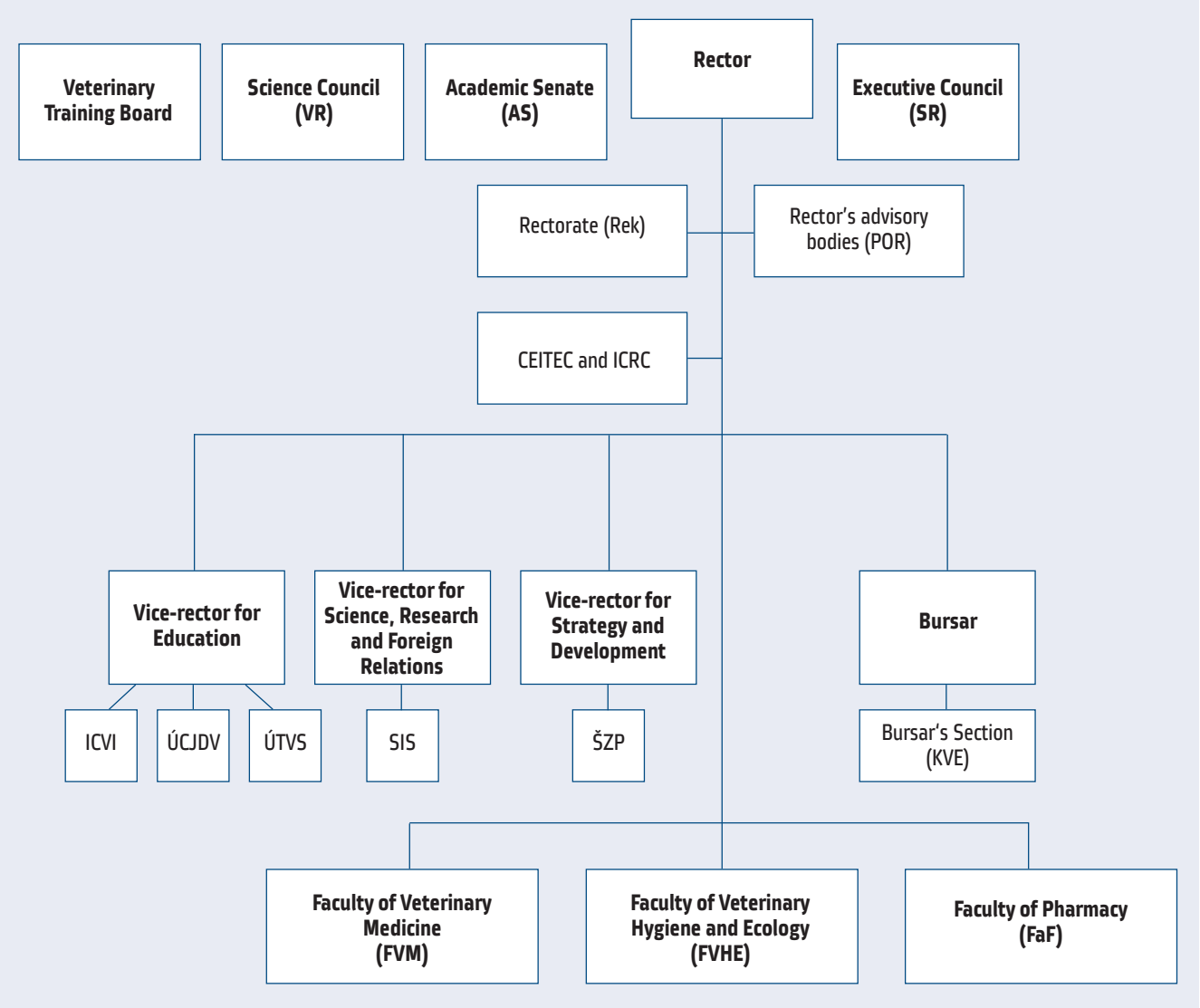
The public takes part in the University's activities through its Executive Council whose members include for instance the abbot of the Old Brno Abbey, governor of the South Moravia Region, Deputy Lord Mayor of Brno, representatives of the Ministry of Education, Youth and Physical Education, members of the Parliament of the Czech Republic and others; they approve important development, evaluation and control reports of the University, its budget, etc.

2.1.4 Internal structure of the university

AS	Academic Senate
SR	Executive Council
VR	Science Council
Rek	Rectorate
POR	Rector's advisory bodies
RVV	Veterinary Training Board
CEITEC	CEITEC – Central European Institute of Technology, UVPS Brno
ICRC	ICRC – International Clinical Research Center, UVPS Brno
ICVI	Institute of Lifelong Learning and Informatics
ÚCJDV	Department of Foreign Languages and History of Veterinary Medicine
ÚTVS	Department of Sports and Physical Education
SIS	Study and Information Centre
ŠZP	Agricultural School Farm Nový Jičín
KVE	Bursar's section
FVM	Faculty of Veterinary Medicine
FVHE	Faculty of Veterinary Hygiene and Ecology
FaF	Faculty of Pharmacy

2.1.5 Faculties

The University consists of three faculties, the Faculty of Veterinary Medicine (FVM), the Faculty of Veterinary Hygiene and Ecology (FVHE) and the Faculty of Pharmacy.



Veterinary training takes place at the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology.

The Faculty of Veterinary Medicine undertakes and warrants the study programme of veterinary medicine in the clinical veterinary medicine track, with an emphasis on hobby (companion) animals (dogs, cats, horses, birds, reptiles, small mammals) –Veterinary Medicine study programme.

The Faculty of Veterinary Hygiene and Ecology undertakes and warrants the veterinary study programme in the track of food hygiene and clinical veterinary medicine of food animals (in particular ruminants and pigs) – Veterinary Hygiene and Ecology study programme.

The faculties cooperate closely and the level of integration between them is high.

Each faculty is managed by its Dean, with two Vice-deans deputizing for and subordinated to the Dean – the Vice-dean for Education and the Vice-dean for Science, Research and Foreign Relations. Economic management and administration of the faculty is entrusted to the Registrar. Self-governance at the faculty is conducted through its Academic Senate. Issues related to activities

Clinical training

in the areas of science and education are addressed by the faculty's Science Council. The Dean establishes advisory bodies for faculty management purposes, namely, the Dean's Advisory Board and advisory bodies of the Dean (expert commissions and councils).

Education, scientific and research activities, specialized veterinary activities, as well as other activities, if any, are conducted in specialized departments and at clinics, departments and work facilities within the departments.

The Dean is nominated by the faculty's academic community and elected by the Academic Senate of the faculty. The proposal based on the election made is then submitted to the Rector. The Rector appoints the proposed candidate as Dean for a 4-year term of office. One and the same person may serve as dean for a maximum of 2 consecutive terms of office.

A vice-dean is nominated by the Dean, the proposal is discussed by the faculty's Academic Senate, following which (no approval is required) the Dean appoints the Vice-dean for a 4-year term of office.

The Registrar is appointed by the Dean of the faculty.

Members of the Academic Senate are elected by the academic community of the faculty (teachers and students) by way of elections for a 3-year term.

Members of the Science Council of the University are nominated by the Dean of the faculty, every member so nominated must be approved by the Academic Senate of the faculty, and the members are subsequently appointed for a 4-year term (expiring concurrently with the Dean's term of office). One third of the members must come from outside the University.

Heads of the individual departments, clinics, departments and work facilities of the faculty are selected by way of a selection process and appointed by the Dean.

2.1.5.1 Faculty of Veterinary Medicine

The mission of the Faculty of Veterinary Medicine is to carry out educational, scientific and other academic activities, as well as specialized veterinary activities in the area of veterinary medicine, with a focus on diagnostic, therapeutic and preventative veterinary medicine.

The Faculty of Veterinary Medicine has a Dean's Office and specialized sections consisting of the following clinics and departments:

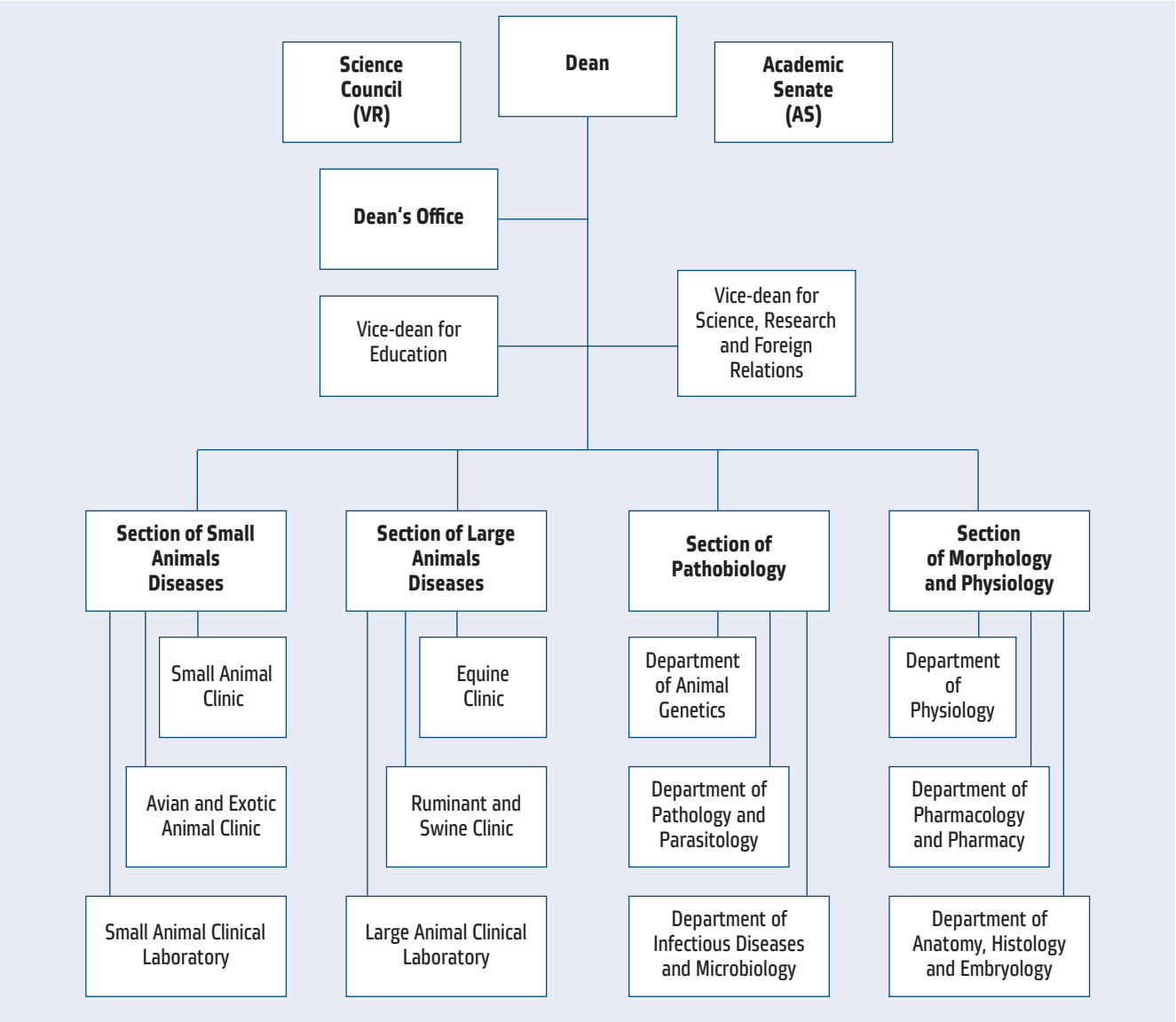
Dean's Office
Section of Small Animals Diseases
- Small Animal Clinic
- Avian and Exotic Animal Clinic
- Small Animal Clinical Laboratory

Section of Large Animals Diseases
- Equine Clinic
- Ruminant and Swine Clinic
- Large Animal Clinical Laboratory

Section of Pathobiology
- Department of Pathology and Parasitology
- Department of Infectious Diseases and Microbiology
- Department of Animal Genetics

Section of Morphology and Physiology
- Department of Anatomy, Histology and Embryology
- Department of Physiology
- Department of Pharmacology and Pharmacy

The faculty has a symmetric structure based on 4 sections, with 3 clinics or departments within each section.



For FVM, collaboration with the Chamber of Veterinary Surgeons of the Czech Republic in which veterinary surgeons with private practices are associated is most significant. FVM collaborates with private veterinary surgeons very closely in the actual teaching process whereby they take part in the teaching process in the form of both lectures and practical training. The involvement of private veterinary surgeons in managed training during veterinary practice in the 6th year at veterinary clinics and livestock and hobby animal breeding facilities is also important. Representatives of the Chamber of Veterinary Surgeons of the Czech Republic sit on boards administering the final state examinations, on the Science Council of FVM which approves study programmes and which reviews the report on educational activities, including the administration of training, at the faculty every year.

FVM also collaborates with professional veterinarian associations that focus on the diseases of cattle, pigs, small animals, horses and other. It also cooperates with breeders of hobby and food animals. In the area of state veterinary medicine, it collaborates with the State Veterinary Administration.

2.1.5.2 Faculty of Veterinary Hygiene and Ecology

The mission of the Faculty of Veterinary Hygiene and Ecology is to carry out educational, scientific and other academic activities, as well as specialized veterinary hygiene activities in the area of food hygiene, public health and food animals.

The Faculty of Veterinary Hygiene and Ecology has a Dean's Office, facilities serving the entire faculty and specialized sections consisting of the following departments:

Dean's Office

Section of Veterinary Ecology and Wildlife Diseases

- Department of Biology and Wildlife Diseases
- Department of Ecology and Diseases of Game, Fish and Bees

Section of Animal and Plant Production

- Department of Animal Nutrition
- Department of Animal Husbandry and Animal Hygiene

Section of Food Hygiene and Technology

- Department of Meat Hygiene and Technology

- Department of Milk Hygiene and Technology
- Department of Vegetable Foodstuff Hygiene and Technology

Section of Veterinary Protection of Public Health

- Department of Veterinary Public Health, Animal Protection and Welfare
- Department of Biochemistry and Biophysics

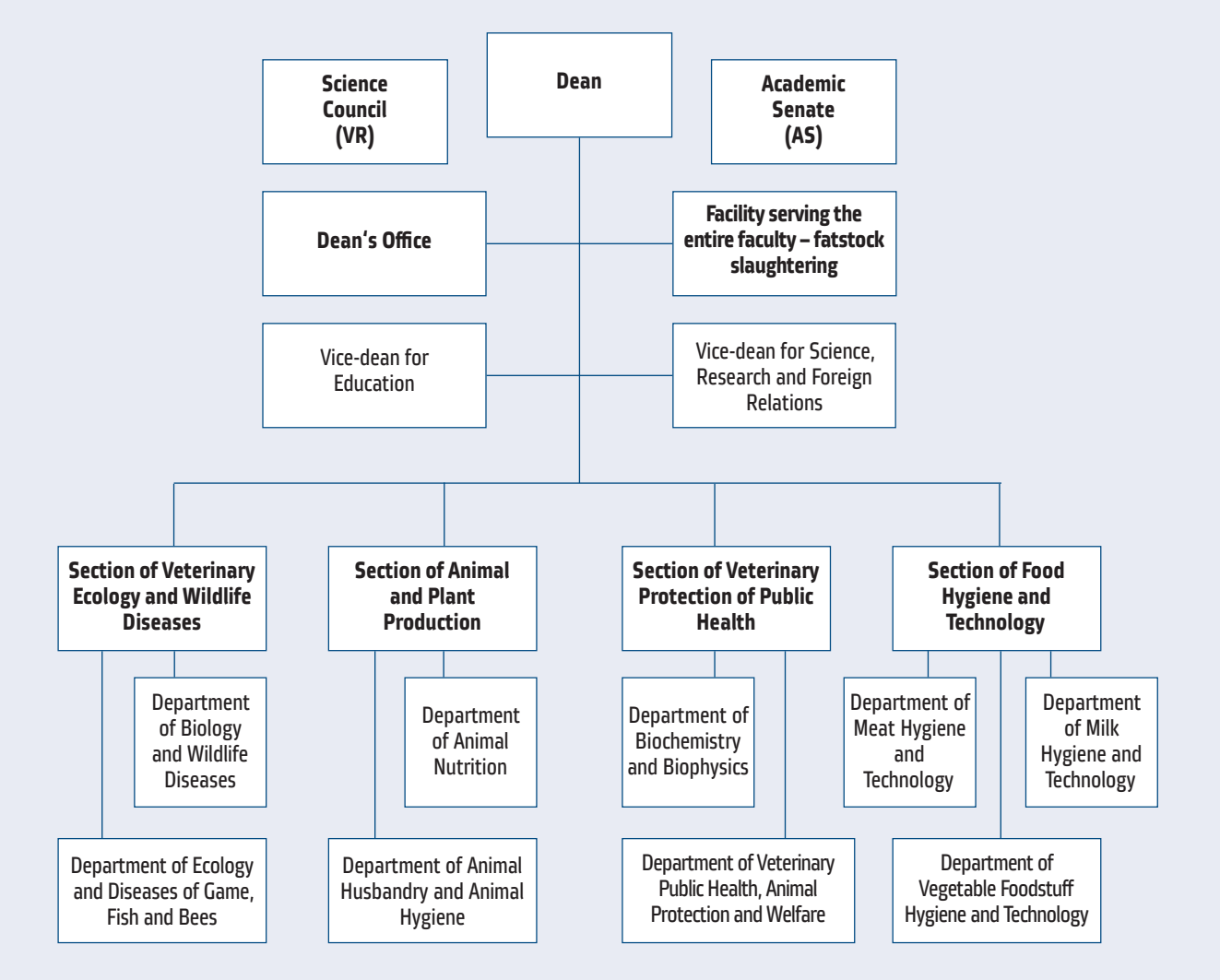
Facility serving the entire faculty

- Fatstock Abattoir

Of the veterinary profession, FVHE's collaboration with the State Veterinary Administration of the Czech Republic (SVS ČR) which employs most of FVHE's graduates is of the greatest importance. The faculty involves veterinarians in the teaching process in the form of both lectures and practical training. Institutions of the State Veterinary Administration offer internships and work experience as part of their study programmes. The participation of SVS ČR's representatives in the Science Council of the faculty which approves study programmes, including any innovations thereto, and where the annual report on educational activities is reviews, is a form of direct involvement in the activities of the Faculty of Veterinary Hygiene and Ecology.

Department of Pharmacology and Pharmacy

FVHE also collaborates with the professional association, the Association of Veterinarians of the Czech Republic, as well as food-processing companies. In the area of private veterinary practice, it also collaborates with the Chamber of Veterinary Surgeons of the Czech Republic.



2.2 Comments

There is a high level of integration between the faculties and the University at UVPS Brno. The University takes care of operations shared by the entire University and the faculties, in particular in the areas of financial management, economy, investments, maintenance of the campus, buildings and equipment, energy and administration. The faculties undertake educational, research, academic and specialized veterinary and hygiene activities. The high level of integration eliminates organizational duplicities in veterinary training.

The organization of veterinary training at the University into two track differentiations is a long-standing tradition (since 1975) whereby every track is pursued by one faculty: the Veterinary Medicine track focusing on clinical veterinary medicine with an emphasis on hobby animals is undertaken by the Faculty of Veterinary Medicine (FVM), while the Veterinary Hygiene and Ecology track focusing on food hygiene and livestock is undertaken by the Faculty of Veterinary Hygiene and Ecology (FVHE). The two-faculty structure is based on a tradition of 23 years (since 1990) and gives the University external credibility and economic advantages (better access to funding), strengthens the University's independence and supports its internal stability. For those reasons, the University has retained its two-faculty structure.

Veterinary educational activities at the University are coordinated by the Veterinary Training Board. The Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology cooperate very closely in both tracks in the delivery of educational training.

The University's cooperation with veterinary practice is also significant for the area of veterinary training, and cooperation with major external veterinary organizations is very close.

With a view to the University's development as a centre of excellence, the activities of veterinary clinics and food hygiene facilities at the University are important, as is involvement in large research centres, namely, the Central European Institute of Technology (CEITEC) which serves as an umbrella organization for the establishment and activities of a European centre of scientific excellence integrating research in the field of life sciences and advanced materials and technology. CEITEC is located in Brno and selected Brno universities and selected research institutions take part in it. The University is further involved in the project of the International Clinical Research Center – ICRC Brno (ICRC) implemented at St. Anne's University Hospital in Brno (FNUSA), with the U.S. Mayo Foundation for Medical Education and Research (Mayo Clinic) as the strategic partner. The project focuses on medical research, in particular in the area of cardiovascular, neurological and oncological diseases in humans. UVPS Brno collaborates on the project in the part dedicated to experimental verification of new findings on animal models, in particular pigs.

2.3 Suggestions

The organizational structure of the University comprises operations and facilities required for its activities as a whole.

Faculty of Veterinary Medicine is more or less completed in terms of organization.

At the Faculty of Veterinary Hygiene and Ecology, it would be appropriate to specify the mission of the Department of Biochemistry and Biophysics within the organizational structure of the faculty more precisely.

Testing a new device for hepatectomy under the ICRC project

FINANCES

3.1 Factual information

3.1.1 General information

The University of Veterinary and Pharmaceutical Sciences obtains funding for the delivery of veterinary training, research and veterinary activities from several sources. Such funds are allocated within the University to individual parts and activities of the University for the pursuit of veterinary training, research and other activities (veterinary care, etc.). The financing model is based on the amount of funding available, contains an incentive system based on performance indicators stipulated by the Ministry of Education, Youth and Physical Education, or on the volume and quality of veterinary activities or education in English, and currently makes it possible to attain a good standard of procurement of the scope and quality of veterinary education at the University.

Veterinary training and other activities at the University of Veterinary and Pharmaceutical Sciences are financed out of several sources of funding. The amount of funding is determined according to a system applicable to the respective funding source. The following sources of funding in particular are involved:

1) University's income from the state for the purpose of veterinary education and research
   - income from the state for educational activities,
   - income from the state for the purpose of scientific research (institutional support to research organizations),
   - income from the state for student research (specific research at university level).

2) University's income for grant research, veterinary activities and teaching in the English study programme
   - income for research obtained under scientific and research programmes, grants and similar research activities,
   - income from veterinary services,
   - income from services in the area of education provided in English.

3) Income from students.

4) Income for construction and capital expenditure – equipment.

Main gate of the University of Veterinary and Pharmaceutical Sciences Brno

Central park on campus is a pleasant place for relaxation

3.1.1.1 University's income from the state for the purpose of veterinary education and research

3.1.1.1.1 Income from the state for educational activities

The University receives these funds from the Ministry of Education, Youth and Physical Education, and the amount of funding is determined on the basis of two components: 80% is determined on the basis of a standard amount per student applicable to all universities, financial requirements of the field of study (a coefficient of 3.5 applies to veterinary education), and the number of students; 20% is determined on the basis of performance indicators of the respective university, which indicators concern in particular the extent and quality of scientific publications (a nation-wide scoring system), funds obtained for scientific activities in grant competitions, funds generated by the university itself (e.g., for services rendered), the number of associate professors and professors, the number of foreign students in study programmes, the number of self-paying foreign students in study programmes, and student mobility. The University thus receives approx. EUR 4,000 per veterinary student which is well above the average per student at universities in the Czech Republic.

3.1.1.1.2 Income from the state for the purpose of scientific research – institutional support to research organizations

The University receives these funds from the Ministry of Education, Youth and Physical Education, and the amount is based on the extent and quality of scientific publications (there is a nation-wide scoring system under which every scientific publication is allocated a score based on quality given by the status of the journal according to the impact factor on the list of journals in that field) over the last five years. These funds amount to approx. EUR 2,080,000 per year, and the amount is above the average figure applicable to a university in the Czech Republic, taking the size of UVPS Brno into account.

3.1.1.1.3 Income from the state for student research (specific research at university level)

The University receives these funds from the Ministry of Education, Youth and Physical Education. The amount of funding is derived from selected indicators, in particular indicators of the University's scientific performance related to education in doctoral and Master's study programmes. The calculation is based on the quantity and quality of eligible outputs (in particular quality scientific publications) stemming from the University's scientific and research activities, as well as the number of Master's programme graduates, the number of students in the doctoral programme and the number of doctoral programme graduates. The amount of funding reflects the proportion of these indicators of the University to those attained by other universities. Funding from this source amounts to approx. EUR 480,000 per year, and exceeds the average figure applicable to a university in the Czech Republic, taking the size of UVPS Brno into account.

3.1.1.2 Allocation of the University's funds to veterinary education and research

Funds obtained by the University are allocated to veterinary education as follows: the University's funding serves as a basis for a draft budget, i.e., fro allocations to individual parts and activities of the University. The budget is proposed by the Rector, reviewed by the University Management, the Rector's Advisory Board, Science Council of the University, discussed with the University's trade unions, deans of the individual faculties, reviewed by the Executive Council of the University, discussed with the economic commission of the University's Academic Senate, and subsequently presented for review and approval to the University's Academic Senate.

The budget contains funding for educational activities, and the first part thereof is dedicated to educational activities proper provided by the faculties. This amount of budgetary funds is allocated to the faculties on the basis of a calculation identical to that used by the Ministry of Education, Youth and Physical Education to allocate funding to the University (i.e., consideration is given to the number of students, standard amount per student and a coefficient expressing financial requirements of veterinary training – veterinary training thus receives higher funding than other training with a lower financial coefficient (for instance, pharmacy), as well as the pro rata share of veterinary training in performance indicators). The second part is intended for the common expenses of the University and the faculties (for instance, access to electronic information sources, connection to the national scientific computer network, CESNET, the Centre of Information Technologies, telephone switchboard, utilities, maintenance of utility facilities, motor vehicles, waste disposal, campus services, work safety and health protection, real property maintenance and repair, campus security, taxes, insurance, depreciation, operation of the Rectorate, and other). The joint budget includes funds for the maintenance and repair of buildings and equipment which are applied as need for repairs; repairs are proposed by clinics and departments. Drawing from the budget is approved by the Bursar, or by the Rector, as the case may be.

The budget further includes funding for research activities, specifically, institutional support to research institutions and specific university research. These funds are allocated to faculties in full (100%) using a calculation identical to that used for the allocation of funds to the University by the Ministry of Education, Youth and Physical Education.

3.1.1.3 Allocation of funds for veterinary training and research by the faculty

Funds received by the faculty from the University's budget are allocated to veterinary training as follows. University funding serves as a basis for the draft budget of the faculty, i.e., for its allocation to individual parts of the faculty and the individual activities pursued by the faculty. The faculty budget is proposed by the Dean, it is reviewed by the faculty's Board of Advisors, generally reviewed by the Science Council of the faculty, discussed by and submitted for approval to the Academic Senate of the faculty.

The budget contains funding for educational activities; the first part is intended for the individual clinics and departments for activities in the area of veterinary training. Allocation of funds between the individual departments and clinics takes account of the scope and financial requirements of teaching performed by the respective department or clinic. The second part covers joint expenditure of the faculty (e.g., utilities, operation of the Dean's Office, salaries of all the faculty staff, etc.).

The budget further contains funds for research activities under institutional support to research institutions and specific university research. A part of these funds covers joint expenditure of the faculty (e.g., utilities consumed in the research process, salaries of faculty staff related to research, etc.). The budget further contains funds which are allocated to individual clinics and departments for research activities. These amounts are based on the pro rata share of individual departments and clinics in research activities. The budget further contains funds for specific university research. Funds are allocated up to the amount allocated to the faculty by the University through the Internal Grant Agency to which grant applications are submitted by students or young teachers in order to obtain research funding.

The Department of Anatomy, Histology and Embryology and the Department of Physiology

3.1.2 Information on extra income

3.1.2.1 Extra income for research, veterinary activities and teaching in the English study programme

3.1.2.1.1 Income for research obtained under scientific and research programmes, grants and similar research activities

The University obtains such funding from entities providing research funding, in particular grant agencies, for projects won in public grant competitions. The amounts vary year from year, and range (e.g., in 2012) around EUR

1,360,000 per year. The funds are allocated to the respective faculty, and costs of activities performed using facilities serving the entire University are deducted from the amount at a rate stipulated in the grant project.

3.1.2.1.2 Income from veterinary services

The University obtains these funds for veterinary services rendered from clients and other institutions to whom the University provides veterinary diagnostic, therapeutic and preventative services. The University generates approximately EUR 2,000,000 per year in this manner. The funds are allocated to the respective faculty, and costs of activities performed using facilities serving the entire University (approx. 15%) are deducted from the amount.

3.1.2.1.3 Income from services in the area of education provided in English

The University obtains these funds as payments from students to whom veterinary training is provided in English. The payment per student is EUR 7,600 per year. The total amount of this income from veterinary training is approx. EUR 1,360,000 per year. The funds are allocated to the respective faculty, and costs of activities performed using facilities serving the entire University (approx. 10%) are deducted from the amount.

After graduation, students like to take pictures astride Ardo, a horse statue by the sculptor Josef Václav Myslbek

3.1.2.2 Income from students

The standard study period is financed by the state in full (100%). Students only pay fees towards costs exceeding the state-paid study, as follows:

- administrative fee for the admission procedure EUR 20, the fee is set by the University. The funds so obtained are used by the faculty,
- fee for study exceeding the standard study period plus one year (i.e., for study in the eighth and subsequent years of study); the amount is set as a threshold by the Ministry of Education, Youth and Physical Education EUR 2,000 and the specific amount set by the University at EUR 400. The funds so obtained are deposited in the faculty's scholarship fund and scholarships paid out to students out of it,
- a fee for study in another study programme (i.e., if the student is enrolled in another study programme financed by the state concurrently, he/she pays a fee in such other study programme; the amount is set as a threshold by the Ministry of Education, Youth and Physical Education (max. EUR 112), and the specific amount set by the University at EUR 112. The funds so obtained are deposited in the faculty's scholarship fund and scholarships paid out to students out of it,
- fee for the issuance of ISIC card – students pay EUR 9 per card.

3.1.2.3 Income for construction and capital expenditure – equipment

3.1.2.3.1 Income for construction

In addition to funding for education, research and extra funding for research, veterinary activities and the English study programme, the University receives funding for construction, i.e., the construction of new premises, remodeling and modernization of buildings. The amount of such funding depends on negotiations between the Rector and the Ministry of Education, Youth and Physical Education concerning the University's plans for construction, remodeling or modernization of its buildings. The provision of such funding depends on whether the Ministry of Education, Youth and Physical Education finds the construction necessary in line with the plans of the Ministry of Education, Youth and Physical Education with regards to capital expenditure in the area of modernization of universities (some construction projects are and some are not eligible for financing), on the amount of funding the Ministry of Education, Youth and Physical Education has at its disposal for capital expenditure in the area of modernization of universities in that particular year, and on a complex system of review and approval, as well as options permissible under the law and under the internal regulations and operating procedures of the Ministry of Education, Youth and Physical Education. Over the last few years (between 2006 and 2013), the University succeeded in obtaining a huge sum of money, EUR 43.2 mil-

lion, which amount is well above the standard compared to other universities in the Czech Republic, taking the size of UVPS Brno into account.

3.1.2.3.2 Income for capital expenditure – equipment

Funding for capital expenditure – equipment – is obtained in particular within the budget as the University's income for veterinary training and research financed by the state (in particular funding of institutional support to research organizations), within the budget as extra funding for research (in particular by way of large research projects and grants), for veterinary activities and training in the English study programme, and further as part of funding of construction and equipment installed in the process of construction, as special funding under development programmes for the University pursuant to the University's request (the Institutional Development Plan of the University), and under special large research projects in the region (research project of Brno universities and research institutes, Central European Institute of Technology – CEITEC, and research project of Brno Universities and hospital, International Clinical Research Center – ICRC).

The equipment is allocated to the faculty, clinic or department which contributed to its acquisition, e.g., through a project, grant, publication output, etc.

Magnetic resonance

3.1.3 Overview income (revenue) and expenditure

Tab. 3.1: Income/revenue (Euro)

Year	State (government)		Income generated by the Faculty		Faculty total (c+d+e)
	To university administered outside the Faculty	Direct to Faculty	Income from services provided	Research	
a	b	c	d	e	f
2012	4,981	4,081	2,932	2,616	9,630
2011	5,593	4,593	2,553	2,806	9,952
2010	5,546	4,848	2,426	3,444	10,717

(EUR '000)

Year	Pay	Non Pay				Total
	Salaries	Teaching support	Research support	Clinical support	Other	
a	b	c	d	e	f	g
2012	4,151	1,575	1,882	1,177	676	9,461
2011	4,185	1,648	2,347	1,110	380	9,672
2010	4,688	1,786	2,665	1,152	189	10,480

(EUR '000)

Note: The tables includes income and expenditure related to veterinary training, and does not include income and expenditure related to other education (e.g., a Bachelor's programme in Food Safety and Quality), or education provided at other faculties (e.g., the Faculty of Pharmacy).

Study and Information Centre

3.2 Comments

3.2.1 Income and provisions for veterinary training and research

The University considers the funding allocated by the state to veterinary education inadequate, and if the University did not obtain further funds by providing veterinary services and implementing the English study programme, it would not be able to provide veterinary training at the standard at which it is being provided.

The problem of allocation of funding for veterinary education by the state lies in the coefficient of financial requirements of veterinary training which is set at 3.5 as compared to other study programmes (law =1.00; technical fields = 1.65; agriculture, pharmacy = 2.25; natural sciences, human medicine = 2.8; arts = 5.9). The coefficient does not adequately reflect the high economic demands posed by veterinary training as compared to other fields of study, and would need to be increased; however, for the sake of stable financing of universities, the Ministry of Education, Youth and Physical Education has not considered changing the coefficient.

Another problem is the way performance indicators are set by the Ministry of Education, Youth and Physical Education for the calculation of the performance-based part of the educational budget. Performance indicators are set with a view to large universities offering education in a multitude of fields (i.e., including theoretical), and do not reflect fields with high financial or special requirements, such as veterinary training. For instance, the performance indicator of student mobility cannot be attained in veterinary education to the same extent as in theoretical fields because a student's stay at a foreign veterinary faculty is significantly more costly that the stay of a student at a foreign faculty of humanities, for instance. For that reason, the mobility at UVPS Brno is much lower than at other universities, and that ultimately leads to a lower calculation of funds for veterinary education allocated by the Ministry of Education, Youth and Physical Education.

Another problem is that quality indicators stipulated by EAEVE as indicators of quality of provisions for veterinary training for international evaluations and their attainment are not taken into account by the Ministry of Education, Youth and Physical Education when it sets up the budget for veterinary training, although the University believes that said indicators are more important and evidence the quality of veterinary training better than the indicators stipulated by the Ministry of Education, Youth and Physical Education.

The University views the allocation of funds for research by the state under institutional support to research organizations, as well as allocation of funds for specific university research, the amount of which is obtained by a calculation based on the scientific and publication output, as an incentive, and such funds constitute a rather high share of research funding obtained by the University thanks to its scientific and research performance.

Extra research funding obtained through grant competition brings a certain amount of funding for the University for the pursuit of research, however, due to changes in grant agencies at national level, other fields (a strong focus on theoretical basic research) or fields with a quick practical impact (significant in particular for technical fields) have been gaining preference. Therefore, veterinary medicine fields with a significant share of applied research or research focusing on the development of clinical veterinary medicine or food supervision and inspection can thus expect a decline in funding from this source.

Extra funding obtained through veterinary services provided at clinics constitute an important part of the budget for veterinary training, and the high amount of this funding reflects the efforts of the University and the individual clinics to provide specialized veterinary care to clients on a large scale and at a high quality standard. Given the financial possibilities of clients, a significant increase in the amount of these funds cannot be expected.

Extra funding obtained through teaching in the English study programme is a positive part of the veterinary education budget. The University strives to increase the number of foreign students studying in English, and there is prospective room for further development of the budget whereby a certain number of Czech students could be replaced by students in the English study programme.

It is necessary to give great credit to the approach of the Ministry of Education, Youth and Physical Education to the structural development of the university, as the provision of funding for construction, remodeling and modernization of the University was enormous between 2005 and 2013; thanks to further agreements between UVPS Brno and the Ministry of Education, Youth and Physical Education, a further significant structural modernization of the University can be expected to take place over the next two years. The allocations of capital expenditure funding for equipment could be higher.

3.2.2 Priorities in the event that the University's income increases

Salaries of teachers and other staff involved in veterinary training are the most significant expenditure item of the

Building of the Clinics for Small Animals

University. Although active staff may supplement their base salary with further remuneration for research, veterinary activities and teaching in the English study programme, their salaries on average still do not compare with income from private clinical veterinary practice. In the event that the University's income increases, its priority is to raise base salaries of both teachers and other staff.

Another priority, should the University's income increase, is to improve the quality of equipment in the sense of large systems at clinics (e.g., MRI) and other departments (e.g., an electron microscope) etc.

3.2.3 Flexibility in the application of funds

Multi-source financing gives the University more options in terms of acquisition of funding for veterinary education; at the same time, the strict dedication of such funding restricts flexibility in their application; it needs to be noted that of late, flexibility of application of funds has been becoming highly restricted, to the point of becoming extremely rigid (e.g., as regards the purchase of most equipment, materials, services, public procurement).

3.2.4 Application of extra income from veterinary activities

Extra funding for veterinary services provided to clients and other institutions are used for veterinary training and for the provision and further development of clinical veterinary activities at the University's clinics. 85% of the funds is used directly at the faculty and its clinics, 15 % of the funds is used towards costs of veterinary activities covered by the University as a whole, e.g., towards access to electronic information sources, connection to the national scientific computer network, CESNET, information technologies, certain utilities (water, gas, etc.), maintenance of utility facilities, waste disposal, work safety and health protection, maintenance and repair of buildings, campus security, insurance, administration related to the activities

Building of the Large Animals Clinics

of the clinics (e.g., Economic Department – Accounting, Department of Investment and Property Management, Department of Public Orders, filing room, other).

3.3 Suggestions

Given the limited state funding for veterinary education, the University would appreciate if the evaluation could stress the specific nature and high financial requirements of veterinary education as compared to other fields (e.g., including a comparison at European level) which could in turn be reflected in an increase of the coefficient of financial requirements for veterinary education.

The University would further welcome support with regard to the replacement of performance indicators stipulated by the Ministry of Education, Youth and Physical Education by performance indicators applicable to international evaluation of veterinary education stipulated by EAEVE.

The University further expects that the evaluation will provide it with support with regard to capital expenditure for construction and equipment so that it could modernize veterinary education in future periods.

CURRICULUM

4.1 Factual information

Veterinary training at the University of Veterinary and Pharmaceutical Sciences Brno is undertaken in accordance with a curriculum based on Directive No. 36/2005/EC, on the recognition of professional qualifications, as well as EU directives regulating food safety in particular, experience presented at meetings of the European Association of Establishments for Veterinary Education (EAEVE) and its documents (for instance, SOP), recommendations contained in the 2005 report on the international evaluation of UVPS Brno, Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, as well as the veterinary training traditions of UVPS Brno spanning a period of 95 years.

The concept of the curriculum is proposed by the faculty management, reviewed by the Dean's Advisory Board, the Veterinary Training Board of the University (body for the coordination of veterinary training at the University), reviewed by the Academic Senate of the faculty (self-governance body of the faculty), and approved by the Science Council of the faculty (science body of the faculty) (the curriculum is always reviewed by the Science Councils of both faculties, i.e., the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology). The curriculum must be in accordance with Act No. 166/1999 Coll., on Veterinary Care, which implements Directive 36/2005/EC in the part concerning veterinary training into the legal order of the Czech Republic, and must further be submitted for accreditation to the national accreditation body, i.e., the Accreditation Board Ministry of Education, Youth and Physical Education; the Accreditation Board generally grants curriculum accreditation for 6 to 12 years (an extension of the accreditation has to be applied for upon the elapse of this period).

Changes to the curriculum must respect the concept of the curriculum, Act No. 166/1999 Coll., on Veterinary Care (and by extension Directive No. 36/2005/EC), and the principles of university education and conditions for veterinary training approved by the Accreditation Board. Nevertheless, there is some room for changes to the curriculum and for supplementation or reduction of certain subjects, in particular compulsory electives and electives, for changes in the scope of training in the individual subjects, etc. However, such changes must always be proposed

Lacture hall in the Hygiene Clinic

and approved using the applicable procedures at the faculty and at the University (i.e., review by faculty management, Dean's Advisory Board, Veterinary Training Board of the University, approval by Science Council of the faculty). This procedure includes approval of the extent of training and its distribution between theory and practical training (i.e., the scope of lectures and practical training work) in individual subjects.

Subjects on the curriculum include subjects or training in the extent required by Directive No. 36/2005/EC, on the recognition of professional qualifications (EU subjects), and follow up training on the training defined by the scope of the EU subjects. Further extra training in subjects outside the EU subjects focuses on the language skills of the students, or further forays into ecology, or special-interest training, such as fishery, bee-keeping, riding, sports, etc.

Practical training in milk hygiene and technology

The final approval of the curriculum takes place at the Science Council, 2/3 of which are constituted by representatives of the University (in particular associate professors and full professors) and 1/3 of outside representatives of the veterinary practice (State Veterinary Administration, Regional Veterinary Administrations, Chamber of Veterinary Surgeons of the Czech Republic, Institute for State Control of Veterinary Biologicals and Medicines, Veterinary Research Institute, representatives of other universities, etc.).

4.1.1 Power of subjects and types of training

4.1.1.1 Power subject

4.1.1.1.1 Veterinary curriculum

The University of Veterinary and Pharmaceutical Sciences Brno has been following the curriculum in its current form since 2012; the curriculum comprises the following:

- compulsory core curriculum of the veterinary curriculum,
- compulsory subjects which follow up on subjects in the veterinary training track chosen (track differentiation subjects),
- compulsory elective subjects (four) which follow up on subjects in the veterinary training track differentiation,
- compulsory extramural work,
- other compulsory subjects (non-EU subjects)
- students have the option of taking on extra training outside the core curriculum, specifically, further compulsory electives on the list of compulsory elective veterinary subjects and other optional electives.

4.1.1.1.2 Core veterinary training curriculum (compulsory subjects)

The core veterinary training curriculum provides the graduate with competences required for the pursuit of the veterinary profession in all areas of veterinary care. The core curriculum comprises basic subjects, basic sciences, animal production, clinical sciences, food hygiene/public health, professional knowledge. Clinical sciences cover all the important animal species, and food hygiene/public health all the important commodities and foodstuffs of animal origin.

4.1.1.1.3 Differentiation subjects on veterinary training curriculum (compulsory subjects)

Differentiation subjects on veterinary training curriculum are an enhancement of the specified part of veterinary training, designed to provide more in-depth knowledge in a particular part of veterinary training. There are two basic differentiation tracks at UVPS Brno: the Veterinary Medicine track and the Veterinary Hygiene and Ecology track. The Veterinary Medicine track contains a differentiation designed to expand and enhance clinical training in particular with regard to hobby (companion) animals (diseases of dogs, cats, horses, birds, reptiles and small mammals), i.e., it includes enhanced training in surgery, reproduction, internal diseases and out-patient and in-patient care of hobby (companion) animals. The other track, Veterinary Hygiene and Ecology, contains a differentiation designed to expand and enhance clinical training with regard to food animals (in particular diseases of swine, ruminants), food hygiene (in particular meat, fish, poultry, milk, eggs and honey, and products therefrom), i.e., it includes out-patient and in-patient veterinary medicine of food animals in particular, and food hygiene/public health, food hygiene and technology, supervision and inspection of food animals, products, food-processing companies and food and veterinary legislation.

Compulsory training in other elective subjects (four) on the list of compulsory elective subjects enhances compulsory training in the chosen differentiation in subjects elected by the student. In the Veterinary Medicine differentiation, it is represented by a list of 37 subjects, mostly of clinical nature, of which the student is obliged to select 4. In the Veterinary Hygiene and Ecology differentiation, it is represented by a list of 37 subjects, mostly of hygiene nature, of which the student is obliged to select 4.

4.1.1.1.4 Compulsory extra-mural work (compulsory subjects)

Compulsory extra-mural work includes training outside the university, without teachers in attendance but in accordance with instructions, and possibly under the supervision of teachers with the applicable specialization. Such training includes extra-mural work in veterinary laboratory diagnostics (generally state veterinary laboratory diagnostics institutes), and extra-mural work at abattoirs in the inspection of fatstock before slaughter and meat and organs after slaughter, and possibly also in a meat-processing facility (generally a fatstock processing facility). In the Veterinary Hygiene and Ecology differentiation, the training further includes extra-mural work with authorized veterinary surgeons (generally the State Veterinary Administration or Regional Veterinary Administrations) in the performance of veterinary supervision, in particular in food hygiene.

4.1.1.1.5 Other compulsory subjects (non-EU subjects) (compulsory subjects)

Training in other compulsory subjects (non-EU subjects) includes, above and beyond the training stipulated by Directive 36/2005/EU, language training of students (English language) and training in a subject demonstrating the environmental context of the veterinary profession (ecology).

4.1.1.1.6 Training outside compulsory training (optional subjects)

Training outside compulsory training gives the student an opportunity to take on other subjects taught as part of veterinary training, specifically, further selected subjects on the list of compulsory elective veterinary subjects, and/or on the list of further elective subjects of special interest (e.g., Latin, fishery, bee-keeping, riding, etc.).

4.1.1.2 Types of training

4.1.1.2.1 Theoretical training

Theoretical training includes lectures, seminars and self-directed learning (defined self-directed learning, e.g. e-learning).

Lectures (A) are held in lecture halls designed for a larger number of students.

Seminars (B) are held in classrooms seating a smaller number of students, usually by way of explanation of the topic using audio-visual presentation, examples with managed discussion of the topic between the teacher and the students.

Self-directed learning (C) to supplement students' knowledge using defined teaching materials within the defined number of curriculum hours.

Moreover, in some subjects (e.g., Anatomy or Histology and Embryology), there is self-directed learning using materials provided by the University (anatomic specimens, models, histological specimens); however, its scope is individual for each student depending on his/her needs, and as such is not included in the curriculum (defined number of hours), nor is it included in the number of periods counted towards training provided to each student, but merely constitutes training enabled by the faculty above and beyond the curriculum.

4.1.1.2.2 Supervised practical training

Practical training includes training in laboratories and classrooms, non-clinical animal work and clinical work.

Microscopy work

Practical training in clinical work

Laboratory and desk-based work (D) includes training in laboratories, training using microscopes (histology and pathohistology of samples) etc., and further includes problem-oriented student work with documents and computers (e.g., work on case studies, computer-aided learning, etc.).

Non-clinical work (E) includes training using healthy animals, objects, products, carcasses and organs of slaughtered animals, and includes autopsies and necropsies.

Clinical work (F) includes practical training using healthy animals in their clinical environment, on clinical patients or herds/flocks of animals and other clinical subjects using clinical diagnostic data, and further includes training in practical training surgical and diagnostic techniques on organs and cadavers.

4.1.1.2.3 Other

Other (G) represents training not included in practical training work in laboratories and classrooms, or not included in non-clinical animal work and clinical work. It generally includes students' trips with a teacher for extramural training not involving animals, i.e., for instance, to food-processing companies, facilities processing animal production waste (e.g., sanitation companies), pharmaceutical companies (e.g., Bioveta), facilities producing feed and feed mixes (Čebín company, etc.), to wildlife environment.

4.1.2. Undergraduate curriculum followed by all students

4.1.2.1 Curriculum hours

The standard veterinary training curriculum contains 6 years (12 terms) of training. Starting from the first year, training is divided into the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology (FVHE) track.

4.1.2.2 Subjects from the list of EU subjects

4.1.2.2.1 Curriculum hours – EU-listed subjects – aggregates per individual years

The number of curriculum hours for EU-listed subjects taken by each student, i.e., the core curriculum and track differentiation subjects for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE) indicated by year and types of training (A, B, C, D, E, F, G) is provided in Table 4.1a.

Table 4.1a: Number of curriculum hours in EU-listed subjects taken by all students – aggregates per individual years

Curriculum taken by each student	FVM								FVHE							
Year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
First	337	2	0	237	114	0	26	716	337	0	0	243	110	0	26	716
Second	299	32	0	276	55	0	4	666	299	36	0	289	38	0	4	666
Third	351	12	0	240	68	43	0	714	337	11	0	264	60	69	0	741
Fourth	311	4	0	93	4	227	0	639	351	4	0	133	10	271	0	769
Fifth	336	0	0	145	17	230	0	728	298	0	0	173	83	97	0	651
Sixth	79	0	150	93	18	860	0	1,200	122	0	150	258	20	620	0	1,170
Total	1,713	50	150	1,084	276	1,360	30	4,663	1,744	51	150	1,360	321	1,057	30	4,713

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

4.1.2.2.2 Curriculum hours in EU-listed subjects – individual subjects taught at UVPS Brno

The number of curriculum hours in EU-listed subjects taken by all students, i.e., the core curriculum and track differentiation subjects for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE) indicated by individual subjects and individual years is provided in Table 4.1b.

Table 4.1b: Curriculum hours in EU-listed subjects taken by each student – individual subjects taught at UVPS Brno per individual years

Curriculum taken by each student	FVM								FVHE							
First year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Medical Terminology and Ethics	13							13	13							13
Biophysics	13			13				26	13			13				26
Chemistry	13			13				26	13			13				26
Biostatistics	13			26				39	13			26				39
Agricultural Production	13						26	39	13						26	39
Rearing Pet Animals – FVM	26	2		7	4			39								
Types and Composition of Foodstuffs – FVHE									26			13				39
Biology	26			26				52	26			26				52
Zoology	14			14				28	14			14				28
Botanics	14			14				28	14			14				28
Anatomy	82				110			192	82				110			192
Histology and Embryology	54			68				122	54			68				122
Physiology	28			28				56	28			28				56
Biochemistry	28			28				56	28			28				56
Total	337	2	0	237	114	0	26	716	337	0	0	243	110	0	26	716

Curriculum taken by each student	FVM								FVHE							
Second year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Physiology	26			26				52	26			26				52
Biochemistry	26			26				52	26			26				52
Basics of Veterinary Care – FVM	27	4		6	17			54								
Human Nutrition – FVHE									27	8		19				54
Animal Protection and Ethology	27	2		46	6			81	27	2		46	6			81
Animal Nutrition	54			50	4			108	54			50	4			108
Microbiology	27			54				81	27			54				81
Animal Husbandry	28	2		12	14			56	28	2		12	14			56
Pathophysiology	14			28				42	14			28				42
Pharmacology and Pharmacy	28	24					4	56	28	24					4	56
Immunology	14			14				28	14			14				28
Pathological Morphology	28			14	14			56	28			14	14			56
Total	299	32	0	276	55	0	4	666	299	36	0	289	38	0	4	666

Curriculum taken by each student	FVM								FVHE							
Third year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Pathophysiology	13			26				39	13			26				39
Pharmacology and Pharmacy	26			2	24			52	26			2	24			52
Immunology	13			13				26	13			13				26
Animal Hygiene	13			20	6			39	13			20	6			39
Toxicology	26			26				52	28			28				56
Laboratory Diagnostics in Pet Animals	26			13				39								
Laboratory Diagnostics in Food Animals	14			14				28								
Food Production									13			11	2			26
Sensory Analysis of Food									14			28				42
Pathological Morphology	54			26	28			108	54			26	28			108
Parasitology	27			54				81	27			54				81
Clinical Genetics	28	12		2				42	26	11		2				39
Obstetrics and Gynaecology	28					14		42	28					14		42
Clinical Propaedeutics of Food Production Animals	13					13		26	14					14		28
Clinical Propaedeutics in Companion Animals	14					14		28	13					13		26
Diseases of Fish and Bees	28			22	4	2		56								
Diseases of Game Animals	28			22	6			56								
General Surgery and Anaesthesiology									28					28		56
Chemistry and Microbiology of Food									27			54				81
Total	351	12	0	240	68	43	0	714	337	11	0	264	60	69	0	741

Curriculum taken by each student	FVM								FVHE							
Fourth year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Andrology	14					14		28								
Obstetrics and Gynaecology	13					26		39	13					26		39
DOS Obstetrics and Gynaecology	0					13		13	0					13		13
Diseases of Fish and Bees									26			22	4	2		54
Diseases of Game Animals									26			20	6			52
Elective subject 1	13			26				39	13			26				39
Diseases of Farm Poultry	28			4	4	6		42								
Economy of Veterinary Activity	14	4		10				28	14	4		10				28
General Surgery and Anaesthesiology	26					26		52								
Diagnostic Imaging	13					26		39	13					26		39
Small Animal Surgery and Orthopaedics									27					14		41
DOS Small Animal Surgery and Orthopaedics									0					14		14
Surgery and Orthopaedics in Large Animals									27					14		41
DOS Surgery and Orthopaedics in Large Animals									0					14		14
General Epizootiology	13			13				26	13			13				26
Internal Diseases of Swine	54					27		81	28					28		56
DOS Internal Diseases of Swine	0					14		14								
Internal Diseases of Ruminants	54					27		81	28					28		56
DOS Internal Diseases of Ruminants	0					14		14								
Dogs and Cats Internal Diseases	28					14		42	27					27		54
DOS Dogs and Cats Diseases									0					27		27
Equine Diseases									54					14		68
DOS Equine Diseases									0					14		14
Infectious Diseases of Animals	28			14				42	28			14				42
Elective subject 2	13			26				39	14			28				42
Practical training work at clinic	0					20		20	0					10		10
Total	311	4	0	93	4	227	0	639	351	4	0	133	10	271	0	769

Curriculum taken by each student	FVM								FVHE							
Fifth year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Diseases of Reptiles, Birds and Small Mammals	26					13		39								
DOS Diseases of Exotic Pet Animals	0					13		13								
Poultry Diseases									26			3	4	6		39
Diseases of Rabbits and Fur Animals									13					13		26
Diseases of Swine									26					26		52
DOS Diseases of Swine									0					13		13
Diseases of Ruminants									26					26		52
DOS Diseases of Ruminants and Swine									0					13		13
Infectious Diseases of Animals	26			13				39	26			13				39
Elective subject 3	13			26				39	13			26				39
Surgery and Orthopaedics in Large Animals	27					27		54								
DOS Surgery and Orthopaedics in Large Animals	0					14		14								
Small Animal Surgery and Orthopaedics	27					40		67								
DOS Small Animal Surgery and Orthopaedics	0					14		14								
Dogs and Cats Internal Diseases	54					41		95								
DOS Dogs and Cats Internal Diseases	0					27		27								
Equine Internal Diseases	54					27		81								
DOS Equine Internal Diseases	0					14		14								
Elective subject 4	14			28				42	14			28				42
Forensic Veterinary Medicine and Veterinary Public Health	26			26				52	28			28				56
Veterinary Inspection of Slaughter Animals									14			12	30			56
Hygiene of Meat Production	41			24	17			82								
Hygiene and Technology of Meat and Meat Products									28			4	24			56
Hygiene and Technology of Poultry, Rabbits and Venison									14			8	6			28
Hygiene and Technology of Fish and Fish Products									14			9	5			28
Hygiene and Technology of Eggs and Honey									14			6	8			28
Milk Production Hygiene	28			28				56								
Hygiene and Technology of Milk and Dairy Products									28			22	6			56
HACCP									14			14				28
Total	336	0	0	145	17	230	0	728	298	0	0	173	83	97	0	651

Curriculum taken by each student	FVM								FVHE							
Sixth year	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Infectious Diseases of Animals and Legislation			30	70		50		150			30	70		50		150
Food Hygiene	79		30	23	18			150								
Hygiene and Technology of Meat and Meat Products									72		30	48				150
Hygiene and Technology of Milk and Dairy Products									20		30	80	20			150
Veterinary Protection of Public Health									30		30	60				120
Dogs and Cats Diseases*			30			270										
Equine Diseases*			30			270										
Diseases of Birds, Reptiles and Small Mammals *			30			270										
Specialized Work *			30			270										
Diseases of Ruminants*			30			150										
Swine Diseases*			30			150										
Diseases of Ruminants and Swine											30			570		600
Poultry Diseases*		60	60			60										
Clinical Pathology*			20	160												
Total	79		150	93	16	860		1,200	122		150	258	20	620		1,170

Curriculum taken by each student	FVM								FVHE							
	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Total curriculum	1,713	50	150	1,084	276	1,360	30	4,663	1,744	51	150	1,360	321	1,057	30	4,713

*Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other, *= the student elects 3-4 subjects from among the subjects so designated*

Note: If a particular subject is only listed for one track in the given year, it usually means that the same or similar subject is listed for the other track in another year.

4.1.2.2.3 Curriculum hours in individual EU-listed subjects

The number of curriculum hours for EU-listed subjects taken by each student, i.e., the core curriculum and track differentiation subjects for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE) indicated by EU-listed subjects is provided in Table 4.2. below

Table 4.2: Curriculum hours in EU-listed subjects taken by each student

Curriculum taken by each student	FVM								FVHE							
Basic Subjects	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Physics	13			13				26	13			13				26
Chemistry	13			13				26	13			13				26
Animal Biology	40			40				80	40			40				80
Plant Biology	14			14				28	14			14				28
Biomathematics	13			26				39	13			26				39
Total	93	0	0	106	0	0	0	199	93	0	0	106	0	0	0	199

Curriculum taken by each student	FVM								FVHE							
Basic Sciences	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Anatomy (incl. Histology and Embryology)	136			68	110			314	136			68	110			314
Physiology	81			108				189	81			108				189
Biochemistry	54			54				108	54			54				108
Genetics	28	12		2				42	26	11		2				39
Pharmacology and Pharmacy	54	24		2	24		4	108	54	24		2	24		4	108
Toxicology	26			26				52	28			28				56
Microbiology	27			54				81	27			54				81
Immunology	27			27				54	27			27				54
Epidemiology	13			13				26	13			13				26
Professional Ethics	13			0				13	13			0				13
Total	459	36	0	354	134	0	4	987	459	35	0	356	134	0	4	988

Curriculum taken by each student	FVM							
Animal production	A	B	C	D	E	F	G	total
Animal Production	13						13	26
Agronomy	0						13	13
Animal Nutrition	54			50	4			108
Rural Economy	14	4		10				28
Animal Husbandry	28	2		12	14			56
Veterinary Hygiene	13			20	6			39
Animal Ethology and Protection	27	2		46	6			81
Track differentiation FVM/FVHE								
Animal Husbandry	26	2		7	4			39
Total	175	10	0	145	34	0	26	390

FVHE							
A	B	C	D	E	F	G	total
13						13	26
						13	13
54			50	4			108
14	4		10				28
28	2		12	14			56
13			20	6			39
27	2		46	6			81
149	8	0	138	30	0	26	351

Curriculum taken by each student	FVM							
Clinical Sciences	A	B	C	D	E	F	G	total
Pathology	82			40	42			164
Parasitology	27			54				81
Obstetrics	28					40		68
Reproduction and Reproductive Disorders	13					13		26
Propedeutics	27					27		54
Diagnostic Imaging	13					26		39
Surgery and Clinical Medicine	269					246		515
Clinical Lectures on Various	84			48	14	8		154
Vet. leg. and forensic med., vet. st. med., public health	26			26				52
Preventive Medicine	54			27				81
Veterinary State Medicine and Public Health	0		30	46		50		126
Ambulatory Clinics	0		30			270		300
Therapeutics	0		30			90		120
Track differentiation FVM/FVHE								
Reproduction and Reproductive Disorders	14					14		28
Surgery and Clinical Medicine	175	4		139	17	80		415
Clinical Lectures on Various	26					26		52
Ambulatory Clinics	0		30			440		470
Total	838	4	120	380	73	1,330	0	2,745

FVHE							
A	B	C	D	E	F	G	total
82			40	42			164
27			54				81
28					40		68
13					13		26
27					27		54
13					26		39
271					246		517
78			45	14	8		145
28			28				56
54			27				81
0		30	46		50		126
0		30			270		300
0					120		120
0					54		54
13					13		26
0					160		160
634	0	60	240	56	1,027	0	2,017

Curriculum taken by each student	FVM								FVHE							
Food Hygiene	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Practical training Work	13				13			26	14				14			28
Food Hygiene and Technology	28			24	4			56	28			4	24			56
Food Science incl. Legislation	28			28				56	28			22	6			56
Inspection and Control of Animal Foodstuffs	79		30	23	18			150	72		30	48				150
Track differentiation FVM/FVHE																
Food Science incl. Legislation									161	8		233	2			404
Practical training Work (in Food Science)												12	16			28
Food Hygiene and Technology									76		30	117	39			262
Inspection and Control of Animal Foodstuffs									30		30	60				120
Total	148	0	30	75	35	0	0	288	409	8	90	496	101	0	0	1,104

Curriculum taken by each student	FVM								FVHE							
Professional Knowledge	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Practice Management	0					30		30	0					30		30
Veterinary Certification	0			20				20	0			20				20
Career Planning	0			4				4	0			4				4
Total	0	0	0	24	0	30	0	54	0	0	0	24	0	30	0	54

Total of curriculum	1,713	50	150	1,084	276	1,360	30	4,663	1,744	51	150	1,360	321	1,057	30	4,713

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

The curriculum to be taken by each student includes four compulsory elective subjects from the list of compulsory elective subjects for a further enhancement of the track differentiation for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE). The list of subjects from which each student must elect 4 subjects for the Veterinary Medicine track (FVM) is provided in Table 4.3a below, and for the Veterinary Hygiene and Ecology track (FVHE) in Table 4.3b. below, respectively.

Table 4.3a EU-listed subjects offered as compulsory elective subjects for the Veterinary Medicine track (FVM)

	FVM								FVHE							
Compulsory elective subjects	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Basic Sciences																
Clinical Anatomy of Domestic Animals	14				28			42								
Clinical Morphology of Vertebrates	6				7			13								
Comparative Anatomy of Vertebrates	13				26			39								
Microscopical Anatomy of Vertebrates	14			28				42								
Dissection Practical Training	0				26			26								
Experimental Embryology	14	4		24				42								
Clinical Microbiology	14			28				42								
Molecular Microbiology	14			14				28								
Clinical Immunology	14			14				28								
Development, Manufacturing and Control of Medicines	0			28				28								
Animal Production																
Veterinary Dietetics	28	6		22				56								
Hunting Game Management	28	10		4	10		4	56								
Clinical Sciences																
Clinical Parasitology of Dog and Cat	26	13						39								
Parasitoses of Wild and Exotic Animals	14			10		4		28								
Parasitoses of Domestic Animals in Tropics and Subtropics	28			14				42								
Practical training Field Diagnostics of Parasitic Infections	28			12		14	2	56								
Parasitic Zoonoses	14			14				28								
Clinical Physiology of the Sport Horse	13				13			26								
Demonstration of Equine Clinical Cases	0	28						28								
Orthopaedics in Sport and Racing Horses	0	28						28								
Case Studies	14	14						28								
Diseases of Rabbits and Fur Farming Animals	13					13		26								
Wildlife Diseases	14	6		14	8			42								
Advanced Techniques in the Diagnostics of Infectious Diseases	14			28				42								
Selected Infections of Dogs and Cats	0	26						26								
Veterinary Oncology of Dogs and Cats	14			14				28								
Tomographic Imaging	13	9				4		26								
Minimally Invasive Endoscopically Assisted Surgery in Practice	14					14		28								
Clinical Cytopathology of the Dogs and Cats	14			14				28								
Laboratory Diagnostic Algorithms in Internal Veterinary Medicine	0			26				26								
Basics in Laboratory Diagnostics of Non-inflammatory Diseases	13			26				39								
Laboratory Diagnostics in Small and Large Animals	13			26				39								
Production and Preventive Medicine of Swine	0					28		28								
Production and Preventive Medicine of Cattle	14			4		24		42								
Veterinary Medicine in Disaster	14	20		8				42								
Assisted Reproduction	14			4	24			42								
Goat and Sheep Herd Health and Production Management	14			6	8	14		42								

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

Table 4.3b EU-listed subjects offered as compulsory elective subjects for the Veterinary Hygiene and Ecology track (FVHE)

	FVM								FVHE							
Compulsory elective subjects	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Basic Sciences																
Development, Manufacturing and Control of Medicines									0			0	28			28
Animal production																
Feed Safety									14	6		18	4			42
Hunting Game Management									28	10		4	10		4	56
Clinical Sciences																
Laboratory Diagnostics in Food Animals									14			14				28
Production and Preventive Medicine of Swine									0			0		28		28
Production and Preventive Medicine of Cattle									14			4		24		42
Veterinary Medicine in Disaster									14	20		8				42
Assisted Reproduction									14			4	24			42
Food Hygiene																
Chemical Laboratory Methods in Food Analysis									13			26				39
Microbiological Laboratory Methods									13			26				39
Molecular Biology in Food Hygiene									14			28				42
Instrumental Methods of Food Analysis									28			14				42
Food Biochemistry									28			14				42
Food Toxicology									13			26				39
Veterinary Ecology									13	10		6	2		8	39
Pharmacology in Food Production									14			26			2	42
Antibiotic Resistance									14			28				42
Food-borne Parasites a Parasitological Laboratory Methods									14			14				28
Food Radiobiology									14	6		18			4	42
Chemistry of Food Chains									14			28				42
Environmental Chemistry									14			24	4			42
Structure and Composition of Foodstuffs									13			26				39
Food Engineering									14	18		2			8	42
Food Packaging									14	24		4				42
Disinfection, Disinfestation and Rodent Control in Food Processing Industry									14	16		6			6	42
Wastes from Food Production									14	20		0			8	42
Hygiene and Technology of Vegetable Products									13			26				39
Hygiene and Technology of Bee Products									14	2		12	8		6	42
Veterinary Practice in the Meat Production and Processing									0			4	10			14
Hygiene and Technology of Fishery Products									0			6	8			14
Cheese Production									14	4		0	24			42
Veterinary Practice in Milk Production									0			6	22			28
Veterinary Practice in Milk Processing									0			6	22			28
Food Preservation									14			20			8	42
Food Quality and Safety Management									14	8		6				28
Foodborne Diseases									0	14		0				14

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

4.1.2.3 Non-EU listed subjects

4.1.2.3.1 Compulsory subjects, which are not EU-listed

The curriculum to be taken by each student includes compulsory training in subjects that are not EU-listed. The list of subjects for the Veterinary Medicine track (FVM) and for the Veterinary Hygiene and Ecology track (FVHE) is provided in Table 4.4.

4.1.3 Further information on the curriculum

4.1.3.1 Important aspects of the curriculum

4.1.3.1.1 Differentiation in the curriculum

Students who opt for training with a focus (differentiation) on pet (companion) animals (FVM) study according to such curriculum from their 1st year.

Table 4.4a Curriculum hours in non-EU-listed subjects taken by each student

Subject	FVM								FVHE							
	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	Total
English language	0	26						26	0	26						26
Ecology	13	4		18	2		2	39	13	4		18	2		2	39
Total	13	30	0	18	2	0	2	65	13	30	0	18	2	0	2	65

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

4.1.2.3.2 Elective (optional) subjects

The University enables students to take on subjects outside compulsory training, specifically, further selected subjects (in addition to the four compulsory electives) as optional subjects to be chosen from the list of compulsory elective veterinary subjects (see Tables 4.3a and 4.3b), as well as subjects from the list of other special-interest electives (e.g., Latin, fishery, bee-keeping, riding, etc). Such electives for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE) are provided in Table 4.4 below.

Curriculum with a differentiation for clinical veterinary medicine

The curriculum contains subjects enhancing the differentiation for clinical veterinary medicine starting from the 1st year:

- in the 1st year: Rearing Pet Animals, Agricultural Production (which includes Rearing Food Animals),
- in the 2nd year: Basics of Veterinary Care,
- in the 3rd year: Clinical Propaedeutics in Companion Animals, Clinical Propaedeutics of Food Production Animals, Laboratory Diagnostics in Pet Animals, Laboratory Diagnostics in Food Animals,

Table 4.4b Curriculum hours in elective non-EU-listed subjects

Subject	FVM								FVHE							
	A	B	C	D	E	F	G	total	A	B	C	D	E	F	G	total
Latin language	0	26						26	0	26						26
Fishery	14			4	10			28	14			4	10			28
Bee-keeping	14			2	12			28	14			2	12			28
Riding	0						14	14	0						14	14
Sports	0						28	28	0						28	28
Methodology of Scientific Work	14							14	14							14
Thesis									0			140				140
Wildlife Diseases									14	6		14	8			42
Pet Animal Rearing									26	2		7	4			39

Notes: A=lectures, B=seminars, C= self-directed study, D=laboratory and desk based work, E=non-clinical animal work, F=clinical work, G=other

- in the 4th and 5th years, the differentiation is further enhanced in joint clinical science subjects and clinical science subjects with enhanced training with regard to pet (companion) animals and in compulsory elective subjects,
- the differentiation in the 6th year consists in subjects in which state *examen rigorosum* is taken, namely the following:
  - Infectious Diseases of Animals and Legislation (compulsory),
  - Food Hygiene (compulsory),
  - Dogs and Cats Diseases* (compulsory elective out of 7 clinical subjects and 1 dissertation subject)
  - Equine Diseases* (compulsory elective out of 7 clinical subjects and 1 dissertation subject),
  - Diseases of Birds, Reptiles and Small Mammals* (compulsory elective out of 7 clinical subjects and 1 dissertation subject).

  * = an example of the choice of 3- 4 clinical subjects out of 7 clinical science subjects and 1 dissertation subject, to be chosen by the student out of interest and in accordance with stipulated rules out of the following subjects: Dogs and Cats Diseases, Equine Diseases, Diseases of Birds, Reptiles and Small Mammals, Diseases of Ruminants, Diseases of Swine, Poultry Diseases, Clinical Pathology, and Final Dissertation.

The curriculum stresses a positive motivation of students for differentiation in the area of clinical veterinary medicine from the 1st year and throughout their studies.

Practical training at the School Agricultural Farm in Nový Jičín

Curriculum with a differentiation for food hygiene and food animals

Students who opt for training with a focus (differentiation) on food hygiene and food animals (FVHE) study according to such curriculum from their 1st year. The curriculum contains subjects enhancing the differentiation for veterinary hygiene and food animals starting from the 1st year:

- in the 1st year: Agricultural Production (which includes Rearing Food Animals), Types and Composition of Foodstuffs,
- in the 2nd year: Human Nutrition,
- in the 3rd year: Food Production, Sensory Analysis of Food, Chemistry and Microbiology of Food,
- in the 4th and 5th years, the differentiation is further enhanced in food hygiene/public health subjects and food hygiene/public health subjects, and in compulsory elective subjects, and in clinical science subjects with enhanced training with regard to food animals;
- the differentiation in the 6th year consists in subjects in which state *examen rigorosum* is taken, namely the following:
  - Infectious Diseases of Animals and Legislation (compulsory),
  - Diseases of Ruminants and Swine (compulsory),
  - Hygiene and Technology of Meat and Meat Products (compulsory),
  - Hygiene and Technology of Milk and Dairy Products (compulsory),
  - Veterinary Protection of Public Health (compulsory),

and moreover, they may work on their Final Dissertation as an elective subject.

The curriculum stresses a positive motivation of students for differentiation in the area of food hygiene and food animals from the 1st year and throughout their studies.

4.1.3.1.2 Structure of the curriculum by terms

The curriculum is structured into terms. The first term generally focuses on basic subjects, the second and third terms on basic sciences, the fourth term on animal production, the fifth term on further basic sciences, the sixth term introduces the first clinical sciences, the seventh and eights terms, in particular in the veterinary medicine program e, focuses on clinical sciences in food animals, while in the veterinary hygiene programme, on clinical sciences in pet (companion) animals, the ninth and tenth terms in veterinary medicine is dedicated in particular to clinical sciences in hobby (companion) animals to an enhanced degree, and in veterinary hygiene, in particular to clinical sciences in food animals to an enhanced degree and food hygiene to an enhanced degree. The training in veterinary medicine in the eleventh and twelfth terms focuses on clinical sciences to an enhanced degree as elected by the students, and on food hygiene to an extent corresponding to the state examination modules, and in veterinary hygiene, it focuses on food hygiene/public health subjects to an enhanced degree and clinical sciences to an enhanced degree as structured in the state examination modules.

Diagnostic imaging training

4.1.3.1.3 Student load under the curriculum

The curriculum takes student load over the individual years of training into consideration. Training does not exceed 29 periods per week (with 26.0 periods week in veterinary medicine and veterinary hygiene and 26.6. periods per week in veterinary hygiene and ecology on average, respectively), with a maximum of 5 examinations per term (4 per term in veterinary medicine and 4 per term in veterinary hygiene and ecology on average, respectively). The difficulty of the examinations and their combination is also taken into account, and examinations combined in such a way as to make them manageable for a regular student (for instance, the 2nd term only contains the very difficult Anatomy examination and Histology and Embryology examination). The curriculum also strives, to the greatest extent possible, to provide a sequence whereby examination in subjects based on other subjects are scheduled for higher terms than examinations in the underlying subjects. The curriculum covers basic science subjects to an adequate extent, animal production, basic sciences in all the fields of veterinary medicine, clinical sciences (clinical work starts as early as the 3rd year), food hygiene/public health to an adequate extent, professional knowledge subjects and other subjects.

4.1.3.1.4 Clinical work and food hygiene/public health on the curriculum

The curriculum in clinical veterinary medicine in both track differentiations (FVM and FVHE) covers animal diseases in the entire range of important animal species: dogs and cats, horses, ruminants, swine, poultry, fish and bees, and game, and thus prepares students for clinical veterinary practice within the entire range of clinical veterinary medicine, supplemented with enhanced training depending on the graduate's specialization in the respective field of clinical veterinary medicine. The curriculum in the area of veterinary hygiene in both track differentiations (FVM and FVHE) covers veterinary hygiene training in the full range of food commodities covered by veterinary medicine: meat and meat products, milk and dairy products, poultry meat and products, rabbit meat and products, game meat and products, fish and fish products and seafood, eggs and honey, and HACCP, and thus prepares students for veterinary hygiene practice within the entire range of veterinary hygiene, supplemented with enhanced training depending on the graduate's specialization in the respective field of veterinary hygiene.

4.1.3.1.5 Day one skills on the curriculum

The curriculum also covers veterinary skills required for the pursuit of the veterinary profession from day one after graduation. Such skills are taught

- during training in clinical science and food hygiene/public health subjects
- these are moreover contained on the curriculum separate subjects ending with a credit, focused on the applicable clinical subject:

- Skills - Small Animal Surgery and Orthopaedics,
- Skills – Surgery and Orthopeadics in Large Animals,
- Skills – Obstetrics and Gynaecology,
- Skills – Dogs and Cats Diseases,
- Skills – Equine Diseases,
- Skills – Diseases of Ruminants,
- Skills – Swine Diseases,
- Skills – Diseases of Exotic Pet Animals,

- and then as part of the respective hygiene subject,
  - Skills – Veterinary Inspection of Slaughter Animals in the subject Veterinary Inspection of Slaughter Animals,
  - Skills – Hygiene and Technology of Meat in the subject Hygiene and Technology of Meat,
  - Skills – Hygiene and Technology of Milk in the subject Hygiene and Technology of Milk

4.1.3.1.6 Modular training in the 6th year

The curriculum contains modular training in the 6th year.

In the Veterinary Medicine track (FVM), state examinations in clinical veterinary medicine are elective (3-4 examinations), plus the student must sit for a compulsory state examination in Infectious Diseases of Animals and Legislation, and a state examination in food hygiene.

In the Veterinary Hygiene and Ecology track (FVHE), training in the 6th year focuses on state examinations in food hygiene (3 examinations), and a compulsory state examination in Infectious Diseases of Animals and Legislation and a compulsory examination in clinical veterinary medicine in ruminants and swine.

The examinations prescribed during the course of study and the state examinations are organized in such a way as to give the graduates the authorization to pursue the veterinary profession in both tracks.

4.1.3.1.7 Extra-mural work on the curriculum

The curriculum covers extramural training in operating facilities so that the graduates would have experience gained directly in fundamental areas of veterinary surgeon's activities. Extra-mural work focuses on laboratory diagnostics (generally at a state veterionary diagnostic institute), extra-mural work focusing on fatstock and meat inspection (generally at an abattoir), and in the case of FVHE, training focusing on veterinary supervision at bodies of state administration (generally the State Veterinary Administration and/or Regional Veterinary Administrations).

4.1.3.1.8 Credit system in the curriculum

The curriculum contains principles for a credit system of study. The subjects are associated with a certain credit value, and in each term, the sum of credit values of the subjects studied represents 30 credits, the minimum number of credits for the entire course of study being 360. The credit system for the individual subjects was designed in such

Students learning about endoscopic methods

a way that the credits reflect the effort required to be made in the study and successful completion of the subject. The core curriculum subjects for both the Veterinary Medicine track and the Veterinary Hygiene and Ecology track carry the same credit value in both tracks. Differentiation subjects, i.e., subjects with enhanced training in one or the other track differentiation, carry a higher credit value as appropriate. Differentiation subjects taught in only one of the track differentiations carry a credit value designed to reflect the effort required to be made in the study and successful completion of the subject.

4.1.3.1.9 Student attendance

Students are obliged to attend training in all the compulsory subjects of the core curriculum and subjects of the differentiation part of the curriculum for the track chosen, and further, four compulsory elective subjects chosen from those offered in the list of compulsory elective subjects for the respective track, and compulsory extra-mural work.

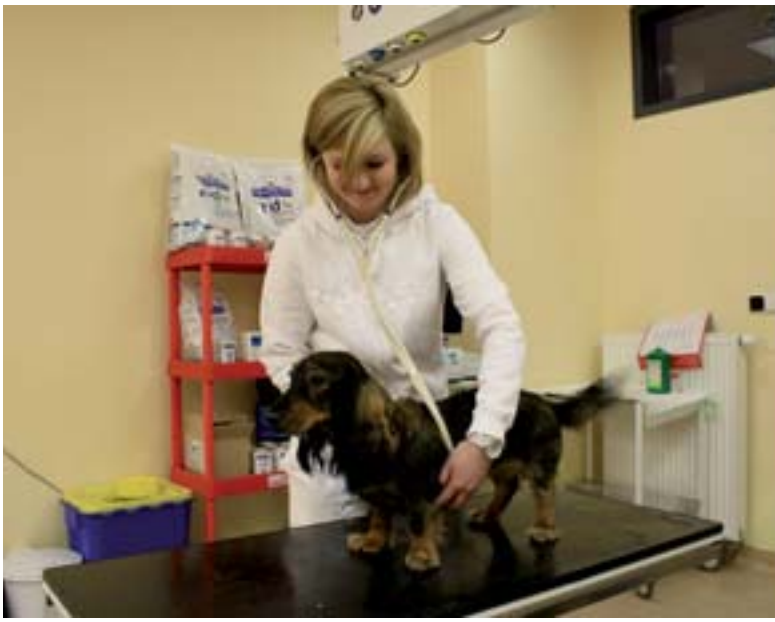
There is both practical training and theoretical training in the 1st through the 5th year. Practical training of D, C, E, F and G types, and theoretical training of the B and C types, is compulsory. Attendance is taken at the beginning of the class or module. If the student is absent (illness, family problems, etc.), a way to substitute for the missed training is sought in consultation with the teacher of that subject (e.g., substitute practical training work at the different time, or other type of training). Theoretical training of the A type is not compulsory, and it is up to the student whether he/she will attend, nonetheless, it can be noted that students participate in this form of training to a substantial extent.

Modular training in the 6th year partly takes place at clinics where it is compulsory, and partly in clinical veterinary practice where it is compulsory and where it is supervised by the veterinary surgeon providing the training, who has the status of teacher vis-à-vis the student, and further randomly by the teacher. The student elaborates documentation in the course of practical training modular work in accordance with instructions issued by the clinic or department, and the teacher reviews such documentation of all the students upon completion of the modular training.

Extramural work is supervised by staff members of the host institution, as well as by the teacher on a random basis, and any documentation drawn up by the student during the extramural work is reviewed by the teacher on completion of the extramural work.

4.1.3.1.10 Distribution between departments and clinics

The organization of training reflects the teaching load of the individual departments and clinics to the extent that in subjects taught over two terms and taught in both tracks (veterinary medicine and veterinary hygiene), classes are held jointly, while in subjects taught in a single term, the training for the veterinary medicine track is scheduled for a different term that the training for the veterinary hygiene track, where possible, so as to distribute the load of the University's clinical and hygiene facilities.



Training in diseases of dogs and cats

4.1.3.2 Specific information on practical training clinical work

Clinical work in both track differentiations (the Veterinary Medicine track and the Veterinary Hygiene and Ecology track) is organized in separate subjects and includes clinical science training in subjects of the core curriculum, and clinical science training for the individual track differentiations.

Clinical science subjects of the (compulsory) core curriculum

Clinical science subjects of the core curriculum are the following:

- Pathological Morphology,
- Parasitology,
- Clinical Propaedeutics of Food Production Animals,
- Clinical Propaedeutics in Companion Animals,
- General Surgery and Anaesthesiology,
- Diagnostic Imaging,
- Small Animal Surgery and Orthopaedics (including skills as specified),
- Surgery and Orthopeadics In Large Animals (including skills as specified),
- Obstetrics and Gynaecology (and Andrology) (including skills as specified),
- Diseases of Fish and Bees,
- Diseases of Game Animals,
- Diseases of Farm Poultry,
- Internal Diseases of Swine (FVM) or Diseases of Swine (FVHE) (including skills as specified),

Training in equine diseases

- Internal Diseases of Ruminants (FVM) or Diseases of Ruminants (FVHE) (including skills as specified),
- Equine Internal Diseases (FVM) or Equine Diseases (FVHE) (including skills as specified),
- Dogs and Cats Internal Diseases (FVM) or Dogs and Cats Diseases (FVHE) (including skills as specified),
- Infectious Diseases of Animals,
- Forensic Veterinary Medicine and Veterinary Public Health,
- training included in the subject of the final state examination, Infectious Diseases of Animals and Legislation.

Clinical science subjects of the (compulsory) differentiation part of the curriculum

Clinical science subjects for the Veterinary Medicine differentiation track are the following:

- other clinical sciences:
  - Rearing Pet Animals,
  - Basics of Veterinary Care,
  - Laboratory Diagnostics in Pet Animals,
  - Laboratory Diagnostics in Food Animals,

core curriculum subjects with extra hours of training:

- Small Animal Surgery and Orthopaedics (enhanced training),
- Surgery and Orthopeadics In Large Animals (enhanced training),
- Obstetrics and Gynaecology (enhanced training),
- Andrology,
- Equine Internal Diseases (enhanced training),
- Dogs and Cats Internal Diseases (enhanced training),
- Diseases of Exotic Pet Animals (including skills as specified)
  - training in the four compulsory elective subjects from the list of compulsory elective subjects for the veterinary medicine differentiation track,
  - further clinical work in the form of modular training in the 6th year in subjects covered by the final state examinations, where the student generally elects 3-4 subjects out of the following 8 subjects: Equine Diseases, Dogs and Cats Diseases, Diseases of Ruminants, Diseases of Swine, Poultry Diseases, Diseases of Birds, Reptiles and Small Mammals, Clinical Pathology, and Final Dissertation.

Clinical science subjects for the **Veterinary Hygiene and Ecology** track are the following:

- clinical science subjects of the core curriculum with extra hours of training:
  - Small Animal Surgery and Orthopaedics
  - Diseases of Swine (enhanced training),
  - Diseases of Ruminants (enhanced training),
  - Diseases of Rabbits and Fur Animals,
- further clinical work in the form of modular training in the 6th year in the state final examination subject of Diseases of Ruminants and Swine.

4.1.3.2.1 Organization of clinical work in the 1st through the 5 th year of study

The practical training part of clinical work up to the 5th year of study is organized in the form of training at clinics in small groups, the size of which is determined by the subject and training type. In practical training work of the F type, the size of the student group generally does not exceed 6 students per teacher. Practical training work in out-patients departments in clinics may take place in even smaller groups, generally approx. 3 to 5 students per teacher, with a view to the focus of the training, in particular in Dogs and Cats Diseases and Diseases of Birds, Reptiles and Small Mammals. Practical training work in mobile clinics takes the form of visits to animal rearing facilities in smaller groups, generally approx. 3 to 5 students per teacher, in particular in subjects focusing on Obstetrics and Gynaecology, Internal Diseases of Ruminants or Internal Diseases of Swine. Further clinical work is conducted in the form of trips to the School Agricultural Farm where students generally stay for several days and work in small groups, performing – in particular in the cattle rearing facility – immobilization of animals, diagnostic, therapeutic and preventive acts, such as taking blood, urine and milk samples, tuberculization, clinical examinations, reproduction control and pregnancy diagnostics, cathetrization, insemination, sonography, C-section in a standing animal, examination per rectum, milk gland examination, hoof treatment, dehorning of calves and heifers, training in cattle, swine and sheep herd health (the latter at a private sheep farm), broiler fattening (a farm in Štramberk), and perform veterinary treatment of animals. Clinical work includes clinical work at the University's clinics.

4.1.3.2.2 Organization of clinical work in the 6th year of study

In the 6th year, clinical work is organized in the form of modular work conducted partly at the University's clin-

ics or at its mobile clinic, and partly as practical training in the practice of a veterinary practitioner (usually on an individual basis) with whom the University has arrangements on student training (the veterinary surgeon has the status of teacher in this process).

In the Veterinary Medicine track differentiation, the student chooses subjects out of 7 clinical science subjects and 1 specialized work subject so as to achieve a credit sum of a minimum of 44 credits. The following modules are available:

- Dogs and Cats Diseases (10-week module) 17 credits,
- Equine Diseases (10-week module) 17 credits,
- Diseases of Birds, Reptiles and Small Mammals (10-week module) 17 credits,
- Specialized Work (10-week module) 17 credits,
- Poultry Diseases (6-week module) 10 credits,
- Diseases of Ruminants (6-week module) 10 credits,
- Diseases of Swine (6-week module) 10 credits,
- Clinical Pathology (6-week module) 10 credits.

The choice of the following three subjects can serve as a model example: Dogs and Cats Diseases, Equine Diseases, Diseases of Birds, Reptiles and Small Mammals; or alternatively other three subjects: Dogs and Cats Diseases, Diseases of Birds, Reptiles and Small Mammals and Poultry Diseases and suchlike.

In the Veterinary Hygiene and Ecology track differentiation, the student attends modular training in

- Diseases of Ruminants and Swine (30-week module) which carries a credit value of 30 credits.

Modular training in the 6th year is organized in such a way that students enrolled in the subject are divided into time modules within which they complete their training in that subject (i.e., the number of students who enrolled in that subject is usually divided into 4 groups, each of which undergoes training in that subject at a different time in the course of the 6th year). The group undergoing training is then divided into sub-groups which rotate around the respective clinic and its special facilities, or undergo training at the mobile clinic, or do practical training work in the practice of a veterinary practitioner. This division and rotation system makes it possible to set up very small student groups (in clinical science subjects, generally approx. 3 to 5 students) for modular practical training work in the 6th year.

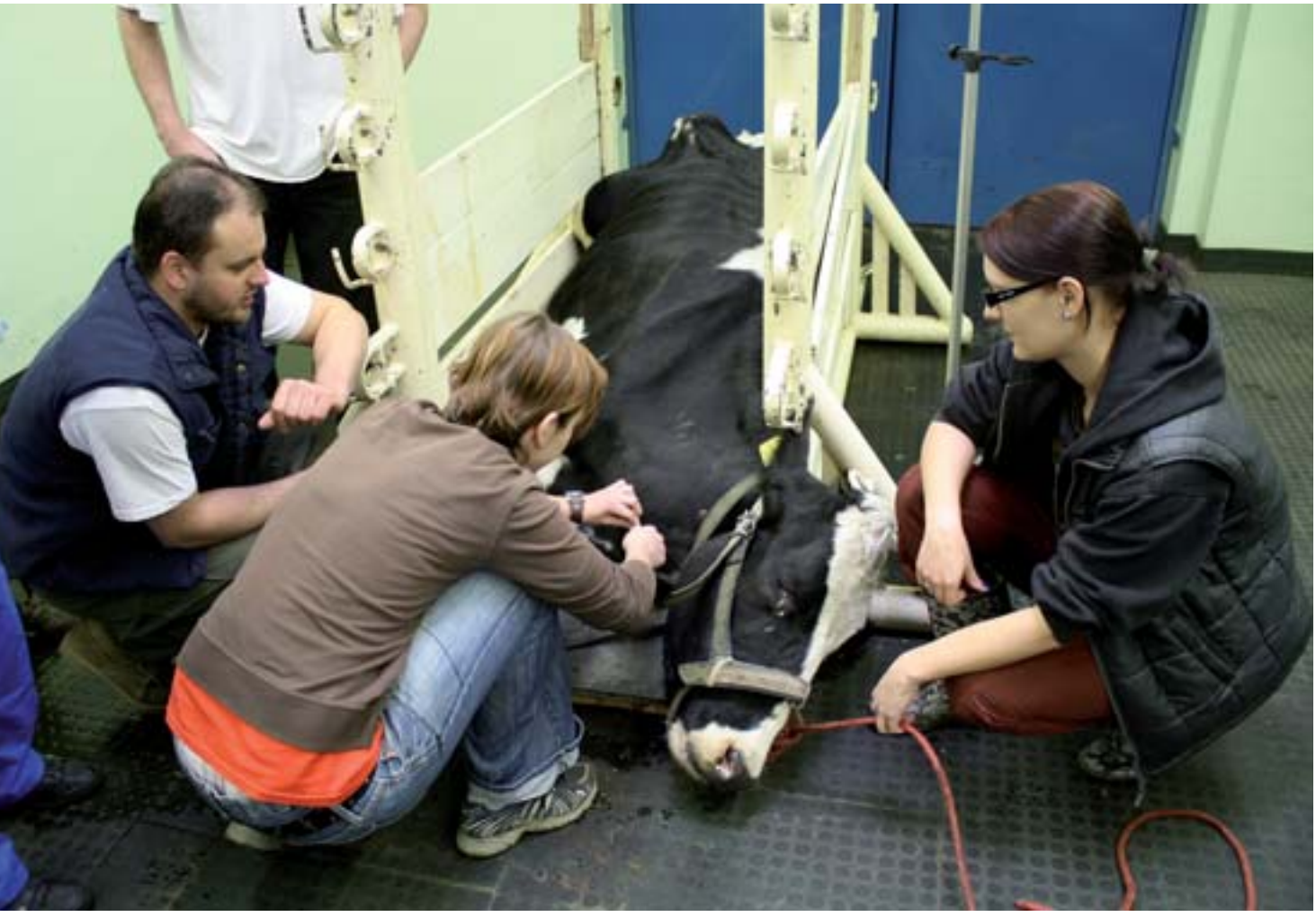
Students who progress to the 6th year have already undergone training in all the clinical science subjects and adequate knowledge, experience and skills, and have passed examinations in those subjects. Modular training is designed to further enhance in particular their experience and skills in the respective clinical science field in various animal species, and to provide them with professional content in the out-patient and in-patient pro-

Training in avian diseases

cesses or in the field in the pursuit of veterinary activities and veterinary practice management. Students thus work with patients in all areas comprising the subject (i.e., in particular diagnostic imaging, surgery (including anaesthesiology), obstetrics and gynaecology, reproduction, internal diseases, and possibly also in other fields of specialization, such as dermatology, gastroenterology, cardiology, urology, ophthalmology, etc.). They thus undergo training at out-patients departments, in operating theatres, at ICU, at in-patient departments. Students come into contact with clients in the course of their training, take part in the entry of case history data and diagnostic data, therapy and prevention concerning the case into the records and computer system, work with the patient under the direction of the teacher – veterinary surgeon, at the level of diagnostics, therapy and prevention, and take part in the operations of the out-patient and in-patient departments (including night hours), or in field activities, including the management of such activities. The daily scope of such activities performed by students is determined by the activities of the veterinary surgeon in the out-patient and in-patient departments, or his/her field activities and rota system. It is generally approx. 6 hours per day depending on the number of clients and the nature of veterinary activities, but may also take 8 hours or more.

4.1.4. Obligatory extramural work

The curriculum to be taken by each student includes compulsory extramural practice, without teachers in attendance but in accordance with instructions and under potential supervision by teachers with the requisite specialization. It is provided in Table 4.4 for the Veterinary Medicine track (FVM) and the Veterinary Hygiene and Ecology track (FVHE). It comprises extramural work in veterinary laboratory diagnostics (generally state veterinary laboratory diagnostics institutes), extra-mural work at abattoirs in the inspection of fatstock before slaughter and meat and organs after slaughter, and possibly also veterinary supervision in facilities processing raw materials and foodstuffs of animal origin. In the Veterinary Hygiene and Ecology differentiation track, such training further includes extramural work with authorized veterinary surgeons (generally the State Veterinary Administration or Regional Veterinary Administrations) in the performance of veterinary supervision, in particular in food hygiene. The scope of such extramural work is provided in Table 4.5.



Training in diseases of ruminants

Table 4.5: Obligatory extramural work that students must undertake as part of their course

Nature of work	Minimum period		Maximum period		Year in which) work is carried out
	hours	% of total study time	hours	% of total study time	
Extramural work at State Veterinary Institute (FVM, FVHE)	40	0.9%	40	0.9%	3
Extramural work at an abattoir (FVM, FVHE)	40	0.9%	40	0.9%	5
Extramural work at Regional Veterinary Administration (FVHE)		0.0%	30	0.6%	6
Total	80	1.8%	80	2.33%	

Notes: Extramural work at State Veterinary Institute = extramural work veterinary laboratory diagnostics (both FVM and FVHE), Extramural work at an abattoir = extramural work at an abattoir (both FVM and FVHE), Extramural work at Regional Veterinary Administration = extramural work with authorized veterinary surgeons (only FVHE)

4.1.5. Specific information on the practical training in food hygiene/public health

Training in food hygiene/public health in both track differentiations (the Veterinary Medicine track and the Veterinary Hygiene and Ecology track) is organized in separate subjects and comprises training in food hygiene/public health subjects of the core curriculum, and training in food hygiene/public health subjects of the applicable differentiation track.

Food hygiene/public health subjects (compulsory) of the core curriculum

Food hygiene/public health subjects of the core curriculum are the following:

- Inspection of Slaughter Animals and Meat (separate subject at FVHE or as part of the subject of Hygiene of Meat Production at FVM) (including skills as specified),
- Hygiene and Technology of Meat and Meat Products (separate subject at FVHE or as part of the subject of Hygiene of Meat Production at FVM) (including skills as specified),
- Hygiene and Technology of Milk and Dairy Products (separate subject at FVHE or as part of the subject of Hygiene of Milk Production at FVM) (including skills as specified)
- further training included in the subject of the final state examination in food hygiene (Food Hygiene as a separate subject (FVM), or as part of Hygiene and Technology of Meat and Meat Products, and Hygiene and Technology of Milk and Dairy Products (FVHE)).

Such training in food hygiene/public health subjects includes training for the purposes of veterinary supervision at abattoirs, assessment of health safety and decisions on the edibility of meat, bodies, other raw materials of animal origin, and veterinary hygiene of foodstuffs in all commodities subject to veterinary supervision of foodstuffs (meat, meat products, poultry, rabbits, fish, venison, milk and dairy products, eggs, honey and other), as well as knowledge in the area of hygiene in meat, milk, egg and honey processing facilities, including HACCP.

Food hygiene/public health subjects (compulsory) in the differentiation part of the curriculum

Differentiation food hygiene/public health subjects for the Veterinary Hygiene and Ecology track

Differentiation subjects in food hygiene/public health for the Veterinary Hygiene and Ecology track include further subjects designed to enhance and expand the knowledge, experience and skills of the student in the area of food hygiene/public health, specifically:

- other food hygiene/public health subjects:
  - Types and Composition of Foodstuffs,
  - Human Nutrition,
  - Food Production,
  - Sensory Analysis of Food,
  - Chemistry and Microbiology of Food,
  - Hygiene and Technology of Poultry, Rabbits and Venison,
  - Hygiene and Technology of Fish and Fish Products,
  - Hygiene and Technology of Eggs and Honey,
  - HACCP,
- core curriculum subjects with extra hours in food hygiene/public health subjects:
  - Inspection of Slaughter Animals and Meat (enhanced training),
  - Hygiene and Technology of Meat and Meat Products (enhanced training),
  - Hygiene and Technology of Milk and Dairy Products (enhanced training).
- training in four compulsory elective subjects from the list of compulsory elective subjects for the Veterinary Hygiene and Ecology differentiation track,
- further training in food hygiene/public health subjects is conducted in the 6th year in the form of modular training in subjects covered by the final state examinations:
  - Hygiene and Technology of Meat and Meat Products (modular training),

- Hygiene and Technology of Milk and Dairy Products (modular training),
- Veterinary Protection of Public Health (modular training).

Subject differentiation in food hygiene in the Veterinary Medicine track

Subject differentiation in food hygiene in the Veterinary Medicine track includes

- further training in food hygiene in the form of modular training in the 6th year of study in the subject of the final state examination in Food Hygiene.

4.1.5.1 Organization of food hygiene/public health training in the 1st through the 5th year of study

Practical training in food hygiene/public health subjects up to the 5th year is organized as training in food hygiene/public health subjects in small groups determined by the subject and type of training. In practical training work of the E type, the size of the student group is up to 12 students per teacher. Depending on the nature of training (e.g., inspection of animals at the abattoir, activities in the Meat and Fish Technology Workshop, activities in the Dairy Pilot Technology Plant), the size of the group may be approx. 6 students, or even less at the abattoir. Further training in food hygiene/public health subjects takes the form of visits to food-processing facilities and other facilities where foodstuffs are processed and produced; these are usually one-day visits during which students acquaint themselves with food-processing facilities, their technologies, hygiene, veterinary inspection and supervision activities.

Part of the food hygiene/public health training with a focus on abattoirs takes place at the University's abattoir – demonstration part of training in veterinary inspection of animals before and during slaughtering, and of meat and organs after slaughtering. The abattoir is on campus and is used to slaughter pigs and cattle as required for training purposes. The animals come from the abattoir in Tišnov which is in contract with the University, and the carcasses, or meat and bodies, are transported to the Tišnov abattoir following their veterinary inspection. Training takes place for periods assigned in the curriculum to the subject of Inspection of Slaughter Animals (FVHE), Hygiene and Technology of Meat (FVHE), or Hygiene of Meat Production (FVM), under the direction of teachers in small groups, generally 6 students per teacher.

A further part of the food hygiene/public health training with a focus on abattoirs takes place directly at the Tišnov abattoir (21 km far from Brno), where students and their teachers come in groups and where training in the veterinary inspection of animals before and during slaughter, and carcasses, meat and organs after slaughter is conducted directly at the abattoir and on slaughtered animals, so that each student would have a turn conducting the inspection. Training takes place for periods assigned in the curriculum to the subject of Inspection of Slaughter Animals (FVHE) or Hygiene of Meat Production (FVM) under the direction of teachers. The number of animals slaughtered and used for training is recorded, and their number makes it possible to conduct training in very small groups of students, or even individually, per slaughtered animal. The abattoir is used to slaughter pigs and cattle, or small ruminants and horses.

The food hygiene/public health training includes a one-week extramural practice at the abattoir where the students have to carry out extramural work for one-week (40 hours) in accordance with the University's directions at the abattoir facilities. Upon completion, the extramural work is assessed by the teacher.

Part of the training also takes place in the Meat and Fish Technology Workshop where students take part in the production of meat and fish products and conduct their health, hygiene and quality assessment.

Part of the training also takes place in the Dairy Pilot Technology Plant where students process milk to make dairy products, in particular cheese and yoghurt, and conduct their health, hygiene and quality assessment.

4.1.5.2 Organization of food hygiene/public health training in the 6th year of study

In the 6th year, training in food hygiene/public health subjects is organized in the form of modular training conducted at the University's facilities.

Food hygiene training at the University's Fatstock Abattoir

In the Veterinary Hygiene and Ecology differentiation track, the student undergoes modular training in Hygiene and Technology of Meat and Meat Products (5 weeks), Hygiene and Technology of Milk and Dairy Products (5 weeks), and Veterinary Protection of Public Health (5 weeks) (which includes a one-week extramural work – hygiene practice with authorized veterinary surgeons).

Practical training of students in the technology of meat products

In the Veterinary Medicine differentiation track, the student undergoes modular training in Food Hygiene (5 weeks).

Modular training in food hygiene/public health subjects in the 6th year is organized in such a way that students enrolled in the subject are divided into time modules within which they complete their training in that subject (i.e., the number of students who enrolled in that subject is usually divided into groups, each of which undergoes training in that subject at a different time in the course of the 6th year). The group undergoing training may be further subdivided into sub-groups which rotate so that training could be conducted in small student groups.

By completing their training in food hygiene/public health subjects, all graduates gain knowledge, experience and skills for veterinary inspection of animals at abattoirs and for the inspection, assessment and decisions on the edibility of meat and organs after slaughter, and knowledge in the area of hygiene and technology of poultry, fish, milk and dairy products, eggs and honey and products therefrom, the area of hygiene and technologies of food-processing facilities and HACCP, food hygiene legislation and supervision and inspection of foodstuffs of animal origin. Training includes work on case studies in which students make a comprehensive assessment of model cases or real practical training cases. Training in food hygiene/public health subjects includes visits to food-processing facilities.

4.1.6 Ratios

4.1.6.1 General indicator types of training

Type	Hours of training in total	FVM	FVHE
A	Lectures	1,713	1,744
B	Seminars	50	51
C	Self-directed study	150	150
D	Laboratory and desk-based work	1,084	1,360
E	Non-clinical animal work	276	321
F	Clinical work	1,360	1,057
G	Other	30	30
	Total	4,663	4,713

Note: The number of training hours consists of hours of training in EU-listed compulsory and compulsory elective subjects, but does not include hours of training in non-EU-listed compulsory subjects (i.e., English, Ecology) and compulsory elective subjects taken above and beyond the four compulsory elective subjects taken by each student, or hours of training in subjects that may be elected above and beyond compulsory training, or hours of extramural work.

$$\text{R6 FVM: } \frac{\text{Theoretical training (A+B+C)}}{\text{Supervised practical training (D+E+F)}} = \frac{1913}{2720} = \frac{1}{0{,}70} : 1{,}42$$

$$\text{R6 FVHE: } \frac{\text{Theoretical training (A+B+C)}}{\text{Supervised practical training (D+E+F)}} = \frac{1945}{2738} = \frac{1}{0{,}71} : 1{,}41$$

$$\text{R7 FVM: } \frac{\text{Clinical Work (F)}}{\text{Laboratory and desk-based work + non-clinical animal work (D+E)}} = \frac{1360}{1360} = \frac{1}{1{,}00} : 1{,}00$$

$$\text{R7 FVHE: } \frac{\text{Clinical Work (F)}}{\text{Laboratory and desk-based work + non-clinical animal work (D+E)}} = \frac{1057}{1681} = \frac{1}{0{,}63} : 1{,}59$$

$$\text{R8 FVM: } \frac{\text{Self-directed learning (C)}}{\text{Teaching load (A+B+C+D+E+F+G)}} = \frac{150}{4663} = \frac{1}{0{,}03} : 31{,}09$$

$$\text{R8 FVHE: } \frac{\text{Self-directed learning (C)}}{\text{Teaching load (A+B+C+D+E+F+G)}} = \frac{150}{4713} = \frac{1}{0{,}03} : 31{,}42$$

4.1.6.2 Special indicators of training in food hygiene/public health

$$\text{R9 FVM: } \frac{\text{Total no. curriculum-hours Food Hygiene / Public Health}}{\text{Total no. hours vet. curriculum}} = \frac{288}{4663} = \frac{1}{0{,}06} : 16{,}191$$

$$\text{R9 FVHE: } \frac{\text{Total no. curriculum-hours Food Hygiene / Public Health}}{\text{Total no. hours vet. curriculum}} = \frac{1104}{4713} = \frac{1}{0{,}23} : 4{,}269$$

$$\text{R10 FVM: } \frac{\text{Total no. curriculum-hours Food Hygiene / Public Health}}{\text{Hours obligatory extramural work in Veterinary Inspection}} = \frac{288}{40} = \frac{1}{7{,}2} : 0{,}139$$

$$\text{R10 FVHE: } \frac{\text{Total no. curriculum-hours Food Hygiene / Public Health}}{\text{Hours obligatory extramural work in Veterinary Inspection}} = \frac{1104}{70} = \frac{1}{15{,}8} : 0{,}063$$

4.2 Comments

4.2.1 Indicators concerning the curriculum

The indicators show a higher share of practical training as compared to theoretical training, a higher share of clinical work as compared to other practical training (in particular at FVM), and a higher share of food hygiene/public health training as compared to other training (in particular at FVHE). The number of hours of self-directed training is influenced by the fact that students engage in self-directed training with a view to their individual needs, with each student spending a different amount of time thereon, as well as the fact that it is not a part of the curriculum, save for the 6th year. The ratio expressing the number of hours of extramural work in food hygiene/public health subjects is influenced by the high number of hours of training in food hygiene/public health in the Veterinary Hygiene and Ecology track differentiation (FVHE).

4.2.2 Modernization of the curriculum in 2012

The curriculum for veterinary training was modernized in the past period. Modernizations were prepared in 2010 and 2011, and the implementation of the curriculum was commenced in 2012. The changes were caused by the incorporation of recommendations made in the 2005 report on the international evaluation of UVPS Brno, Report on the visit to the University of Veterinary and Pharmaceutical Sciences Brno, experience presented at meetings of the European Association of Establishments for **Veterinary Education** (EAEVE) (e.g., a greater emphasis on the Day One Skills requirement), requirements set out in EAEVE's documents (for instance, the Principles and Process of Evaluation of Veterinary Training in Europe), as well as changes in veterinary practice (e.g., the shift in focus of a substantial part of private veterinary practice to hobby (companion) animals, the need for experts in food hygiene linked to food animal medicine), and maintenance of the unique nature of veterinary training at UVPS Brno (for instance, the very strong training in food hygiene/public health at UVPS Brno).

4.2.3 Comparison of the modernized and original curricula

A comparison of the modernized curriculum (in force in 2012) and the original curriculum (in force up to 2012) is provided in the table below.

Table: Comparison of the modernized curriculum (in force as of 2012) and the original curriculum (in force up to 2012) in terms of number of hours

Subjects (number of hours)	**2012**	**2012**	**2011**	**2011**	**diff.**	**diff.**
Basic Subjects	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Physics	26	26	39	39	-13	-13
Chemistry	26	26	52	52	-26	-26
Animal Biology	80	80	136	136	-56	-56
Plant Biology	28	28	42	42	-14	-14
Biomathematics	39	39	39	42	0	-3
Total	199	199	308	311	-109	-112

Subjects (number of hours)	**2012**	**2012**	**2011**	**2011**	**diff.**	**diff.**
Basic Sciences	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Anatomy (incl. Histology and Embryology)	314	314	308	308	6	6
Physiology	189	189	243	243	-54	-54
Biochemistry	108	108	135	135	-27	-27
Genetics	42	39	52	56	-10	-17
Pharmacology and Pharmacy	108	108	108	108	0	0
Toxicology	52	56	39	39	13	17
Microbiology	81	81	81	81	0	0
Immunology	54	54	68	68	-14	-14
Epidemiology	26	26	28	28	-2	-2
Professional Ethics	13	13	26	26	-13	-13
Track differentiation FVM/FVHE						
Microbiology	0	0	28	0	-28	0
Total	987	988	1,116	1,092	-129	-104

Subjects (number of hours)	**2012**	**2012**	**2011**	**2011**	**diff.**	**diff.**
Animal Production	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Animal Production	26	26	26	26	0	0
Agronomy	13	13	13	13	0	0
Animal Nutrition	108	108	109	109	-1	-1
Rural Economy	28	28	39	39	-11	-11
Animal Husbandry	56	56	95	95	-39	-39
Veterinary Hygiene	39	39	81	81	-42	-42
Animal Ethology and Protection	81	81	42	42	39	39
Track differentiation FVM/FVHE						
Animal Husbandry	39		0	0	39	0
Total	390	351	405	405	-15	-54

Subjects (number of hours)	2012	2012	2011	2011	diff.	diff.
Clinical Sciences	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Pathology	164	164	159	159	5	5
Parasitology	81	81	94	94	-13	-13
Obstetrics	68	68	55	55	13	13
Reproduction and Reproductive Disorders	26	26	26	26	0	0
Propaedeutics	54	54	0	0	54	54
Diagnostic Imaging	39	39	42	42	-3	-3
Surgery and Clinical Medicine	515	517	417	417	98	100
Clinical Lectures on Various	154	145	134	134	20	11
Veterinary leg. and forensic med., veterinary state medicine and public health	52	56	56	56	-4	0
Preventive Medicine	81	81	82	82	-1	-1
Veterinary State Medicine and Public Health	126	126	126	126	0	0
Ambulatory Clinics	300	300	300	300	0	0
Therapeutics	120	120	120	120	0	0
Track differentiation FVM/FVHE						
Reproduction and Reproductive Disorders	28	0	42	0	-14	0
Obstetrics	0	0	39	0	-39	0
Surgery and Clinical Medicine	415	54	410	0	5	54
Clinical Lectures on Various	52	26	0	0	52	26
Ambulatory Clinics	470	160	470	150	0	10
Total	2,745	2,017	2,572	1,761	173	256

Subjects (hours)	2012	2012	2011	2011	diff.	diff.
Food Hygiene	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Practical training Work	26	28	66	66	-40	-38
Food Hygiene and Technology	56	56	69	69	-13	-13
Food Science incl. Legislation	56	56	81	81	-25	-25
Inspection and Control of Animal Foodstuffs	150	150	150	150	0	0
Track differentiation FVM/FVHE						
Food Science incl. Legislation	0	404	0	636	0	-232
Practical training Work	0	28	0	55	0	-27
Food Hygiene and Technology	0	262	0	276	0	-14
Inspection and Control of Animal Foodstuffs	0	120	0	150	0	-30
Total	288	1,104	366	1,483	-78	-379

Subjects (hours)	2012	2012	2011	2011	diff.	diff.
Professional Knowledge	**FVM**	**FVHE**	**FVM**	**FVHE**	**FVM**	**FVHE**
Practice Management	30	30	30	30	0	0
Veterinary Certification	20	20	20	20	0	0
Career Planning	4	4	4	4	0	0
Total	54	54	54	54	0	0

Entire curriculum total	**4,663**	**4,713**	**4,821**	**5,106**	**-158**	**-393**

Table: Comparison of the new curriculum (in force as of 2012) and the original curriculum (in force up to 2012) in %

Subjects (%)	2012	2012	2011	2011	diff.	diff.
	FVM	FVHE	FVM	FVHE	FVM	FVHE
Basic Subjects	4.3	4.2	6.4	6.1	-2.1	-1.9
Basic Sciences	21.2	21.0	23.1	21.4	-2.0	-0.4
Animal Production	8.4	7.4	8.4	7.9	0.0	-0.5
Clinical Sciences	58.9	42.8	53.3	34.5	5.5	8.3
Food Hygiene	6.2	23.4	7.6	29.0	-1.4	-5.6
Professional Knowledge	1.2	1.1	1.1	1.1	0.0	0.1
Total	100.0	100.0	100.0	100.0	0.0	0.0

The table shows that in accordance with the 2005 report on the international evaluation of UVPS Brno:

- the total number of hours in the curricula in both tracks was reduced,
- the total number of hours in basic subjects was reduced, i.e., in physics, chemistry, biology, zoology, botany (students already come with knowledge of these subjects from secondary school, and their knowledge of biology (including zoology) and chemistry is further tested in the admission test),
- in animal production subjects, the number of hours in Animal Nutrition (earlier on already), Animal Husbandry, Animal Hygiene was reduced, and number of hours in Ethology and Animal Welfare increased,
- in basic science subjects, the training in Physiology and Pathofysiology was linked, and new types of training introduced in order to reduce the total number of Physiology hours; the training of Microbiology and Immunology was changed so as to reduce the number of hours; in agreement with directors of studies, the number of training hours in Animal Genetics and Biochemistry was also reduced,
- in clinical sciences, the total number of hours was increased, clinical sciences were introduced into earlier stages of the curriculum; the number of hours of training in clinical sciences was increased, Propaedeutics was introduced as a separate subject, the number of training hours in surgery and internal medicine in particular in pet animals was increased, as was the number of hours of training dedicated to other animal species (exotic animals, game, etc.), and the number of hours of training in obstetrics and reproduction and reproductive disorders between the individual tracks became more even,
- in food hygiene/public health training, direct training in veterinary inspection of animals at abattoirs and inspection of meat and organs after slaughter at abattoirs was introduced (under a contractual arrangement), whereby the number of carcasses and organs inspected by each students was increased considerably, the training process became more efficient and the number of hours spent on practical training could be reduced; food hygiene/public health training became more concentrated and the number of direct training hours could be reduced as a result,
- a percentage comparison of the total numbers of hours in the individual areas of training shows that in proportion to the total number of hours, the number of hours dedicated to clinical work increased (in line with trends in veterinary training), the strong clinical training in the Veterinary Medicine track differentiation was preserved (2,745 hours, i.e., 58.9% of training), as was the strong food hygiene/public health training in the Veterinary Hygiene and Ecology track differentiation (1,104 hours, i.e., 23.4% of training).

The total number of hours dedicated to clinical sciences was increased

4.2.4 Graduate career paths

Veterinary training conducted according to the modernized curriculum follows two track differentiations which correspond to the main career paths of the graduates in the Czech Republic.

The Veterinary Medicine track differentiation (FVM) focuses on the entire field of veterinary medicine, with an

emphasis on clinical veterinary medicine, in particular on pet (companion) animals (dogs, cats, horses, birds, reptiles, small mammals), and the presumption that graduates would seek careers in private veterinary practice focusing on small animals (currently most of FVM graduates). Clinical sciences naturally make it possible to focus on clinical medicine of food animals, where the graduates seek careers in private clinical practice focusing on food animals (a smaller number of FVM graduates).

The Veterinary Hygiene and Ecology track differentiation (FVHE) focuses on the entire field of veterinary medicine, with an emphasis on food hygiene, state veterinary medicine and veterinary medicine of food animals (ruminants, pigs), and the presumption that graduates would seek careers in state veterinary administration, i.e., veterinary hygiene supervision of food (provided by the state in the Czech Republic) and supervision of animal rearing facilities, protection of food animals from infections (provided by the state in the Czech Republic), in state veterinary administration (for FVHE graduates), as well as private veterinary practice focusing on food animals.

4.2.5 Degree awarded to graduates

Graduates of both track differentiations obtain the degree MVDr. (Medicinae Veterinarie Doctor). The University has not considered making a distinction between the two differentiation tracks by means of the degree awarded. Graduates of both differentiation tracks are veterinary surgeons who have completed all the subjects prescribed by Directive 36/2005/EC and the national Act on Veterinary Care, are competent in all areas of veterinary medicine. The difference between the two tracks is at the level of differentiation (rather than specialization) which gives them, in addition to full veterinary training (in all areas of the veterinary profession) an enhanced and deeper education in the differentiation track, i.e., for a graduate of the Veterinary Medicine track, in clinical veterinary medicine in animal species depending on choice of focus in the 6th year, with most graduates opting for pet (companion) animals (dogs, cats, horses, birds, reptiles, small mammals), and for a graduate of the Veterinary Hygiene and Ecology track, an enhanced and deeper education in food hygiene/public health and veterinary medicine in food animals (ruminants, pigs). To award different degrees within single veterinary medicine would be confusing both within the profession and for the public.

4.2.6. Further anticipated developments in the curriculum

The curriculum has lately been evolving towards a more precise definition of the core curriculum subjects, differentiation subjects and other compulsory elective and elective subjects, in order to increase the share of clinical sciences in the curriculum, to shift clinical science training towards lower years of study, to extend the time available for practical training in day one skills, to expand the range of compulsory elective and elective subjects on offer, to respect an adequate load of students in terms of weekly direct training and an acceptable number of examinations per term, to enhance the differentiation with a view to practical training needs (companion animals or food hygiene and food animals), to increase the extent of direct practical training involving animals at clinics, and to increase the extent of direct practical training involving fatstock and raw materials and foodstuffs of animal origin, to organize training in the 6th year in the form of training modules based on the subjects elected and providing a comprehensive view of the clinical patient or food hygiene/public health.

Fresh graduates of the University of Veterinary and Pharmaceutical Sciences Brno

In the near future, changes of the curriculum to reflect development in veterinary practice can be expected to take place, i.e, a further enhancement of one differentiation track in clinical science training focusing on companion animals (i.e., dog, cat, horse, birds, reptiles, mammals), and a further enhancement of the other differentiation track focusing on state veterinary medicine, food hygiene and veterinary medicine of food animals.

4.3 Suggestions

There ought to be a complete system of prerequisites for the curricula of both differentiation tracks (both FVM and FVHE). This system is currently being designed in the veterinary training at UVPS Brno, and its implementation is contemplated to take place as of 2014.

The curriculum of the Veterinary Medicine differentiation track (FVM) could have a broader basis in food hygiene in the Food Science part; it may thus be recommended to increase the number of hours in food hygiene training in this differentiation track by adding Chemistry and Microbiology of Food.

TEACHING AND LEARNING: QUALITY AND EVALUATION

5.1 Factual information

5.1.1 The teaching programme

5.1.1.1 Coordination and management of veterinary training

Veterinary education at the University is coordinated by the Veterinary Training Board which manages the educational process and inspects its quality.

Veterinary training at the University of Veterinary and Pharmaceutical Sciences Brno in both tracks, and with a focus on Veterinary Medicine (with an emphasis on pet), and on Veterinary Hygiene and Ecology (with an emphasis on food hygiene and food animals), respectively, is conducted in an integrated fashion at the entire University. The Faculty of Veterinary Medicine and its sections, clinics and departments provide clinical teaching and the teaching of basic sciences according to the focus of the individual departments to both tracks of veterinary training. The Faculty of Veterinary Hygiene and Ecology provide teaching in the fields of hygiene, animal husbandry and animal production, the teaching of certain basic sciences according to the focus of the individual departments, as well as the teaching of both tracks of veterinary training. The Rectorate and its departments procure the teaching of foreign languages, ethics and history of veterinary medicine, as well as sports activities on the curriculum.

The teaching at individual faculties is managed by the Dean and Vice-dean for Education of the respective faculty. Teaching within a section is coordinated by the head of each section. Teaching at departments and at clinics is managed by department heads, and professional standards are observed by the director of studies of every subject who also coordinates the teaching performed by teachers, i.e., full professors, associate professors, assistant professors and assistants.

5.1.1.2 Teaching process

The teaching process takes place in departments and at clinics. The content of every subject taught is defined by the focus of that subject, determined by the director of studies and published before classes start each term. At the beginning of the term, the director of studies publishes the following with regard to every subject:

- syllabi of lectures and practical training, as well as extra-mural work, if any,

Clinical training at the Avian and Exotic Animal Clinic

- names of teachers of the subject,
- details on the course of tuition during the term,
- requirements applicable to the student in tuition during the term,
- credit requirements,
- examination requirements, examination form (theoretical, practical, test, etc.),
- number of credits per subject,
- time schedule for consultations, if any,
- literature to be studied for the subject.

Logical sequence of subjects stems from the curriculum. The individual departments and clinics collaborate in the teaching process (for instance, using animals at clinics for the teaching of Animal Husbandry, or using clinics to measure animal hygiene properties as part of the animal husbandry subject), or in obtaining teaching materials (animals that die at the clinics are used as materials for autopsies in the teaching of pathology, etc.).

The student learns in the course of veterinary training by studying the individual subjects on the curriculum. Depending on the focus of the subject, they are classified as basic subjects, animal production, basic sciences, clinical sciences, food hygiene/public health, professional knowledge and other subjects. The subjects cover all areas of veterinary medicine so that the student would acquire knowledge and become a competent veterinary surgeon in all areas of the veterinary profession.

5.1.1.3 Forms of teaching

Veterinary training includes many different forms of instruction, in particular lectures, seminars, practical training classes in laboratories, classes in specialized laboratories, practical training classes using cell cultures, tissues, organs, body parts, disposable and permanent slides, in autopsy rooms, out-patient surgeries, specialized veterinary diagnostic facilities, operating theatres, ICU facilities, in-patient facilities, stables at clinics, in breeders' stables as part of the mobile clinics process, in stables at farms in the process of animal production teaching, at abattoirs, meat processing facilities and facilities producing meat products, poultry, game, fish, milk processing and production of dairy products, egg processing and production of egg products, honey and other products of animal origin; the educational process includes the teaching of veterinary supervision, inspection and administration, and is supplemented by extramural work and practice at veterinary diagnostic facilities, at abattoirs in the process of veterinary supervision, at clinical facilities and in the process of supervision performed by the State Veterinary Administration.

The teaching is organized according to the individual veterinary fields, clinical teaching according to animal species. The instruction covers various issues within the subject, and further provides a comprehensive approach synthesizing the facts learnt into a single complex represented for instance by an animal or a herd, a flock of animals, or is problem-oriented.

Clinical training at the Equine Clinic

The process of instruction employs modern multimedia means of recording the presentation of knowledge or experience, as well as computer data evaluation, computer simulation and other options offered by information technology.

E-learning is not used extensively in veterinary training at UVPS Brno, mainly because veterinary training requires that the student gains experience and skills through contact with the patient. The students have to be present at the clinical facility, in the abattoir, at work facilities, working with cells, tissues, organs, animal products, cadavers, etc., and training requires direct practicing of techniques on animals or material. E-learning is unable to provide such experience in veterinary training at an adequate level.

5.1.1.4 Textbooks, lecture notes, books

Textbooks, lecture notes, specialized books and other specialized texts are used in veterinary education and learning. There is a list of recommended literature for every subject on the curriculum, and the list is made available to the students before they start studying the subject. The student may buy such study literature in a shop (there is a bookstore dedicated to specialized veterinary literature on campus). Study literature may further be borrowed at the University Library or studied in the reading room of the University Library. Students have access to further study literature in libraries at the departments and clinics. International publications (some 80% is in English) represent an important amount of study literature and other specialized literature.

The University publishes lecture notes for the students' study. The lecture notes summarize specialized issues related to the subject. Lecture notes are currently published electronically and can be accessed by the students on the University's Intranet.

There are textbooks, lecture notes or specialized books or other specialized texts for all the essential subjects on the veterinary curriculum. Students may access study literature in electronic form or in the form of interactive teaching programmes in some subjects (electronic interactive texts in physiology, case studies in animal welfare, veterinary legislation, etc.).

5.1.1.5 Practical training instruction and instruction using practical training materials

Many subjects on the curriculum are taught outside the University campus.

Part of the instruction takes place at the School Agricultural Farm in Nový Jičín at Nové Dvory (in particular instruction in the area of animal production and animal husbandry, as well as clinical instruction with regard to food animals).

Instruction also takes place at farms where animals are bred and where individual departments or clinics make

Training in the veterinary inspection of fatstock at Tišnov abattoir

arrangements for access to the animals for the purpose of instruction (non-commercial field trips within clinical instruction). (The collaboration does not require a separate contract).

Instruction also takes place through a mobile clinic whereby teachers and small groups of students visit animal breeders on request or visit clinical patients as prearranged (commercial trips with students). (The animal breeder's request for the provision of veterinary care and the veterinary care provided by the University constitute a contract).

There is an arrangement with a poultry slaughtering facility (Modřice) on the provision of poultry cadavers from the abattoir (following transportation for slaughter) to students for learning purposes. (The collaboration does not require a separate contract).

There is a close collaboration in the veterinary training of students between the University and the State Veterinary Administration (Regional Veterinary Administrations) (extra-mural work of students at abattoirs, students' practice in veterinary supervision, in the state veterinary administration). (The collaboration does not require a separate contract but the University does have a Master Agreement with the State Veterinary Administration).

The University also collaborates with state veterinary diagnostic laboratories (extra-mural practice of students in laboratory diagnostics). (The collaboration does not require a separate contract but the University does have a Master Agreement with the State Veterinary Administration).

Veterinary inspection of fatstock is taught at the abattoir in Tišnov. The instruction applies to a large number of students and their practical training activity, i.e., the practicing of veterinary inspection of bodies and organs

Clinical training at the Ruminant and Swine Clinic

following slaughter. The collaboration is based on a specific agreement setting out obligations on the part of both the abattoir and the University.

Veterinary training in a number of subjects includes visits to companies and facilities, e.g., a visit to food-processing facilities at Krásno, Váhala or Kostelec, and other food-processing companies, a visit to a veterinary sanitation facility at Medlov, and other. The collaboration is based on good relations between the University and the respective companies spanning many years, and no separate contract is required.

Instruction of 6th year students includes practical training veterinary instruction conducted by private veterinary surgeons. The university directly collaborates with a number of veterinary surgeons with practices providing veterinary care to dogs and cats, reptiles, birds and small mammals, horses, ruminants, pigs and poultry. The veterinary surgeons are appointed by the University to teach a particular student for a specific period of time, and during that time, they act in the capacity of the student's teacher and are given a special teaching appointment by the University. (The appointment constitutes a certain form of agreement between the University and the private veterinary surgeon).

The University also obtains great quantities of teaching materials from the practice on commercial terms whereby the University processes biological material and diagnoses diseases by examining samples. The University also obtains teaching material on a non-commercial basis whereby it arranges for a supply of samples, tissues, organs and other biological material (e.g., tissues and organs from abattoirs, etc.) for the teaching of students.

Practical training instruction of students and instruction using practical training materials is a very important part of the teaching process in some subjects on the curriculum with a view to the acquisition of practical training experience and skills.

5.1.1.6 Day one skills (DOS)

Theoretical knowledge creates a knowledge base for understanding and development, as well as a capability of medical interpretation of findings, which may be developed further in light of latest findings during the pursuit of the veterinary profession. Practical training experience is represented by findings at practical training level, presented by the teacher, or acquired by the student, in the course of practical training, so as to carry out practical training acts within the full scope of the veterinary profession. Skills are findings obtained at the level of practical training ability to perform acts of the veterinary profession with certainty based on personal experience. Emphasis has recently been placed on day one skills (following successful completion of veterinary studies) to be acquired by the graduate in the course of veterinary study.

The Veterinary Medicine and Veterinary Hygiene and Ecology study programmes at the University of Veterinary and Pharmaceutical Sciences Brno include the teaching of day one skills (DOS). The instruction is carried out in individual specialized subjects on the curriculum and also in separate subjects with a credit requirement for each respective clinical subject, i.e.: skills - small animal surgery and orthopaedics, skills – surgery and orthopeadics in large animals, skills – obstetrics and gynaecology, skills – dogs and cats diseases, skills – equine diseases, skills – diseases of ruminants, skills – swine diseases, skills – diseases of exotic pet animals, and then as part of the respective hygiene subject, skills – veterinary inspection of slaughter animals in the subject veterinary inspection of slaughter animals, skills – hygiene and technology of meat in the subject hygiene and technology of meat, skills – hygiene and technology of milk in the subject hygiene and technology of milk. From the University's perspective, these subjects create room for the teaching of the requisite day one skills (DOS).

In order to support the teaching of day one skills (DOS), lists of acts and activities comprising day one skills (DOS) were compiled for autonomous DOS subjects in which skills are taught. The student is obliged to undergo the skill (DOS) training within the autonomous subject, and have the teacher confirm in a special document (credit book) that the skill training of the student did take place. Such provision for instruction and recording of DOS provides

Treating a tortoise at the Avian and Exotic Animal Clinic

the requisite certainty that the student underwent the skill instruction to the stipulated extent, and obtained the skills (DOS) concerned at the requisite standard. This form of instruction will presumably continue to develop as more experience is gained. Nonetheless, the fact that skills (DOS) in the Veterinary Medicine and Veterinary Hygiene and Ecology study programmes have a defined teaching space in the curriculum, acts and activities included among skills (DOS) were incorporated into the syllabi of individual subjects, and there is a technical provision designed to ensure the student undergoes this training in the form of administrative confirmation, represents a significant modernization in DOS teaching at UVPS Brno.

5.1.2. The teaching environment

Teachers work at clinics and departments where they perform educational, research, specialized veterinary or other academic activity.

Teachers in departments and at clinics prepare for classes, they have computers with adequate software at their disposal for theoretical preparation, they have access to the department or clinic library (textbooks, lecture notes, books, journal), access to the internet, and, through the University's network, to specialized and scientific databases. Teachers prepare for classes in a standard manner using multi-media technology (computers connected to overhead projectors) permitting the presentation of structured text, schemes, pictures, photographs, video-recordings and other documentary materials.

For the preparation of practical training classes, teachers can use premises, work facilities, equipment, support staff and in particular materials, and depending on the focus of the department or clinic, also healthy animals, patients, animal cadavers, tissues, organs, slides, permanent slides and other teaching materials.

For their scientific and research activities, teachers have access to computers with adequate software, access to literary sources, as well as access to electronic specialized and scientific databases. Departments and clinics offer conditions for experimental work.

Specialized veterinary activities are carried out by the teachers at the work facilities at individual clinics or at the mobile clinic in practice, using the out-patient's surgeries, operating theatres, ICUs, in-patient facilities, imaging technology at clinics, laboratory diagnostics support and other.

Through the performance of activities in the preparation of theoretical instruction, practical training, pursuit of scientific and research activities and pursuit of specialized veterinary activities, teachers gain knowledge, experience and skills in the subject they teach.

Further support to the development of teaching skills in teachers has the form of internships at research facilities of other institutions and practical training work facilities (short-term specialize internships – for instance, at another university with regard to the introduction of a new methodology, or at a state veterinary institute to test a methodology, or in practice at an abattoir, etc., or short-term internships abroad).

The University also offers opportunities for teachers to improve their language skills. English courses are held at faculty level.

The University further offers courses for teachers to improve their computer skills. Computer skill courses – Excel, Word, Power point and other – are held.

There are also courses of pedagogical skills available at the University; however, these are not regular and large scale.

As regards certain activities carried out at the University, legal regulations require special knowledge, or even examinations, for the authorization to handle special equipment and facilities. The University enables teachers to attend such courses in order to obtain authorizations for such activities, specifically, for instance, the authorization to manage experiments on animals, the authorization to handle equipment producing X-rays, the authorization to handle radioisotopes, etc.

The University appreciates teachers with quality teaching, research or veterinary activities. Financial remuneration containing incentives based on instruction, number and quality of publication, veterinary activities performed, makes it possible to reflect extra dedication on the teacher's part. Quality instruction, research and other activities are also given appreciation in the form of the PhD. degree, habilitation procedure, the academic title associate professor, the professorial procedure and the academic title professor. Outstanding performance is rewarded by an honorary medal in some fields (e.g., Prof. Kábrt Medal, Prof. Matyáš Medal). Selected staff are awarded the Gold Medal of the University on important anniversaries of the University.

5.1.3 The examination system

The examination of students in individual subjects of study and subjects of final state examination is governed by the Study and Examination Code of the University.

Examinations take part during the teaching process, at the end of the term when credits are awarded, and upon completion of the subject.

5.1.3.1 Examination during the teaching process

Examination during the teaching process takes place in certain subjects (based on the examination tradition of that subject), and is announced at the beginning of the term as part of the study of that subject and as part of the terms for successful completion of the subject (for instance, such ongoing examination takes place in anatomy). The student is examined by the teacher in charge of practical training classes. Credit award at the end of the term is conditioned on a successful examination during the term.

Preparing for exams

5.1.3.2 Evaluation of subjects, which are awarded by at the end of the term

Instruction in every subject ends by credit award at the end of the term. Credit awarding in the subject concerned is indicated in the curriculum and announced at the beginning of the term as part of the study of the subject, and a condition for successful completion of study of that subject. Requirements applicable to the credit are published with regard to every subject at the beginning of every term. The credit is awarded to the student by the teacher who conducts practical training classes or a teacher designated by the director of studies. The credit is generally awarded in the last week when classes are held in the term. The student may sit for the credit repeatedly.

5.1.3.3 Evaluation of subjects, which are completed by an examination

The purpose of the examination is to ascertain whether the student has theoretical knowledge, practical training experience and skills to the extent and in the form stipulated for every subject of study. Examinations are taken in the form determined by the director of studies (written test, theoretical examination, practical examination in a laboratory, autopsy room, at a clinic, practical examination of skills, etc.) and may consist of several parts (in practical training subjects, they usually consist of theoretical and practical training parts). The student is examined by the director of studies or by other specialists authorized to examine by the Dean. An examination may only be taken 3 times. Examinations are usually held in the examination period which generally lasts for 5 weeks after classes end in the winter term, and 5 weeks after classes end in the summer term. Examination dates may be set outside the exam period as well, in such cases, the decision on setting an examination date outside the exam period is made by the director of studies for that discipline.

One month before the beginning of the examination period, the examiner announces examination dates (the number of students per examination date is limited). The number of places per exam must be a minimum of 1.5 times the number of students enrolled for the subject. The student registers for the date chosen. The number of examination dates must be a minimum of 1.5 times the number of students enrolled for the subject. At an oral examina-

Final state examination may include a practical part

tion, the student is assigned questions and is entitled to approx. 15 minutes of preparation time; the oral examination proper should not exceed 30 minutes. The result is graded as follows:

Excellent	A	1
Very good	B	1.5
Good	C	2
Satisfactory	D	2.5
Sufficient	E	3
Fail	FX	4
Fail	F	4

The result of a successfully passed examination is entered into the student's credit book and into records kept by the faculty.

The student must complete all examinations for the respective year before registering for the following year of study. The registration date is set by the Dean and usually falls on the beginning of the winter term (the month of September).

For the student to pass to the following year of study, he/she must earn the requisite number of credits stipulated by the Study and Examination Code. No prerequisites are stipulated, i.e., that a particular examination be passed as a condition of registration for another year of study, or registration for another subject on the curriculum.

5.1.3.4 Final state examination

The student sits for the final state examination before an examination board numbering a minimum of three members. Only full professors, associate professors and specialists approved by the Science Council are authorized to examine. The state examination consists of individual state examinations and every individual examination may consist of an oral and a practical training part. The individual state examinations are held on days stipulated by the Dean of the faculty.

At the individual state examination, the student is assigned questions and given 30 minutes to prepare. The result of the individual state examination is graded as follows:

Excellent	A	1
Very good	B	1.5
Good	C	2
Satisfactory	D	2.5
Sufficient	E	3
Fail	FX	4
Fail	F	4

The overall result of the state examination is an arithmetic average of the grades given in the individual state examinations, as follows:

average grade 1.00 – 1.30	Excellent	A
average grade 1.31 – 1.50	Very good	B

average grade 1.51 – 2.30	Good	C
average grade 2.31 – 2.50	Satisfactory	D
average grade 2.51 – 3.00	Sufficient	E

If a student fails any *examen rigorosum,* the Dean will permit a retake at the student's request. An individual state examination can only be repeated once. If the student fails even the retake or fails to pass all the individual state examinations within 24 months from the date of the first individual state examination, his/her study is terminated.

5.1.4 Evaluation of teaching and learning

5.1.4.1 Internal quality evaluation

5.1.4.1.1 Evaluation of the quality of education in the system of management of sections, clinics and departments at the University

The University of Veterinary and Pharmaceutical Sciences Brno conducts an internal evaluation of the quality of education in the system of management of clinics and departments. Such quality evaluation is performed at the level of University Management, the Board of Advisors of UVPS's Rector, Boards of Advisors of the Deans of the faculties, and at meetings of department heads, as well as the level of sections, departments and clinics. The Science Council of UVPS Brno and Science Councils of the individual faculties (on which outside representatives of other universities, research institutes and the practice sector are also represented), the Academic Senate of UVPS Brno and Academic Senates of the individual faculties, as well as the Executive Council of UVPS Brno, as the case may be, also examine the quality of education.

The actual evaluation of the quality of education is based on an inspection as to whether quality of education is adequate in the applicable accredited study programmes and whether it is in compliance with the University's Long-term Plan and Institutional Development Plan, recommendations made by the Accreditation Board and proposals made by members of the academic community.

The number of autopsies available in the training process is one of the veterinary training quality indicators

Department of Quality Evaluation was established under the Rectorate in order to strengthen the concept and coordination of quality evaluation at the University.

5.1.4.1.2 Evaluation of the quality of education by the Veterinary Training Board at the University

The Veterinary Training Board is the University's body for the coordination of veterinary training. Its province is in particular the professional management of veterinary training and veterinary training quality control.

The Veterinary Training Board examines in particular the following issues in the area of quality evaluation of veterinary training:

- quality evaluation of veterinary training using quality indicators under the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine,
- *in situ* evaluation of premises, technologies, equipment and materials serving for veterinary education (at individual work facilities undertaking veterinary training),
- evaluation of academic staff involved in veterinary training,
- evaluation of instruction in the framework of veterinary training by students,
- evaluation of veterinary training by the University Management and management of the faculties,
- evaluation of veterinary training on the basis of the report issued by the national Accreditation Board,
- evaluation of veterinary training on the basis of the Report adopted by the Joint Education Committee of the EAEVE.

Having examined the respective issue, the Veterinary Training Board may adopt the respective Recommendation of the Veterinary Training Board. The Recommendation of the Veterinary Training Board is approved by the Rector. Following approval by the Rector, the Recommendation of the Veterinary Training Board is a principal recommendation for professional management and quality control of veterinary training for the individual veterinary faculties (FVM and FVHE).

5.1.4.1.3 Evaluation of the quality of training under the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine at the University

The quality of veterinary training at the University is evaluated under the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine. The system is formulated as an integrated set of indicators of the quality of veterinary training at UVPS Brno which is based on supranational and national requirements applicable to veterinary training, and

at the same time, on conditions of veterinary training at the University of Veterinary and Pharmaceutical Sciences Brno. Given the differences between the individual requirements and their potential quantification, the indicators are formulated on two levels, as verbal quality indicators and as numerical quality indicators.

Verbal indicators of veterinary training quality are defined as 25 indicators, many of which consist of further sub-indicators. Numerical indicators are defined as 50 indicators which include descriptions pertaining to academic staff, students, type of instruction, number of animals available for instruction, both within the institution and within the "mobile clinic", number of autopsies available for instruction, further indicators describing the condition of equipment and operations at the level of clinics, isolation facilities, lecture halls and premises for instruction in classrooms, instruction in laboratories, autopsy rooms and other non-clinical instruction, instruction at the School Agricultural Farm, the scope of research and publication activities, the scope of instruction in English and organization of international summer schools. Numerical indicators of veterinary training quality are set as ranges of values within which the particular numerical indicator is deemed satisfied.

In the overall evaluation, the individual indicators are not evaluated mechanically and separately but rather taken into consideration in a context relevant to veterinary training at the University of Veterinary and Pharmaceutical Sciences Brno. In 2012, all the quality indicators for veterinary training were met.

The System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine represents a possibility of taking a structured look at veterinary training at UVPS Brno from the point of view of conditions for quality veterinary training at the University within the meaning of international requirements with an evaluable conclusion, the possibility of identifying shortcomings, if any, and adopting measures to rectify them.

5.1.4.1.4 Evaluation of individual teachers at the University

Every teacher at the University is evaluated at the level of the respective clinic or department, and subsequently at the level of the faculty, in particular with a view to the number of classes taught and the quality and quantity of research work based on the number and quality of publications. The evaluation is reflected in the incentive segment of teachers' financial remuneration. Teachers are also evaluated in the habilitation procedure (by the lecture reviewers, habilitation thesis opponents, habilitation committee, Science Council of the faculty) and in the professorial appointment procedure (by the appointment committee, Science Council of the faculty, Science Council of the University).

The University is nevertheless negotiating the verification of a system for the evaluation of individual staff using a multi-criteria system designed by Palacky University in Olomouc. If the system proves to be suitable for the conditions at UVPS Brno, it will be used for annual evaluation of teachers at the University.

Students in a laboratory

5.1.4.1.5 Evaluation of the quality of training by students at the University

Students also take part in the evaluation of the quality of training at UVPS Brno. They use a quality evaluation method using a computer programme for anonymous evaluations. The quality of the educational activities at the University is evaluated by the students always for the term, and every subject the students attend in that term is evaluated. Students evaluate teaching with a view to how well lectures, practical training, seminars and practical training are provided for, and point out shortcomings, if any. While the evaluation is anonymous, the programme is designed in such a way that every student can only carry out the evaluation once, and can only evaluate subjects for which he/she is registered in his/her study plan for the academic year in question. The system evaluates the teacher for the field under assessment and the respective subject by assigning the teacher a grade calculated as the arithmetic mean of the grades assigned to the teacher by the students.

The evaluation results are reviewed by the University Management, the Board of Advisors of UVPS's Rector and Boards of Advisors of the Deans of the faculties. The results are then communicated to the individual departments and clinics through the Dean's Offices of the faculties. Following the evaluation of the students' comments, if a teacher repeatedly receives a negative evaluation, appropriate changes to improve the quality of instruction are made.

The training quality evaluation is to give students an opportunity to take part in the process of improvement of the quality of veterinary instruction at the University. However, rather few students take part in the evaluation process.

5.1.4.2 External quality evaluation

5.1.4.2.1 External quality evaluation conducted by the Accreditation Board of the Ministry of Education, Youth and Physical Education

The Accreditation Board of the Ministry of Education, Youth and Physical Education conducts an evaluation of study programmes when an application for accreditation or re-accreditation of a study programme or field is made. The accreditation process involves the elaboration of self-evaluation documents concerning the study programme and course, a review thereof by an expert commission, a review and/or approval of the accreditation at the level of the Accreditation Board, issuance of a decision on the accreditation of the respective programme or course by the Ministry of Education, Youth and Physical Education. Veterinary training in the Veterinary Medicine track and in the Veterinary Hygiene and Ecology track is currently successfully accredited by the Accreditation Board of the Ministry of Education, Youth and Physical Education for teaching both in Czech and in English (Veterinary Medicine up to December 31, 2013; the documentation for an extension of the accreditation is currently being filled; Veterinary Hygiene and Ecology is accredited up to December 31, 2019).

The Accreditation Board of the Ministry of Education, Youth and Physical Education also evaluates the quality of doctoral study programmes. Such evaluation was conducted by the Accreditation Board of the Ministry of Education, Youth and Physical Education at the University in April 2013. Self-evaluation reports and other documents for the evaluation of quality of DSP in the field of veterinary medicine for the Accreditation Board of the Ministry of Education, Youth and Physical Education have been drawn up, the expert commission of the Accreditation Board reviewed the documents, conducted an *in situ* examination of the quality of doctoral theses, premises, equipment, materials and staffing for the doctoral study programmes, discussions were carried out with the management of the University and the faculties, directors of studies of the individual courses and with students. An evaluation report was drawn up and reviewed and approved by the Accreditation Board of the Ministry of Education, Youth and Physical Education. The evaluation of doctoral study programmes was favourable.

The Accreditation Board of the Ministry of Education, Youth and Physical Education also assesses the quality of the entire individual faculties at universities. In 2006, an assessment of the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology with a view to quality of education being provided at the faculties was carried out. The result was favourable and the standards of education at both faculties was found to be good.

5.1.4.2.2 External evaluation for the authorization to award the Diploma Supplement Label

As regards supranational evaluation of the University, it is significant that in 2009, the University of Veterinary and Pharmaceutical Sciences Brno obtained an EC certificate – Diploma Supplement Label for 2009–2013, which evidences that UVPS Brno meets supranational conditions for the issuance of the supplement. As the Diploma Supplement Label certificate will expire in 2013, UVPS Brno started preparing the requisite documentation to that it could reapply.

5.1.5 Student welfare

The University of Veterinary and Pharmaceutical Sciences Brno intends to create adequate conditions for its students also as regards student welfare. This has to do with conditions in the area of accommodation, boarding, relaxa-

The Kaunic Student Residence Hall has a capacity of 468 beds

The foyer of the Study and Information Centre is a pleasant and comfortable space where students can spend their breaks or leisure time

tion areas on campus, medical care, protection of students against zoonoses, sports activities, leisure time activities, scholarship programmes, gifted student programmes and counselling for students.

5.1.5.1 Student accommodation

UVPS Brno provides student accommodation in its own Kaunic Student Residence Hall, as well as Residence Hall of the University of Defence.

The capacity of the Kaunic Student Residence Hall is 468 beds for students. The residence hall is divided into two blocks: one contains single rooms with bathrooms, and a communal system where one unit contains two double rooms with a kitchenette and bathroom. The second block contains double and triple rooms with communal amenities in the corridor.

Students may also live at the Residence Hall of the University of Defence with a capacity of 179 beds. It offers self-contained double and triple rooms.

In 2012, the number of applications for student accommodation was 782. Accommodation was assigned using a score system based on distance and study results in the preceding academic year. First year students were automatically given a higher score on an one-off basis in order to secure housing for this year of study as a matter of priority.

In 2012, 709 applicants were granted housing (the difference in the number of beds and the number of boarders is due to the fact that a certain percentage of students either never moved in, or left the housing during the year, and other students thus moved in). The University thus grants 90.1% of the applications for student residence hall accommodation.

Many students opt for residence halls only at the beginning of study, and shift to private accommodation later on.

5.1.5.2 Student boarding

On campus, student can eat in the University canteen which offers lunches to staff and students. As it is not a student canteen, prices are higher than prices usually charged to students at other Brno universities. Students use the canteen only to a limited extent.

Student can further buy refreshments at the University's Study and Information Centre. The fast food facility there caters primarily to students and students use it throughout the day.

UVPS Brno does not have its own student cafeteria (especially for lunches), and students thus use the student cafeteria of Mendel University in Brno. However, the University plans to build a student cafeteria on campus.

5.1.5.3 Student relaxation areas on campus

Veterinary training is essentially based on a broad range of various practical training work facilities where practical training takes place. These facilities work according to a certain schedule. Every student's timetable thus contains breaks between the individual class modules. The

When the weather is good, students can sit on benches in front of the Study and Information Centre

University thus felt it was important to create relaxation areas for students on campus where they could spend their breaks between classes.

Therefore, free seating zones were created at the Study and Information Centre and other pavilions where students can spend time between classes, especially at times of inclement weather. Seating zones for students were created (in particular in front of the Study and Information Centre building) and benches installed.

Students can naturally also spend breaks between classes at the University Library and in the computer room of the Study and Information Centre.

5.1.5.4 Medical care

Premises for a medical centre with human physicians and a pharmacy were created on the campus. A general practitioner and specialists have offices there and students use the out-patient medical care available. Therefore, in case of emergency, a physician is available on the campus to provide first aid, to treat injuries or provide other medical care to students.

5.1.5.5 Protection of students against zoonoses

The University acts in accordance with legal regulations when protecting students against zoonoses. Students are advised of the risk and prevention of such diseases during their studies at the University. They are obliged to take precautions, namely, no drinking, eating, smoking and chewing in class, they have to wash their hands and use protective means (gloves, rubber boots, coats, face shields, headwear) which are cleaned and disinfected during and after class. They are obliged to comply with sanitary code in facilities requiring this measure.

For practical training classes, students change from their civilian clothes and wear coats and/or other protective means. Facilities where practical training takes place offer lockers where students can keep their civilian clothes while taking the practical training classes at the clinic or department. Nevertheless, the University deems it necessary to establish Student Locker Centre on the campus where every student attending practical training classes requiring hygienic and prophylactic measures would have a locker for a substantial part of his/her studies at the University.

5.1.5.6 Student sports activities

There is an indoor sports hall on campus for student sports activities. Sports activities are organized by the Department of Sports and Physical Education which offers a broad range of various sports and sports activities to students, both on campus and during sports camps outside campus.

Sports are among the elective subjects and students can choose from 28 different kinds of sports. Students representing the University in university competitions and at the Czech Academic Games are recruited from among the best students.

5.1.5.7 Leisure time activities

Student organization IVSA (International Veterinary Student Association) is active at the University of Veterinary and Pharmaceutical Sciences Brno. It engages the activities related to social, cultural and leisure time activities of the students. Student organization IVSA manage the traditional veterinary ball of the University, Majáles (student spring celebrations), publishes student magazine "Výfuk" and organizes the welcome ceremony for the fist year students. Further organization includes the Cynology Club where students can pursue their interest in cynology, Hunting Association and the renewed Equestrian Club.

A student initiative at the University led to the foundation of a project in support of abandoned animals, Companion for Life, where students engage in activities targeting abandoned animals.

5.1.5.8 Scholarship programmes

The allocation of scholarships at UVPS Brno is governed by a scholarship code which applies to the entire University and which makes it possible to pay merit scholarships, research scholarships, PhD. scholarships, accommodation

scholarships, social scholarships, extraordinary (special purpose) scholarships, scholarships in support of study abroad and scholarships for foreign students. In 2012, scholarships were paid to a total of 2,483 students.

Merit scholarships are paid to students with grade average 1.0, 1.25 and 1.5 over a year of study.

Research scholarships are paid in relation to student research project work (projects of the Internal Grant Agency of UVPS Brno).

Doctoral scholarships are paid to students enrolled in the PhD programme in the 1st through the 4th years of study.

Accommodation scholarships are paid to students upon application and after their eligibility is verified pursuant to the scholarship code and data entered in the Student Register.

Social scholarships are paid to students upon application and after their eligibility is verified by the state social support department of a labour office of competent jurisdiction.

Extraordinary scholarships are paid in particular for extraordinary sports achievements in the representation of UVPS Brno, to support science and research output, for the organization of conferences, summer schools, in the context of foreign internships and for other extraordinary activities.

Scholarships in support of study abroad are awarded to students under the Erasmus, CEEPUS and other mobility programmes.

5.1.5.9 Counseling for students

Students at the University can obtain information or advice on study matters and conditions and other matters if need be. For veterinary study, brochures – Study at UVPS – containing basic information for students are published. Students can obtain further information from the Department of Student Affairs staff who advise students on a variety of matters. If the student's individual problem goes beyond ordinary cases, it is addressed by the Vice-dean of the faculty on a case-by-case basis.

Job advices is provided in class as part of the subject of public veterinary medicine. Further, the Chamber of Veterinary Surgeons of the Czech Republic has its seat on campus, in the building of the University, and students can thus obtain further specific information concerning veterinary practice directly from the Chamber's secretariat. Students also meet the staff of the State Veterinary Administration during training; this organization employs veterinary surgeons who work for the civil service (veterinary supervision, inspection, audits, administration in the area of animal health, infections, food hygiene, protection of animals against cruelty, etc.).

5.1.5.10 Gifted students care

Special attention is devoted to extraordinarily gifted students. At UVPS Brno, such students work on research projects directly in the individual departments and clinics of the faculties. High-achievers are motivated by merit scholarships

The indoor sports hall offers optimum conditions for various sports endeavors, including floorball

to maintain their excellent grades. For students taking part in research at the University, conferences on student science and research activities with international participation are held. At the conference, scientific and scholarly student work is presented and the best work rewarded.

5.1.5.11 Students with special needs

The study of veterinary courses requires adequate health on the part of students, in particular with a view to safety during practical training. The study of many subjects requires good senses, in particular vision, hearing, sense of smell, sense of touch and good locomotive abilities. Applicants for veterinary study are therefore required to present a medical clearance.

5.1.5.12 Buildings and facilities operated by the University for students

In summary, the University operates the following facilities to provide the student welfare:

- Study and Information Centre (relaxation zones where students can spend breaks between classes, space for student leisure time activities, refreshments for students),
- Student residence hall (student activities),
- Sports hall (student sports activities),
- Accommodation and Canteen Centre for employees and students (students can have a lunch there),
- IVSA Centre – administrative space for the activities of the IVSA student organization,
- Hunting Association – administrative space for the activities of a student organization focusing on hunting,
- Cynology Club – pens for dogs on the University campus and a training area for dogs on the University campus used by the Cynology Club,
- Equestrian Club – indoor riding hall, outdoor riding range and administrative space for the activities of the Equestrian Club at the University,
- Health Centre providing human medical care on the campus (medical care for students),
- University campus where students can rest on benches or on the lawn inside the campus.

5.2 Comments

Veterinary training at the University is provided at a very good standard, its quality is evaluated at various levels, and conclusions drawn from the evaluation are used to improve the quality of veterinary training and to rectify any shortcomings identified.

Veterinary training at University level is coordinated by the Veterinary Training Board which can adopt recommendations for changes required for the provision of quality veterinary training at the University.

Veterinary training is managed and evaluated by faculty management, in individual sections, departments and clinics. If any minor shortcomings are identified, measures to rectify them are adopted at the appropriate management level (for instance, when fewer examination dates than stipulated by study regulations are set).

The Equestrian Club organizes lessons for students to teach them the basics of horse handling

The training encompasses all the subjects required for the graduate to be fully competent in all areas of veterinary practice. It contains two tracks, namely, Veterinary Medicine with a predominant focus on clinical veterinary medicine, and within that, a more extensive coverage of pet animals (dogs, cats, horses, birds, reptiles, small mammals). The second track, Veterinary Hygiene and Ecology, focuses predominantly on food hygiene and food animal medicine.

Instructions take place in departments and at clinics, the activities between departments and clinics are coordinated.

Teachers work in departments and at clinics where conditions have been created for the preparation of individual courses, to their teaching, to conduct scientific research, and at clinics in particular, teachers are also involved in specialized veterinary activities in the provision of veterinary care to patients at the clinics. The University creates opportunities for teachers to improve their teaching, research and professional skills and expertise.

Training is conducted in a variety of forms, both on and outside campus. In the provision of instruction, the University works closely with the veterinary practice in all areas of veterinary surgeons' activity, with breeders, food-processing companies and other institutions.

To study the individual subjects of the curriculum, students use textbooks, lecture notes, books and other specialized literature which can be purchased in the book store, borrowed from the University Library or they can study in the reading room of the University Library.

Teaching takes place at the level of theoretical (lectures), practical training, and the newly emphasized day one skills (DOS).

Students are examined in the course of training (in some subjects), at the end of the term when credits are awarded, upon completion of a subject by way of an examination, and at the end of the study by way of final state examinations. Examinations are conducted in accordance with the rules stipulated by the University's Study and Examination Code.

The provisions for veterinary training at the University are at a very good standard.

Evaluation of training is conducted both internally and externally.

Within the University, evaluation of training is conducted by the University Management, sections, department and clinics, as well as the science body of the University and the faculties (Science Council), and the self-governing body of the University and the faculties (Academic Senate). Quality of education is further evaluated by the University's Veterinary Training Board. The University has its own special evaluation system, the System of Evaluation of Quality of Education and Other Academic Activities in the Area of Veterinary Medicine. Individual teachers are also evaluated within the University. Students evaluate the quality of training as well, using an anonymous computer evaluation system. Internal evaluation of training is conducted on multiple levels and makes it possible to identify any shortcomings and to adopt measures to rectify them.

External evaluation of the quality of veterinary training is performed by the Accreditation Board of the Ministry of Education, Youth and Physical Education. The Accreditation Board evaluates the quality of the individual under-graduate study programmes or courses, and grants an accreditation for a specific period based on its evaluation. The Accreditation Board further evaluates the quality of post-graduate study programmes or courses, and grants an accreditation to such courses for a specific period based on its evaluation. The Accreditation Board of the Ministry of Education, Youth and Physical Education also evaluates the quality of the faculty as a whole, and adopts recommendations if it is necessary. The successful acquisition of the authorization to grant the Diploma Supplement Label represents a supranational evaluation. The evaluation of the quality of veterinary training provided at UVPS Brno, performed by the Accreditation Board of the Ministry of Education, Youth and Physical Education, is favourable.

In recent years, the University has done much to improve student welfare. It provides accommodation to students in the student residence hall, and 90.1% of all applications are granted. Students may buy refreshments, as well as meals, on campus but there is still no cafeteria catering specially to students. There are relaxation zones where students may spend their breaks between classes during the day, both inside the building if the weather is inclement, or outside on benches when the weather is sufficient. Medical care is available on campus. There is a system designed to protect students against zoonoses during courses. Students pursue sports and leisure time activities on cam-

The Study and Information Centre is one of the dominant features on campus in terms of both architecture and function

During the traditional student life celebrations, Majáles, students may try out a number of interesting attractions directly on campus

pus. The University offers various scholarships to students, and students may avail themselves of counseling provided by the University. The University takes care of particularly gifted students. The University operates a number of buildings, rooms and facilities for student welfare. Overall, the University takes very good care of student welfare although there certainly is room for further improvement.

5.3 Suggestions

As regards quality evaluation, it could be recommended that the level of individual evaluation of teachers at the University should be increased. The current system concentrates on the evaluation of training and the evaluation of research conducted by individual teachers, as well as their veterinary activities, with an impact on their financial remuneration. Nevertheless, the system does not cover many other activities performed by the teacher as part of his/her duties (e.g., supervision of post-graduates, participation at conferences, management of a section, department or clinic, etc.). The University is about to test a more comprehensive system of individual teacher evaluation developed by Palacky University in Olomouc.

In the area of welfare, it could be recommended that the issue of central lockers for students on campus should be resolved. The University could also search a solution of student lunch area missing on the campus in terms identical or similar to those prevailing at other (large) universities. It would also be appropriate to address scholarships for postgraduate students which are very low (however, this problem falls under the province of the Ministry of Education, Youth and Physical Education).

FACILITIES AND EQUIPMENT

6.1 Factual information

6.1.1 Premises in general

UVPS Brno is concentrated on a self-contained campus in the city of Brno; the University further includes the School Agricultural Farm.

6.1.1.1 Campus

The University campus occupies an area of approximately 13 hectares. On the campus, there are buildings with facilities for the veterinary training of students. The most important buildings and other parts of the University campus representing teaching and operating centres on campus are the following:

- Clinics for Small Animals (which includes the Small Animal Clinic and the Avian and Exotic Animal Clinic) and Centre for Avian Medicine (under construction, to be extended),
- Clinics for Large Animals (which includes the Equine Clinic and the Ruminant and Swine Clinic – the part focusing on diseases of ruminants),
- Pavilion of Swine Diseases (which includes the Ruminant and Swine Clinic – the part focusing on swine diseases),
- Equine Orthopaedic Centre and Hippodrome (which includes an indoor riding hall for horses and facilities for orthopaedic farriery, as well as a part focused on equine reproduction), horse stables and an outdoor hippodrome,
- Pavilion of Pathobiology (which includes the Department of Pathology and Parasitology and the Department of Infectious Diseases and Microbiology),
- Isolation Facilities and work facilities of the Department of Infectious Diseases and Microbiology,
- Building of Department of Animal Genetics,
- Pavilion of Morphology and Physiology (which includes the Department of Anatomy, Histology and Embryology and the Department of Physiology),
- Pavilion of Department of Pharmacology and Pharmacy,

Aerial photo of the campus of the University of Veterinary and Pharmaceutical Sciences Brno

- Pavilion of Hygiene (which includes the Department of Milk Hygiene and Technology and the Dairy Pilot Technology Plant),
- Building of the Department of Meat Hygiene and Technology (which includes the Department of Meat Hygiene and Technology and Meat and Fish Technology Workshops),
- Fatstock Abattoir (in the Pavilion of Morphology and Physiology),
- Building of Veterinary Public Health & Animal Welfare Department and Department of Biology & Wildlife Diseases,
- Building of Ecology & Game, Fish and Bees Diseases Department,
- Building of Biochemistry & Biophysics Department,
- Building of Department of Animal Nutrition, Department of Animal Husbandry & Animal Hygiene and Department of Vegetable Foodstuffs Hygiene & Technology, and Research Stables of Department of Animal Nutrition,

- Building of the Rectorate (which includes the Rectorate and the University's administration centre),
- Auditorium of the University,
- Study and Information Centre of the University (which includes the University Library, reading room, computer rooms, University archives, as well as the Department of Foreign Languages and History of Veterinary Medicine, Dean's Offices of the faculties, Department of Student Affairs for the students, relaxation zones for students, refreshments),
- Building of Centre of Information Technologies,
- Sports Hall (which includes the Department of Sports and Physical Education and Indoor Sports Hall), and tennis courts,
- Building of Institute of Lifelong Learning and Informatics,
- Building of the University's Accommodation and Canteen Centre,
- Building of Estate Management Department,
- Building of Department of Transportation and Campus Maintenance,
- Reception Building,
- Waste Water Treatment Plant,
- Central Park,
- Central Parking Lot,

- Pharmacy Building I (which includes the building and facilities where students in the Pharmacy course are taught) and a greenhouse,
- Pharmacy Building II (under construction, it represents further premises and facilities for the teaching of students in the Pharmacy course),
- Department of Pharmaceutics Building (building for the teaching of students in the Pharmacy course),

Building of the Study and Information Centre dominates the modern campus

- Botanical Garden I (includes a botanical garden dedicated in particular to annuals grown for teaching purposes),
- Botanical Garden II (includes a botanical garden dedicated in particular to perennials grown for teaching purposes – included in the construction plan).

UVPS Brno further includes the following facilities that are outside the campus:

- School Agricultural Farm in Nový Jičín and Nové Dvory u Brna which has an acreage of around 3,299 hectares and serves for the rearing of cattle and pigs, the teaching of students *in situ,* and for agricultural production of feed, cereals and other agricultural commodities. The farm includes a game enclosure for the rearing of fallow deer, a pheasantry for the rearing of pheasants, and hunting grounds where game can be hunted,
- Kaunic Student Residence Hall which serves for student accommodation,
- Accommodation and Canteen Centre at Nový Dvůr.

The campus with the individual buildings and facilities of the University is shown in the map below.

Plan of UVPS Brno

1 Rectorate
Institute of Lifelong Learning and Informatics
Institute of Wildlife Ecology
Filing room

1a Auditorium

2 Institute of Lifelong Learning and Informatics
Department of Applied Pharmacy

3 Economic management

4 Ruminant and Swine Clinic (swine diseases section)
Large Animal Clinical Laboratory

5 Hippodrome

6 Institute of Lifelong Learning and Informatics (classroom)
Lecture Hall 9

7 Equine Clinic
Ruminant and Swine Clinic (ruminants' diseases section)
Lecture Hall 2
\+ Out-patient surgery and emergency room for large animals

10 Department of Sports and Physical Education (gymnasium, courts)

12 Department of Milk Hygiene and Technology
Lecture Hall 5

13 Department of Meat Hygiene and Technology

14 Department of Animal Genetics

15 Department of Animal Nutrition
Department of Animal Husbandry and Animal Hygiene
Department of Vegetable Foodstuff Hygiene and Technology

16 FVHE building

18 Department of Pharmaceutics

22 Department of Pharmacology and Pharmacy
Chamber of Veterinary Surgeons

23 Accommodation and Canteen Centre

24 Dean's Office and Department of Student Affairs – FVM
Dean's Office and Department of Student Affairs – FVHE
Dean's Office and Department of Student Affairs – FaF
Study and Information Centre – University Library
Archives, Depositary
Department of Foreign Languages and History of Veterinary Medicine
Office of History of Veterinary Medicine and Pharmacy

25 Department of Ecology and Diseases of Game, Fish and Bees

30 Centre of Information Technologies

31 Department of Biochemistry and Biophysics
Lecture Hall 7

32 Department of Veterinary Public Health, Animal Protection and Welfare
Department of Biology and Wildlife Diseases
Lecture Hall 6

33 Department of Infectious Diseases and Microbiology
Department of Pathology and Parasitology
Lecture Hall 4
\+ Pathology

34 Department of Anatomy, Histology and Embryology
Department of Physiology
Lecture Hall 3
Fatstock Abattoir

43 Small Animal Clinic
Avian and Exotic Animal Clinic
Small Animal Clinical Laboratory
Lecture Hall 1
\+ Small Animal Emergency
Pharmacist
Medical Centre

44 Department of Natural Drugs
Department of Chemical Drugs
Department of Human Pharmacology and Toxicology
Lecture Hall 8

50 National Institute of Public Health

\+ Small Animal Emergency (blue cross – building No. 43)
\+ Large Animal Emergency (blue cross – building No. 7)
\+ Pharmacist (green cross)
\+ Medical Centre (red cross)
\+ Pathology (black cross)
P Parking lot

Isolation facilities

6.1.1.2 School Agricultural Farm

The School Agricultural Farm is located near Nový Jičín (144 km far from Brno) and near Nové Dvory (16 km far from Brno) and has a total acreage of 3,299 hectares.

6.1.2 Premises used for clinics and hospitalisation

The University has facilities for the hospitalization and isolation of important animal species. These are located at the respective clinics, or the Isolation Facilities and work facilities of the Department of Infectious Diseases and Microbiology.

6.1.3 Premises for animals

The University has facilities for the rearing of animals. Animals are located at the University but mainly at the School Agricultural Farm.

6.1.3.1 Ruminants

Of ruminants, the Ruminant and Swine Clinic keeps, in addition to patients, the following animals for teaching purposes: non-lactating cows (5 cows) and a bull (1 bull), of small ruminants, goats (15 females, 1 male – recognized breed), and sheep (6 sheep). At the School Agricultural Farm, there are stables and facilities for cattle rearing (calves up to 3 months of age, brood heifers, pregnant heifers, milking cows, calves of beef cattle up to 3 months of age, brood heifers of beef cattle, pregnant heifers of beef cattle, cows without commercial milk production, cattle for fattening, young stud bulls), the total number being 2,610 heads of cattle. The University rears cattle for the purposes of teaching, especially with regard to animal production and ruminant disease subjects: agricultural production, animal nu-

Table 6.1: Places available for hospitalization and animals to be accommodated

	Species	No. of places
Regular hospitalisation	cattle	22
	horses	50
	small ruminants (goats and sheep)	69
	pigs	245-441*
	dogs	77
	cats	26
	other – poultry and rabbits	48
	other – exotic birds	30
	other – reptiles	20
	other – small mammals	80
Isolation facilities	cattle	4**
	horses	4**
	small ruminants (goats and sheep)	15**
	pigs	15**
	dogs	23***
	cats	6
	other – poultry and rabbits	86
	other – exotic birds	2****
	other – reptiles	2****
	other – small mammals	100-200

*Notes: * = capacity of the clinic based on pig size, ** = it is presumed that one kind of animals is housed, *** = capacity of the Department of Infectious Diseases and Microbiology (15) and Small Animal Clinic (8), **** = box for separate housing, if applicable*

The swine disease section can be found in Professor Dražan Pavilion

trition, animal husbandry, animal hygiene, fundamentals of veterinary care, obstetrics and gynaecology, ruminant diseases, infectious diseases in animals, and other subjects.

6.1.3.2 Pigs

Pigs are kept at the University for teaching purposes at the Ruminant and Swine Clinic where in addition to patients, 1-4 sows and 2 boars from the Insemination Station are kept. There are facilities for pig rearing at the School Agricultural Farm (sows, piglets, pre-fattening stage, fattening), and a total of 4,977 pigs are kept there. The University rears pigs for teaching purposes, especially with regard to animal production and swine diseases subjects (agricultural production, animal nutrition, animal husbandry, animal hygiene, swine diseases, infectious diseases in animals, and other subjects).

6.1.3.3 Horses

Horses are kept for the purposes of teaching at the Equine Clinic; five animals are kept for the purpose of instruction in subjects dealing with horse breeding and equestrian sports. Horses are also bred at the School Agricultural Farm. A total of 23 horses is currently kept at the farm in stables and pasture-kept.

6.1.3.4 Poultry (pheasants)

The School Agricultural Farm includes a pheasantry for the rearing of pheasants, with more than 1,000 pheasants reared annually.

6.1.3.5 Bees

There are apicultural facilities on the University campus, the total number of bee colonies currently counting is 22. The apicultural facilities are used for teaching purposes in the subject Diseases of fish and bees.

6.1.3.6 Game

The School Agricultural Farm includes a game enclosure for fallow deer and mouflon; there are currently around 200 fallow deer and 20 mouflons. The University exercises its hunting rights on the grounds of the School Agricultural Farm. Roe deer, wild boars, hares and pheasants are hunted there. These facilities are used in particular for the teaching of Diseases of game animals and Hunting game management.

6.1.3.7 Wildlife

Wildlife (especially small mammals and birds) live on the land of the School Agricultural Farm in Nový Jičín and Nový Dvůr represented by fields, meadows and brushwood. They are used for teaching purposes (catching, identification, examination) in Biology, Zoology, Ecology, Wildlife diseases.

6.1.3.8 Experimental animals

There is a number of facilities on University campus for the keeping and handling of experimental animals used in teaching and in research. Depending on the focus of the individual clinics and departments, these are facilities of various types for traditional laboratory animals (mice, rats, rabbits, poultry, fish, frogs, small birds), as well as less common species of laboratory animals (non-traditional rodents, reptiles, etc.) and other experimental animals (pigs, cattle, sheep, goats, dogs, cats, etc.). The number of animals used in teaching and research depends on the focus

of instruction, number of students, focus of the experiments and the research projects conducted. The facilities in question have been accredited for the handling of experimental animals by the Ministry of Agriculture in 2009 in accordance with national Act No. 246/1992 Coll., on the Prevention of Cruelty to Animals, as amended. Each experiment (i.e., the use of animals in teaching or research) is then subject to separate approval by the Board of Ethics for Animal Protection, and by the Ministry of Education, Youth and Physical Education within the specific project.

6.1.4 Premises used for theoretical, practical training and supervised teaching

The University has a broad range of premises for theoretical, practical training and other teaching required in the process of veterinary training.

6.1.4.1 Premises used for student clinical work

Premises for student clinical work and classes, i.e., in particular activities at out-patient departments and operating theatres) are located at the respective clinics of the University.

Lecture in the large lecture hall at the Clinics for Small Animals

Table 6.2: Premises for clinical work and student training

	Species	No. of consulting rooms and surgical suites
No. of consulting rooms (out-patient)	cattle, sheep, goats	2
	horses	3
	pigs	1
	dogs and cats	18
	poultry and rabbits	1
	exotic animals	2
No. of surgical suites	cattle, sheep, goats	2
	horses	3
	pigs	1
	dogs and cats	9
	poultry and rabbits	1
	exotic animals	1

6.1.4.2. Lecture halls

The University also has 8 large lecture halls where students of veterinary medicine are taught.

6.1.4.3. Premises for student group work

There are seminar rooms at individual clinics or departments that are used for seminar room instructions of veterinary medicine students.

Table 6.3 Premises for lecturing

No. of places per lecture hall								
Hall	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
Seats	220	198	120	120	90	80	75	41
Total number of seats in lecture halls	944							

Table 6.4 Premises for group work (number of rooms that can be used for supervised work) – work in classrooms

Places per room – group work									
Department of Anatomy, Histology and Embryology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	20	20						
Department of Physiology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	20	24						
Department of Pharmacology and Pharmacy	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	25							
Department of Infectious Diseases and Microbiology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	14							
Department of Pathology and Parasitology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	0							
Department of Animal Genetics	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24							
Ruminant and Swine Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	9	14	42	14	40			
Equine Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	38	20	20					
Large Animal Clinical Laboratory	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	0							
Small Animal Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	18	12	18	14	9	14	34	
Avian and Exotic Animal Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12	15	16					
Small Animal Clinical Laboratory	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	20							
Department of Biology and Wildlife Diseases	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	14	13	16					
Department of Ecology and Diseases of Game, Fish and Bees	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	18	18						
Department of Animal Nutrition	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24							
Department of Animal Husbandry and Animal Hygiene	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	60	16	36	20				
Department of Biochemistry and Biophysics	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	0							
Department of Meat Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12	12						
Department of Milk Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24	35	12	12	20			
Department of Vegetable Foodstuff Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24	24						
Department of Veterinary Public Health, Animal Protection and Welfare	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24	30	16	24	49			
Department of Foreign Languages and History of Veterinary Medicine	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	36	30	20	20				
Total No. of Seats		1,185							

The total number of rooms for classroom instruction (number of rooms that can be used for supervised work) is 54, with a total capacity of 1,186 places.

6.1.4.4 Laboratories and other premises for practical training work by students

Further, there are rooms at individual clinics or department that are used for practical training of veterinary medicine students (in particular laboratories, special laboratories, autopsy rooms, rooms dedicated to microscopy work, etc.).

The total number of rooms for practical training (laboratories, autopsy rooms, rooms dedicated to microscopy work, etc.) is 78, with a total capacity of 1,156 seats.

Table 6.5 Premises for practical training work (number of laboratories for practical training work by students) (laboratories, autopsy rooms, microscopy rooms, etc.)

Places per room – practical training work									
Department of Anatomy, Histology and Embryology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	80	20	55					
Department of Physiology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12	10	12	16	22			
Department of Pharmacology and Pharmacy	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12	12	6					
Department of Infectious Diseases and Microbiology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	16	13	18	13				
Department of Pathology and Parasitology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	26	12	50	12	32			
Department of Animal Genetics	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	14							
Ruminant and Swine Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	10	10	12	16	8	8	12	5
Equine Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	7	10						
Large Animal Clinical Laboratory	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	8	8	4					
Small Animal Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	10	10	5	15	15			
Avian and Exotic Animal Clinic	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	8	7	6					
Small Animal Clinical Laboratory	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	10	10	10					
Department of Biology and Wildlife Diseases	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	13	13						
Department of Ecology and Diseases of Game, Fish and Bees	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	14	14	14	10	12	6		
Department of Animal Nutrition	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	14							
Department of Animal Husbandry and Animal Hygiene	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12							
Department of Biochemistry and Biophysics	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	24	24	24	24	12			
Department of Meat Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12	12	15	12	12	12	14	12
Department of Milk Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	20	12	14	12	12			
Department of Vegetable Foodstuff Hygiene and Technology	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	12							
Department of Veterinary Public Health, Animal Protection and Welfare	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	13	13	14	16				
Department of Foreign Languages and History of Veterinary Medicine	Room	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
	Seats	0							
Total number of places		1,156							

Training at the Department of Anatomy, Histology and Embryology

6.1.4.5 Measures designed to protect the health and safety of students

All students are subject to measures designed to protect their health and safety during practical training classes. The students undergo a compulsory instruction concerning protective and safety measures applied in practical training classes, and are further specifically instructed in every subject requiring protective and safety measures on safety rules applicable to work in the respective laboratory, autopsy room and other high-risk premises and facilities of the University.

Further, depending on the nature of instruction, the students must be equipped with protective means to protect their safety and health during practical training classes. Depending on the subject, they must therefore be equipped in particular with protective coats, gloves, special footwear, goggles, aprons, etc. They must use the appropriate cleaning products, disinfectants and other means to protect their health and to prevent the spreading of infectious agents.

They are advised of the principles of safe laboratory practice, in particular of safe handling of hazardous chemical substances, toxic substances, microbes causing diseases and macrobially infected material, biological material, the handling of radioactive material and protection against radiation and X-rays. They are instructed about the safe handling of electrical current, fire, technical gases, water and various types of radiation. If students enter any food-processing facilities, including abattoirs, they must have a valid clearance for foodprocessing industry staff.

When working with animals, students are instructed about the rules of safe approach to animals, their holding, fixation and handling. When taking part in veterinary interventions and other veterinary activities, they are instructed about the safe handling of veterinary equipment, facilities, objects and medicines, and work under the teacher's supervision.

During practical training , students must no eat, drink, smoke or chew gum, and must move around and perform practical training tasks in such a way so as not to jeopardize their own safety and health and the safety and health of other students, teachers and other staff involved in the practical training and the operation of the work facility concerned.

Students are instructed about first aid rules for the purpose of protection of life and health. The respective work places are equipped with first aid facilities and kits in accordance with legal regulations on the protection of occupational health and safety. If any injury, harm to health or similar incident occurs, the student is given first aid, a protocol on the incident is drawn up, and the student sees a physician if need be.

All students are insured against injury, harm or threat to health during instruction at the University, its facilities or during practical training classes.

The system and facilities for the protection of occupational safety and health and fire protection at all of the work facilities within the University are checked at least once a year, protocols are drawn up on all the inspections

Training in a laboratory

and any problems promptly rectified. The activities at the individual work facilities are checked by a specially trained staff member, occupational and fire safety technician, and the University is further subject to external inspections conducted by the Occupational Safety Inspectorate for South Moravia and Zlín Regions, and by the Fire Rescue Service of the South Moravia Region with regard to fire safety inspections.

6.1.5 Diagnostic laboratories and clinical support services

6.1.5.1 Diagnostic laboratory activities

Diagnostic laboratory activities at the University are concentrated in two centres with a view to the existence of two large clinical centres: Clinics for Small Animals and Clinics for Large Animals. Diagnostic work for the Clinics for Small Animals is performed in the Small Animal Clinical Laboratory, and for the Clinics for Large Animals, in the Large Animal Clinical Laboratory. Further specialized laboratory work is undertaken at the departments.

Diagnostic laboratory work for the purposes of clinical examination of small animals (in particular dogs, cats, birds, reptile, small mammals, exotic animals) takes places in the Central Small Animal Laboratory. It analyzes in particular blood, plasma, serum, urine and exudates from a biochemical, haematological, immunological and cytological perspective. The laboratory analyzes approx. 14,000 samples per year.

Diagnostic laboratory work for the purposes of clinical examination of large animals (in particular cattle, sheep, goats, pigs, horses) is concentrated at the Central Large Animal Laboratory. It analyzes in particular body fluids, rumen fluid, milk, colostrum and exudates of large animals. The laboratory analyzes approx. 5,000 samples per year.

Laboratory diagnostic work at the level of pre-clinical and other examination is also performed in the respective departments, with some of the specialized laboratory clinical examinations being performed at clinics. These laboratories focus on anatomy and histology, pathology, parasitology, epizootology and microbiology and immunology, toxicology, radiobiology, animal nutrition, animal hygiene, reproductive indicators and embryology, special diagnostics in avian medicine, in wildlife and fish, and analysis of samples in food hygiene. Through their activities performed for the practice sector, these laboratories develop the specialized diagnostic veterinary work in individual departments or clinics, and thus facilitate direct instruction of students using samples for laboratory diagnostics from the practice sector. Such laboratory diagnostic work is a part of the teaching process in clinical subjects focusing on the diseases of dogs and cats, birds, reptiles and small mammals, horses, ruminants and pigs, as well as pre-clinical fields, and is also a part of the state *examen rigorosum* in Clinical pathology.

Over 30,000 samples provided by the practice sector are analyzed in the University's laboratories annually. An overview based on the specialization of the laboratory, examination methods, sample types and numbers is provided in the table below.

Table: Diagnostic laboratories in departments, clinics, or as other facilities

Specialization of the laboratory	Examination methods	Sample types	Sample number	Sample number	Sample number
			2012	2011	2010
Anatomy and histology	histology (microscopy)	tissues, organs	435	164	214
Pathology	histopathology	tissues, smears	1,326	1,569	1,556
Parasitology	stool examination, ectoparasitology, haematoparasitology	faecal matter, GIT content, smears, scrapings, feathers, fur, blood smear thick	2,990	2,209	2,811
Epizootology, microbiology, immunology	virology (PCR, RT-PCR, ELISA; Im.blot, serology), bacteriology (bact. methods, serology)	blood serum, tissues	8,070	3,988	4,839
Toxicology	chromatography (TLC, HPLC/MS, LC), spectrophotometry	blood, tissues, water, feed	14	15	12
Radiobiology	spectrometry gamma	water, meat, products of nature	19	28	36
Animal nutrition	chemical analysis	feedstuffs, mix components	98	85	91
Animal hygiene	chemical and microbiological analysis	potable and feed water	24	80	72
Reproduction and embryology	embryology	oocytes, cattle embryos, uterine douche	307	237	237
Small Animal Clinical Laboratory	biochemistry, hematology, immunology, cytology	blood, plasma/serum, urine, exudates	14,038	13,990	14,240
Large Animal Clinical Laboratory	biochemistry, hematology, rumenology	blood, urine, colostrum, milk, tissues, rumen fluid	4,939	5,519	0
Avian medicine	hematology, biochemistry, PCR	blood, plasma, tissues	868	1,058	1339
Diseases of fish	microscopy	Tissues	72	115	13
Wildlife diseases	PCR	cellular smears	127	622	237
Food hygiene	food microbiology (PCR), food chemistry	tissues, intestinal contents, smears, meat products	966	837	581
Total			34,293	30,516	26,278
Average			30,362		

6.1.5.2 Clinical support services

Clinical support service (para-clinical diagnostics) at the University is localized into two centres because of the existence of two large clinical centres: the Clinics for Small Animals and the Clinics for Large Animals.

Clinical support service for small animals (dogs, cats, birds, reptiles and small mammals) is located in the Clinics for Small Animals and caters to the Small Animal Clinic and the Avian and Exotic Animal Clinic. Equipment for the following procedures is located there: radiological diagnostics, ultrasonography, endoscopy (gastroscopy, duodenoscopy, colonoscopy), rhinoscopy, bronchoscopy, arthroscopy, electrocardiography. Further, the following procedures are available there: skiascopy, dynamic angiography, computer tomography, magnetic resonance, isotope diagnostics and other.

Para-clinical diagnostics for large animals (horses, pigs, cattle and small ruminants) is located at the Clinics for Large Animals and Pavilion of Swine Diseases and caters to the Equine Clinic and the Ruminant and Swine Clinic. Equipment for the following procedures is located there: radiological diagnostics, ultrasonography, endoscopy (gastroscopy, duodenoscopy, colonoscopy), rhinoscopy, bronchoscopy, arthroscopy, electrocardiography, magnetotherapy. There is also other equipment for diagnosing diseases in large animals, for instance, equipment for diagnostics using a treadmill, and other.

The facilities of para-clinical diagnostics for small and large animals are used for student instruction in clinical subjects, in particular those focusing on imaging diagnostics, animal surgery, obstetrics and gynaecology, internal medi-

Paraclinical diagnostics

cine, and further according to animal species, on avian and reptilian diseases, diseases of small mammals, equine diseases, ruminant diseases, swine diseases; para-clinical diagnostics is also a part of the clinical state *examen rigorosum*.

Animal anaesthesia facilities are located in two centres in the two clinical pavilions on University campus. The anaesthesia facilities for small animals (dogs, cats, birds, reptiles and small mammals) are located in the Clinics for Small Animals and cater to the Small Animal Clinic and the Avian and Exotic Animal Clinic. The anaesthesia facilities for large animals (horses, pigs, cattle and small ruminants) are located in the Clinics for Large Animals and Pavilion of Swine Diseases and cater to the Equine Clinic and the Ruminant and Swine Clinic.

The anaesthesia facilities are used for student instruction in subjects focusing in particular on animal surgery and orthopaedics, imaging diagnostics, as well as subjects dealing with diseases afflicting individual animal species. Anaesthesia as part of various subjects is also included in the content of the clinical state *examen rigorosum*.

6.1.6 Abattoir facilities

The University uses two facilities for the slaughter of fatstock for teaching purposes.

There is located an abattoir facility with the capacity of 12 pigs a day and 2 heads of cattle a month in the campus. It is equipped with facilities for the arrival of the animals, their restraint, stunning, slaughter and processing, and a facility for the inspection of the bodies and organs of the slaughtered animals, followed by chilling and freezing facilities for the storage of carcasses, meat and organs. Given the limited capacity and great requirements posed by the abattoir facility, fatstock slaughter is used for demonstration in the teaching of students with regard to fatstock and meat inspection.

In order to enable students to gain practical training knowledge and experience in a facility specializing in slaughter, and practical training skills in the inspection of carcasses and meat, the University has a contract with an abattoir and meat-processing facility in Tišnov u Brna (21 km far from Brno), where students are taught and acquire specific practical training skills in veterinary inspection of animals before and during slaughter, and carcasses, meat and organs after slaughter.

In the course of their training focusing on the inspection of fatstock carcasses, meat and organs, the students directly examine 951 pigs, 253 cattle, 17 small ruminants and 17 horses at the University's abattoir facility and the abattoir in Tišnov per year on average.

6.1.7 Foodstuff processing unit

For the instruction of students in the area of food hygiene and technology, the University has the Meat and Fish

Technology Workshop and the Dairy Pilot Technology Plant.

The Meat and Fish Technology Workshop is a teaching facility for the instruction of students in the area of meat hygiene and technology. It is located in the Building of Department of Meat Hygiene and Technology and equipped with facilities for the processing of meat and the production of heat-treated meat products, in particular a bowl cutter, stuffer, smoking chamber and other technologies for the production of meat products. Students take part in practical training classes focusing on specific meat processing and production of specific products, followed by their assessment and evaluation from the point of veterinary hygiene, technology and quality. A total of 139 kg of meat, 38 kg of meat products and 46 kg of fish is processed there annually for teaching purposes. The Meat and Fish Technology Workshop is also used for work on science and research projects.

The Dairy Pilot Technology Plant is located in the building of the Department of Milk Hygiene and Technology and equipped with facilities for milk pasteurization and the production of selected dairy products. Students take part in practical training classes focusing on milk and dairy product hygiene and technology. A total of 280 litres of milk is processed, and 25 kg of cheese and 460 jars of yoghurt are produced there annually for teaching purposes.

Fatstock abattoir is used to train students in the inspection of fatstock

The Dairy Pilot Technology Plant is also used for work on science and research projects.

6.1.8 Waste management

Waste management at the University is governed by law and University regulations. Waste is sorted and safety measures and measures for its safe disposal strictly observed.

Hazardous waste is sorted with a view to the degree of risk and stored separately in special containers intended for this type of waste. Such waste includes for instance used needles produced by the clinics. Hazardous waste is collected and disposed of by a specialist company (SITA CZ a.s.) pursuant to a contract with the University.

Toxic and chemical waste is sorted and stored separately and, in accordance with the applicable waste management rules, collected and disposed of by a specialist company (SITA CZ a.s.) pursuant to a contract with the University.

Radioactive waste (radionuclides with a short half-time) is stored in special containers. Once the activity level drops below the threshold permitted by legislation, it it treated as communal waste and collected and disposed of by a specialist company (SITA CZ a.s.). Waste generated by radiological diagnostics is disposed of by allowing time for decay or by dilution to the level fit for release; should any waste be produced incapable of such disposal, it would be disposed of separately by a specialized company in accordance with the Nuclear Act.

Biological waste (cadavers, organs, tissues, etc.) is collected and stored separately in coolers and subsequently collected and removed by a specialist sanitary company (Agris, spol. s r.o.) pursuant to a contract with the University.

Animal waste (in particular manure) is stored separately in special containers and subsequently collected and removed from the premises by a specialist company to a public catchpit at Moravany u Brna.

Waste water. There are two separate waste water sewage systems on the campus: one for waste water from infectious and hazardous facilities (hazardous waste water), and the other for regular communal waste water. Hazardous waste water is chemically treated (chlorination), the sludge is separated and sanitized by heat treatment (125 °C for 30 minutes). The University has its own waste water treatment plant for that purpose.

Communal waste is sorted to separate paper, plastics and other waste that can be incinerated, stored separately and collected and removed from campus in the form of separated waste by a specialist company (SITA CZ a.s).

6.1.9 Future changes

Over the last 9 years, the University underwent a fundamental structural modernization which turned the premises into a modern university campus focusing on

veterinary training. The following needs to be remodelled, modernized or built to complete this extensive modernization:

- The building of the Department of Veterinary Public Health, Animal Protection and Welfare and the Department of Biology and Wildlife Diseases is to undergo an overall remodelling and modernization, the alteration has already been approved in the form of registration of the building project with the Ministry of Education, Youth and Physical Education; works are expected to start in 2013,
- The Building of Ecology & Game, Fish and Bees Diseases Department is to be modernized, the modernization features in the University's plan approved by the Ministry of Education, Youth and Physical Education for the upcoming period,
- The building of the University Car Transport and Campus Maintenance Centre is to be built on the edge of the campus, works are expected to commence in 2014,
- Student Locker Centre for changing into protective wear in the context of clinical and hygiene classes, new construction expected to be completed in 2013,
- The building of the Rectorate (which includes the Rectorate and the University's administration centre) needs to be modernized and remodelled, this project needs to be included in the University's plans for the upcoming period,
- Student cafeteria either needs to be built, or the buildings in the centre of the campus currently used for transportation need to be remodelled; this project needs to be included in the University's plans for the upcoming period.

6.2 Comments

Since the last evaluation of veterinary training in 2004, i.e., over the last 9 years, an extensive modernization of the campus took place. The following pavilions were built or generally remodelled:

- Pavilion of Morphology and Physiology (2008) (extensive remodelling),
- Pavilion of Swine Diseases (2010) (newly built),
- Pavilion of Pathobiology (2013) (general remodelling),
- Equine Orthopaedic Centre and Hippodrome (2012) (general remodelling),
- Centre for Avian Medicine (2013) (newly built),
- Department of Pharmacology and Pharmacy (2010) (an animal house for the department was added),
- Operating theatres and installation of MRI (2010) (structural alterations),
- Winterization of buildings No. 13, 15, 18, 22 (2006, 2009) (structural alterations),
- Pavilion of Hygiene (2006) (newly built),
- Pig and cattle abattoir on campus (2007) (general remodelling),

The Equine Orthopedic Centre and Hippodrome provide ideal conditions for both training and sports activities

The Department of Milk Hygiene and Technology

- Stables for Experimental Animals for Department of Animal Nutrition I and II (2007 and 2010) (newly built),
- Lecture Hall in building No. 32 (2009) (remodelling),
- Study and Information Centre of the University (2011) (newly built),
- Accommodation and Canteen Centre on campus (2006) (general remodelling),
- Auditorium of the University (2008) (general remodelling),
- Building of the Institute of Lifelong Learning and Informatics (2011) (extensive remodelling of the building),
- Building of Centre of Information Technologies (2010) (major remodelling of the building),
- Building of Internal University Property Management (2011) (general remodelling of the building),
- Reception Building (2009) (general remodelling of the building),
- Waste Water Treatment Plant (2010) (general remodelling),
- Central Parking Lot (2010) (newly built),
- Sewage System on campus (2006) (remodelled and newly built),
- Central heating source – exchangers (2012) (remodelling),
- Modern cowshed for 800 dairy cows at the School Agricultural Farm (2006) (newly built).

Over the last period, the University thus built, remodelled or generally modernized its buildings and facilities at the cost of i.e., EUR 43.2 million. The University obtained the funding in most part from the Ministry of Education, Youth and Physical Education.

At the same time, the University modernized the equipment at clinics and departments in the process of building alterations, or using separate subsidies from the Ministry of Education, Youth and Physical Education, in particular in the form of projects, and further out of research grants or funds earned by the University through the provision of veterinary services, or using funds obtained outside the state budget. The most important projects which contributed to the modernization of the University's equipment for veterinary training and research were two extensive research plans funded by the Ministry of Education, Youth and Physical Education, and the University's current involvement in a large-scale project involving multiple uni-

Visualization of the extensively remodeled Pavilion of Pathobiology

versities and research institutes, CEITEC (the University obtained equipment for EUR 2 million, as a result), and collaboration on the large-scale project of ICRC (where the University obtained equipment for EUR 3 million).

6.3 Suggestions

The building of the University in the area of veterinary training greatly progressed during the last period in terms of the unique University campus designed for veterinary training; the University has built and modernized most of the essential buildings and facilities, or the same are approved and prepared for remodelling. The recommendation for the upcoming period thus is to continue and complete the approved and commenced remodelling of the building of the Department of Veterinary Public Health, Animal Protection and Welfare and the Department of Biology and Wildlife Diseases, and to continue the preparations for the approved remodelling of the Building of Ecology & Game, Fish and Bees Diseases Department. The University further ought to build a new Department of Transportation and Campus Maintenance on the edge of the campus (preparatory work on the design and plans have been commenced), and to include the remodelling of the Rectorate building and the construction of a new student cafeteria in its plans.

As regards equipment in the upcoming period, it is recommended for the University to focus on obtaining further funding for equipment from the Ministry of Education, Youth and Physical Education (e.g., using funding for institutional support to research institutions, provided by the Ministry of Education, Youth and Physical Education, funding available under institutional development plans of the Ministry of Education, Youth and Physical Education), research projects, the University's capital expenditure budget (where such funding is not linked to building alterations and modernization), veterinary services and other funding obtained outside the state budget.

ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

7.1 Factual information

7.1.1 Anatomy

In the teaching of anatomy, materials for practical training are used, in particular cadavers, entire skeletons, separate animal skulls and bones, anatomical specimens and live animals, as well as e-learning material during practical training, students perform anatomical autopsies of whole animals or their individual parts and organs in anatomical autopsy rooms, use a variety of skulls, bones and tissues available for study by students in the osteological room, variety of specimen and skeletons of whole animal in the anatomical museum to which students have free access. Whole animals and computer-aided material are also used in practical training anatomy teaching. Every student undergoes practical training anatomical training involving a dog and a ruminant, as well as other animals. The range of anatomy training includes in particular the following animal species: dog, cat, ruminants, pigs, horses, rabbits, poultry, exotic animals, or other.

Outside regular course hours (usually during the afternoons), students enjoy free access to both the large and small anatomical autopsy rooms and the osteological room where they can study autopsy specimens on tables, animal skeletons, skulls and bones on their own.

Cadavers are obtained from the University's clinics and also from practical training veterinary surgeons, food animals from abattoirs, and parts of bodies and organs for anatomy classes are also brought from the abattoir. Specimens for anatomical training are kept either in special preserving solutions or frozen. The Department of Anatomy has facilities for the processing and storage of different types of anatomical material.

Anatomy training is also conducted with a view to ongoing clinical training, and live animals from clinics are used for that purpose (dogs, cats, poultry, exotic animals).

Training in the anatomy autopsy room

Table 7.1 Material used in practical training anatomical training

	dog		ruminant		horse		other	
	2012	2011	2012	2011	2012	2011	2012	2011
live animals	58*	50*	0	0	0	0	122	122
cadavers	130	125	9	7	3	2	330	350
skeletons (whole)	8	8	11	11	6	6	45	45
specimens	120	110	160	150	80	80	150	150
skulls, bones, tissues, etc.	300	300	350	350	200	200	250	250
ultrasound	0	0	0	0	0	0	0	0
computer-assisted teaching	0	0	0	0	0	0	40	40

Fish were also used in fish anatomical course in 2012: 203 fish, and in 2011: 84 fish.

7.1.2 Pathology

In pathological morphology lessons, whole animal cadavers are used for pathoanatomical diagnostics, and organ and tissue samples for pathohistological diagnostics.

Cadavers and organ and tissue samples of various animal species are obtained from animals that die at the University's clinics, in breeding facilities, or from the Agris Medlov sanitation company or from an abattoir. The cadavers involved are of animals that died or where put down and are used for pathoanatomical diagnostics with subsequent documentation of the necropsy performed, and further animal cadavers obtained in order to instruct the students in pathological anatomy. Most of the pathological anatomy lessons take place in the autopsy room of the Department of Pathology and Parasitology, however, some necropsies are performed in the context of clinical work in the separate autopsy room of the Small Animal Clinic, the Avian and Exotic Animal Clinic, the Equine Clinic and the Ruminant and Swine Clinic, or in the autopsy room of the Department of Ecology and Diseases of Game, Fish and Bees.

Samples for pathohistological diagnostics are obtained from animals that die at the University's clinics, in breeding facilities, or biopsy samples obtained from live patients at the clinics. The samples are obtained from animal cadavers for the purpose of pathohistological diagnostics with subsequent documentation of the pathohistological diagnosis made, and samples obtained from live animals as an extra source for the pathohistological instruction of students.

Training in the pathology autopsy room

Table 7.2 No. of necropsies (whole cadavers) over the past three years

Species	No. of necropsies			
	2012	2011	2010	average
Cattle	143	155	161	562
Small ruminants	28	25	32	
Pigs	382	401	360	
Other livestock	0	0	0	
Horses	30	28	43	34
Poultry	337	231	252	312
Rabbits	28	38	51	
Dogs	56	34	59	353
Cats	35	22	37	
Other (birds, reptiles, small mammals)	161	179	198	

Number of organ and tissue samples examined for the purpose for histopathological trainig over the past three years

Species	Number of organ and tissue samples			
	2012	2011	2010	average
Cattle	6	9	16	43
Small ruminants	8	11	7	
Pigs	21	30	31	
Other livestock	0	0	0	
Horses	26	21	32	26
Poultry	11	8	12	36
Rabbits	25	31	34	
Dogs	1034	1234	1216	1374
Cats	112	125	116	
Other*	93	128	121	

*Notes : * = rodents, ferrets, reptiles, exotic birds*

7.1.3 Animal production

Animal production courses, as well as clinical training, take place at the University's School Agricultural Farm in Nový Jičín and Nový Dvůr. Students go to the School Agricultural Farm in Nový Jičín and Nový Dvůr for their practical training lessons, either for a one-day lesson module with teachers, or for lesson modules spread over several days whereby they stay and eat at the School Agricultural Farm. Animals kept on campus at the clinics and departments for teaching purposes (horses, ruminants, pigs, exotic animals, bees) or found at the clinics on out-patient and in-patient wards are also used in animal production lessons.

Work at the School Agricultural Farm in Nový Jičín

At the School Agricultural Farm, there are sheds and facilities for the rearing of cattle numbering 2,610 heads in total. At the University, the Ruminant and Swine Clinic keeps the following animals for teaching purposes: non-lactating cows (5 cows) and a bull (1 bull), of small ruminants, goats (15 females, 1 male – recognized breed), and sheep (6 sheep).

The School Agricultural Farm further has pig-rearing facilities for all pig categories; the pigs total 4,977. The Ruminant and Swine Clinic at the University also keeps pigs brought from farms for teaching purposes and numbering 1 to 4 sows and 2 bears from the Insemination Station.

Horses are also kept at the School Agricultural Farm in number around 23, these are riding horses. Further horses are kept on campus for teaching purposes in number 5 (the Equine Clinic).

As regards poultry production, the School Agricultural Farm runs a pheasantry where over a thousand pheasants are reared annually; the pheasants are released onto the hunting grounds and hunted by way of joint hunts.

As regards game production, there is a game enclosure at the School Agricultural Farm where some 200 fallow deer and 20 mouflons are kept. There are also hunting grounds at the School Agricultural Farm for the rearing and hunting of game, in particular roe deer, wild boars, hares and pheasants, or vermin (foxes, etc).

Fish is bought from fish producers for teaching purposes and kept at the University in fish facilities until they can be used in class (the Department of Ecology and Diseases of Game, Fish and Bees).

There are apicultural facilities on University campus, the total number of bee colonies currently numbering 22; the honey and other bee products are used in courses (the Department of Ecology and Diseases of Game, Fish and Bees).

In the area of animal production, the teaching covers agricultural and animal production, animal nutrition and animal husbandry, animal hygiene including animal welfare aspects, and diseases of food animals.

Classes are held in the University's facilities and at its School Agricultural Farm. Over 50,000 student hours per year are taught at the School Agricultural Farm in the area of agricultural and animal production and in clinical lessons.

Average numbers of animals kept at the School Agricultural Farm and the yields achieved over the last three years are provided in the table below.

Area on which crops are grown at the University's School Agricultural Farm and yields achieved over the last three years are provided in the table below.

The Department of Ecology and Diseases of Game, Fish and Bees takes care of 22 bee colonies

Table: No. of animals kept at the School Agricultural Farm

Animal species and category	Average No.	Yield	Average No.	Yield	Average No.	Yield
	2012	2012	2011	2011	2010	2010
calves up to 3 months of age	205	0.80 kg/FR	195	0.80 kg/FR	192	0.81 kg/FR
brood heifers	798	0.78 kg/FR	785	0.77 kg/FR	775	0.76 kg/FR
pregnant heifers	178	-	179	-	190	-
milking cows	1,240	22.38 l/FR	1224	22.32 l/FR	1,239	23.81 l/FR
calves of beef cattle up to 3 months of age	19	1.05 kg/FR	17	1.05 kg/FR	19	1.05 kg/FR
brood heifers of beef cattle	51	0.84 kg/FR	52	0.84 kg/FR	53	0.84 kg/FR
pregnant heifers of beef cattle	5	-	5	-	6	-
cows without commercial milk production	82	-	84	-	82	-
cattle for fattening, young stud bulls	32	1.20 kg/FR	27	1.20 kg/FR	19	1.21 kg/FR
sows	459	22.94 piglets/ sow and year	428	21.00 piglets/ sow and year	455	21.60 piglets/ sow and year
piglets	889	-	865	-	968	-
pre-fattening	1,480	0.46 kg/FR	1120	0.48 kg/FR	1,182	0.47 kg/FR
fattening	2,149	0.85 kg/FR	2226	0.84 kg/FR	2,598	0.83 kg/FR
horses up to 3 years of age	5	-	6	-	9	-
horses above 3 years of age	18	-	20	-	20	-

Table: Area on which crops are grown at the School Agricultural Farm and yields achieved

Crops	area	yield	area	yield	area	yield
	ha	q/ha	ha	q/ha	ha	q/ha
	2012	2012	2011	2011	2010	2010
winter wheat	610.8	52.28	703.4	67.30	636.4	55.20
spring wheat	59.3	51.82	-	-	26.0	25.15
winter barley	136.7	40.30	231.1	48.74	211.5	36.23
spring barley	219.4	50.05	137.5	45.65	129.1	47.97
oats	24.0	50.20	-	-	-	-
rape	327.4	29.80	298.4	37.03	282.3	24.75
grain maize	332.6	106.50	322.7	100.78	152.3	77.13
maize for silage	262.4	732.04	263.3	711.40	443.7	500.37
broad bean GPS	61.3	179.70	60.6	130.93	61.0	125.75
broad been seed	-	-	15.0	17.77	-	-
peas GPS	-	-	40.0	237.08	50.0	210.39
soybean	-	-	50.0	18.63	-	-
lupin	8.0	6.20	11.0	22.73	-	-
mix of annuals	40.0	307.90	-	-	34.9	275.31
clover for seed*	26.6	3.80	25.0	2.72	20.3	0.74
grasses for seedé	59.8	5.09	43.6	9.75	54.0	6.48
perennial fodder plants for o.p.	492.1	318.68	474.5	379.93	503.6	277.42
TTP	581.2	141.00	583.5	166.80	590.1	151.98
OOŠ Příbor	8.0	-	8.0	-	8.0	-
Not in use (roads, etc.)	76.4	-	76.4	-	147.8	-

7.1.4 Food hygiene/public health

In the teaching of food/veterinary protection of public health, slaughtering of fatstock at the University is used in particular to demonstrate the slaughtering process and to teach veterinary inspection of fatstock and meat, and further, the abattoir in Tišnov near Brno where the students travel together with their teachers and perform veterinary inspection during the facility's operation.

The lessons focus on the assessment of fatstock prior to slaughter, assessment of unloading of the animals from vehicles, herding to the place of slaughter, stunning, slaughter, processing of the bodies and veterinary inspection of the animals during slaughter and veterinary inspection of the carcasses, meat and organs after slaughter, including HACCP instruction at the abattoir. Arrangements are in place for students to learn directly at other facilities whereby they visit meat-processing plants under teacher's supervision. Records are kept of the numbers of animals inspected by students at abattoirs (cattle, small ruminants, pigs, horses); the numbers are provided in the table below. Veterinary inspection of poultry (or rabbits) as part of the teaching process is conducted at the poultry abattoir in Modřice where students inspect poultry under the supervision of a teacher and a veterinary surgeon acting *ex officio*. Numbers of poultry, rabbits and other animals subjected to veterinary inspection in the process of teaching of food hygiene are provided in the table below.

Department of Meat Hygiene and Technology – Abattoir

Table: Number of animals inspected at abattoirs over the last three years

Species	No. of animals inspected			
	2012	2011	2010	Average
Cattle	204	272	284	253
Small ruminants	16	17	17	17
Pigs	978	943	991	971
Horses	16	17	17	17
Poultry a rabbits	300	520	475	432
Other*	16	16	16	16

*Note : * = hare, pheasant*

In the teaching of food/veterinary protection of public health, the University also uses the Meat and Fish Technology Workshop where students attend courses focuse on meat and fish-processing technology and hygiene, produce meat and fish products and subject them to veterinary inspection. Meat and other abattoir components required for the activities of the Meat and Fish Technology Workshop (blood, organs, casings and spices) are obtained from the University abattoir, or the abattoir in Tišnov with which the University has a contract on student instruction. Fish is bought either directly from producers (in storeponds) or on the market. The quantities of meat, poultry and fish used in courses, and the quantity of meat products produced, are provided in the table below. In lectures focusing on egg and honey hygiene, these raw materials are used in the quantities indicated in the table. Eggs and honey are bought either directly from producers or on the market, honey also comes from the bee colonies kept on the campus.

Training in pig slaughtering and processing

In courses focusing on milk and dairy product hygiene, students use the Dairy Pilot Technology Plant where they treat and process milk and produce dairy products, in particular cheese and yoghurt. Milk for practical training at the Dairy Pilot Technology Plant is obtained from the School Agricultural Farm in Nový Dvůr and on the market. The quantity of the milk processed and the quantity of dairy products produced by the students in practical training is indicated in the table below.

Department of Meat Hygiene and Technology – Meat and Fish Technology Workshop

Table: Samples of foodstuffs used in class

Species	No. of samples			
	2012	2011	2010	average
Meat (kg)	240	136	140	139
Meat product (kg)*	39	35	39	38
Poultry (kg)	3	3	3	3
Fish (pax)	50	44	44	46
Eggs (pax)	480	456	480	472
Honey (kg)	2.6	2.5	2.6	2.5
Other (pax)*	60	48	48	52

Notes: * = hash and crumbs sausage, collared pork, sausages, ham mousse, meatloaf

** sea fish (herring, salmon, cod fillet) and fresh water fish (pangasius, carp, tench) and fish products (marinated fish, semi-preserved products, tinned products)

Students make meat products in the Meat and Fish Technology Workshop

Department of Milk Hygiene and Technology – Dairy Pilot Technology Plant

Table: No. of foodstuff samples (pax) used in class over the last three years

Species	No. of samples of products produced (pc, litre, kg)			
	2012	2011	2010	average
Raw milk – pasteurization (litres)	280	290	270	280
Dairy product – fresh cheese (kg)	24	25	26	25
Dairy product – yoghurt 180 ml (pax)	450	470	460	460

All students must further go through a 40-hour extramural residency at the abattoir in order to gain a more extensive knowledge, experience and skills in abattoir veterinary inspection. They undertake the residency in accordance with the University's instruction, the residence is organized in collaboration with official veterinarians of the State Veterinary Administration and the Regional Veterinary Administrations. The students take part in and carry out, under the supervision of the official veterinarian, inspection of animals prior to slaughter, veterinary inspection of animals during slaughter and of meat and organs after slaughter, as well as veterinary surveillance of hygiene, sanitation, operating, organizational, and veterinary-hygienic measures in the abattoir operation and the meat production and processing operations, compliance with HACCP, and veterinary assessment and marking of carcasses, meat and meat products, if applicable, in the meat-processing operation. The extramural residency is overseen by the University through the Department of Meat Hygiene and Technology.

7.1.5 Consultations and patient flow services

7.1.5.1 Consultation

7.1.5.1.1 Out-patient care

Clinical veterinary care (out-patient care and treatment) of patients at the University is provided by four clinics, namely, the Small Animal Clinic, the Avian and Exotic Animal Clinic, the Equine Clinic and the Ruminant and Swine Clinic.

7.1.5.1.1.1 Small Animal Clinic

The Small Animal Clinic is located in the Clinics for Small Animals and consists of a reception which serves for the registration of patients, out-patient surgeries, operating theatres, ICU, premises for post-operative stay of patients, and premises for hospitalization of patients. The clinic is open 52 weeks a year, 7 days a week, and staffed by veterinary surgeons 24 hours a day. Regular hours are from 7 a.m. till 3:30 p.m. when regular out-patient care, treatment and surgeries take place, together with most of the classes for students. Between 3:30 p.m. and 7 a.m. on business days and the whole day Saturday and Sunday, the clinic runs in emergency mode whereby the veterinary surgeons and staff on duty is present and emergency veterinary care is provided, acute surgeries performed and post-operative care and care of hospitalized animals taken. Students also take part in this activity and may spend nights directly at the clinic. Veterinary care and surgeries are thus available at this clinic on a non-stop basis.

7.1.5.1.1.2 Avian and Exotic Animal Clinic

The Avian and Exotic Animal Clinic is located in the Clinics for Small Animals, uses the reception in the pavilion for the registration of its patients, and consists of out-patient surgeries, operating theatres, premises for post-operative stay of patients, and premises for hospitalization of patients. The clinic is open 52 weeks a year, 7 days a week. Regular hours are from 7 a.m. till 3 p.m. when regular out-patient care, treatment and surgeries take place, together with most of the classes for students. Between 3 p.m. and 7 a.m. on business days and the whole day Saturday and Sunday, the clinic runs in emergency mode whereby veterinary surgeons on stand-by can be reached by phone, and if need be, they provide emergency veterinary care, perform acute surgeries and provide post-operative care and care of hospitalized animals. Students also take part

The Avian and Exotic Animal Clinic provides veterinary care with student participation

in this activity (in numbers required for the operation or veterinary intervention). Veterinary care and urgent surgeries are thus available non-stop, further surgeries may be scheduled for the following day.

7.1.5.1.1.3 Equine Clinic

The Equine Clinic is located in the Clinics for Large Animals, has its own reception for the admission and registration of patients, and consists of out-patient surgeries, operating theatres, premises for post-operative stay of patients, ICU, and premises for hospitalization of patients. The clinic is open 52 weeks a year, 7 days a week, and staffed by a veterinary surgeon 24 hours a day. Regular hours are from 7 a.m. till 3:30 p.m. when regular out-patient care, treatment and surgeries take place, together with most of the classes for students. Between 3:30 p.m. and 7 a.m. on business days and the whole day Saturday, Sunday and on bank holidays, the clinic runs in emergency mode whereby the veterinary surgeons and staff on duty (as well as students, if applicable) is present and emergency veterinary care is provided, acute surgeries performed and post-operative care and care of hospitalized animals taken. As the clinic maintains close contacts with horse breeders, virtually every case is reported to the clinic by phone and the clinic arranges the emergency veterinary care, urgent surgeries, post-operative care and care of the hospitalized animals. Students also take an active part in this activity and can spend nights at the clinic. The clinic thus has arrangements in place for the non-stop provision of veterinary care and performance of urgent operations.

7.1.5.1.1.4 Ruminant and Swine Clinic

The Ruminant and Swine Clinic is located in the Clinics for Large Animals and in the Pavilion of Swine Diseases . It admits and registers patients, includes stabling for out-patient care provided to ruminants, operating theatres, premises for post-operative stay of patients, and stables for hospitalization of patients. The clinic is open 52 weeks a year, 7 days a week. Regular hours are from 7 a.m. till 3:30 p.m. when regular out-patient care, treatment and surgeries take place, together with most of the classes for students. Between 3:30 p.m. and 7 a.m. on business days and the whole day Saturday, Sunday and on bank holidays, clinical care of ruminants is provided on an emergency care basis whereby veterinary surgeons on stand-by can be reached by phone, and if need be, they provide emergency veterinary care. Students can also take part in this

Students doing practical work at the Ruminant and Swine Clinic

activity. In the clinical care of pigs, all patients are hospitalized at the clinic, their admission and registration takes place from 7 a.m. till 3:30 p.m. Students can also take part in this activity (max. 5 students per teacher).

7.1.5.1.2 Hospitalization

All the clinics, specifically, the Small Animal Clinic, the Avian and Exotic Animal Clinic, the Equine Clinic and the Ruminant and Swine Clinic provide animal hospitalization care at a high standard. Hospitalized patients are used for the teaching of students. Students take part in the admission of patients for hospitalization, examination of patients, including examination using advanced imaging technologies, preparation for surgery, surgery, intensive post-operative care, post-operative care and other care at the clinics. Hospitalization of patients and provision of care to them at all the clinics is available 52 weeks a year, 7 days a week, with a veterinary surgeon in attendance 24 hours a day at the Small Animal Clinic and the Equine Clinic. Patients are hospitalized at the Avian and Exotic Animal Clinic as well, with care provided by a veterinary surgeon during regular hours, i.e., from 7 a.m. till 3 p.m. and emergency care provided by the veterinary surgeon on call from 3 p.m. till 7 a.m. Students help care for the hospitalized animals. At the Ruminant and Swine Clinic, hospitalization care is provided and a veterinary surgeon is present during regular hours from 7 a.m. till 3:30 p.m. on weekdays, and from 8 a.m. till 12 a.m. on Saturday and Sundays; outside regular hours, veterinary surgeons are on stand-by and can be summoned by phone.

7.1.5.2 Patient flow

Table 7.3: No. of cases: a) admitted for consultation and b) hospitalized at faculty clinics over the last three years

Species	No. of cases 2012		No. of cases 2011		No. of cases 2010		Average
	out-patient	hospit.	out-patient	hospit.	out-patient	hospit.	
	a	b	c	d	e	f	
cattle	0	41	0	100	0	92	409
sheep, goats	4	65	0	114	0	113	
pigs	1	334	0	279	0	78	
lamas and alpacas	0	1	0	4	0	1	
poultry	13	0	17	0	16		1,471
rabbits	1,166	398	988	456	878	482	
horses	544	566	575	651	525	597	1,153
dogs	6,041	1,112	6,717	1,038	6,660	1,017	13,325
cats	1,196	227	1,406	240	1,327	222	
birds (excl. poultry)	980	115	830	152	1,110	208	
reptiles	202	187	172	212	268	223	
other small mammals	1,766	739	1,944	764	2,089	813	

7.1.6 Vehicles for animal transport

The University transports sick animals to the clinics in different ways depending on the species. Cattle, small ruminants and pigs are transported to the clinic by the University's vehicles if the breeder does not bring them and requests transportation. As regards horses, the patients are brought to the clinic by their breeders or the equine rescue service with whose operators the clinic collaborates. Dogs, cats, poultry, rabbits, birds, reptiles and small mammals are brought to the clinic by their owners.

The University uses its own approved vehicle to transport cattle, small ruminants and pigs, specifically, an IVECO truck (carrying capacity of 3 tons) which is used to transport ruminants or a larger number of pigs. To transport a smaller number of pigs and piglets, the University uses a small pick-up truck, Opel Movano, together with a braked trailer for animal transport, with a carrying capacity of 1,200 kg.

7.1.7 On-call emergency service

All the clinics, i.e., the Small Animal Clinic, the Avian and Exotic Animal Clinic, the Equine Clinic and the Ruminant and Swine Clinic provide non-stop emergency care at the clinics (except for the clinical section specializing in pigs). Students take part in these activities in small groups.

The Small Animal Clinic provides emergency veterinary care 24 hours a day and veterinary surgeons are present round the clock.

The Avian and Exotic Animal Clinic provides emergency veterinary care during regular hours, i.e., from 7 a.m. till 3 p.m., while from 3 p.m. till 7 a.m. on weekdays and on Saturdays and Sundays, the clinic runs in a stand-by regime whereby veterinary surgeons are on call and can be reached by telephone if necessary.

The Equine Clinic provides emergency veterinary care 24 hours a day and veterinary surgeons are present round the clock.

The Ruminant and Swine Clinic provides emergency veterinary care during regular hours, i.e., from 7 a.m. till 3:30 p.m., between 3:30 p.m. and 9:30 p.m., emergency care is provided by the veterinarian on duty, and from 9:30 p.m. till 7 a.m. on weekdays and on Saturdays and Sundays by a veterinary surgeon reachable by call who makes arrangements for urgent veterinary care if necessary. In clinical care, emergency care is provided to pigs from 7 a.m. till 3:30 p.m.

Training provided by the clinic – Caesarian section

7.1.8 On farm teaching and outside patient care

7.1.8.1 Ambulatory (mobile) clinic

The University runs an ambulatory mobile clinic on a commercial basis. Its activities include ambulatory trips outside the University in order to provide veterinary care on farms and other institution on request; care is provided 365 days a year upon agreement with the breeder. The mobile clinic's activities focus on internal veterinary medicine, gynaecology, obstetrics and reproductive medicine, or other areas of veterinary medicine as may be relevant on animal farms. Students take part in the activities of mobile clinics in small groups (max. 3-5 students per teacher) as part of their clinical lessons.

The numbers of patients attended to through the mobile clinics over the last three years are provided in the table below.

Table 7.4a1 No. of cases (patients) seen by mobile clinics (on a commercial basis) in the past three years

Species	No. of patients			Average
	2012	2011	2010	
cattle – internal	478	182	220	24,364
cattle – reproduction	14,912	19,286	17,902	
small ruminants -internal	47	307	46	
small ruminants -reproduction	4,176	6,187	8,964	
pigs	26	41	52	
lamas and alpacas	39	124	102	
poultry (flocks)	2*	2*	3*	7.7
rabbits (units)	8	4	4	
horses	1	2	4	2

The number of herds seen by mobile clinics over the last three years is provided in the table below.

Table 7.4a2 Number of herds seen by mobile clinics (on a commercial basis) in the past three years

Species	Number of herds			Average
	2012	2011	2010	
cattle	430	809	486	749
small ruminants	5	5	5	
pigs	126	173	155	
lamas and alpacas	16	20	20	

For the purposes of the mobile clinic and transport of students to farms and institutions, the University has the requisite vehicles. The University's vehicles for the transportation of veterinary medicine teachers and students for the purpose of mobile clinics are listed in the table below.

Cars and buses of UVPS Brno used for trips by students for classes outside the UVPS Brno campus

Car model	License plate No.	No. of seats (for students)
Land Rover Discovery	2B24198	6
Fabia Combi	5B2 3190	3
Fabia Combi	5B2 3191	3
Fabia Combi	5B2 6215	3
Škoda Octavia	1B8 6169	3
Hyudai	5B2 5462	3
Dacia Logan	5B2 5154	4
Dacia Logan Lux	5B2 5153	7
Fabia Combi	6B2 3746	4
Opel Vivaro	5B4 1134	8
Opel Vivaro st.	2B5 0640	8
Opel Vivaro	5B4 1135	8

7.1.8.2 Other on farm services and outside teaching

The University pursues other mobile veterinary activities in the teaching of students at the School Agricultural Farm in Nový Jičín and Nový Dvůr, and on farms and institutions visited by teachers and students for teaching purposes. The numbers of such other patients visited through mobile clinics (non-commercial, for teaching purposes) and during lessons held at the University's School Agricultural Farm are indicated in the table below.

Table 7.4b1: Number of patients seen on outside teaching (i.e., arranged for teaching purposes, usually not on a commercial basis, and including the School Agricultural Farm) in the past three years

Species	No. of patients			Average
	2012	2011	2010	
cattle – internal	2,202	2,856	3,173	6,815
cattle – reproduction	1,020	1,009	979	
small ruminants	757	1,208	1,362	
pigs	4,175	1,039	664	
horses	3	15	25	14

During lessons held on farms and at the School Agricultural Farm, students perform clinical diagnostics, preventative acts in the form of vaccination, and provide treatment. Students further take part in the analysis of herd health analysis and proposal of measures in the process of advisory activities provided by the teacher.

The University uses buses to transport students to the University's School Agricultural Farm in Nový Jičín and Nový Dvůr; the University owns one bus and hires other buses from a bus company.

Buses of UVPS Brno used to transport students to classes held outside the UVPS Brno campus

Car model	License plate No.	No. of seats (for students)
Karosa (UVPS Brno)	BZM 6008	47
ČSAD Tišnov	-	47

7.1.9 Other information

7.1.9.1. Small Animal Clinic

The Small Animal Clinic is a reference facility for the Czech Republic, the Slovak Republic and some of the other neighbouring countries. The Small Animal Clinic serves as a reference facility also with regard to private veterinary facilities in the whole of the Czech Republic. Some 70% cases at the clinic are referred cases, approx. 30% are primary cases that come to the clinic.

The clinic performs advisory, diagnostic and therapeutic reference activities for private veterinarian practices. Selected private veterinary practices specializing in small animals collaborate with the clinic and take part in the clinical instruction of 6th year students.

The clinic has state of the art aseptic operating theatres and an intensive care unit, equipment for computer tomography, ultrasonography, arthroscopy, laparoscopy, endoscopy, electrocardiography, electroencephalography/electromyography, a gamma camera and, for research purposes, with magnetic resonance and MRI navigated C-arm.

Dispatch centre of the Small Animal Clinic

The individual veterinary surgeons working at the clinic specialize in orthopaedics, soft tissue surgery, neurosurgery, anaesthesiology, ophthalmology, stomatology, intensive care, neurology, cardiology, dermatology, endocrinology, urology, obstetrics and gynaecology or imaging methods. These veterinary surgeons specializing in individual fields within small animal veterinary medicine have the primary responsibility for the teaching and clinical work with regard to their specific fields of specialization.

Veterinary surgeons working at the clinic specialize in small animal orthopaedics and neurosurgery (3), soft tissue surgery (3), anaesthesiology (2), ophthalmology (2), stomatology (2), intensive care (2), neurology (2), cardiology (2), dermatology and endocrinology (3), urology (2), obstetrics and gynaecology (2) or imaging methods (3). Specialized veterinary care at the clinic is provided 52 weeks a year, 7 days a week during the clinic's regular hours, i.e., from 7 a.m. till 3:30 p.m.

The Small Animal Clinic uses a centralized electronic system (Winvet) for the registration of out-patients and hospitalized patients, samples and biological materials, results of examinations using imaging methods. Patient data and medical records can be obtained in the system as required. Patient records are saved and backed up in electronic form, some also in hard copies. The Clinic's electronic patient registration system also serves to record medicines and expendable supplies used in the treatment of patients. Students work with the system at the clinic under supervision.

7.1.9.2. Avian and Exotic Animal Clinic

The Avian and Exotic Animal Clinic provides primary care to patients (reptiles, birds and small mammals). It provides specialized veterinary care as the only reference facility in the Czech Republic. Most visits, over 75% of clients, are breeders who seek specialists in the field directly. The clinic provides comprehensive veterinary care to its patients. As a specialty, its laboratory identifies the sex of birds using molecular-genetic methods, together with the possibility of verification by endoscopic methods.

The clinical operations offer their own examinations using ultrasonography and X-ray, diagnostics, and least invasive interventions using rigid and flexible endoscopy. Critical patients are stabilized in oxygen boxes and their vital signs monitored by special devices designed for exotic animals (ECG, SPO_2, $ETCO_2$, indirectly taken blood pressure, heart rate, respiratory rate and body temperature). There are also devices for the administration of inhalator anaesthesia using both isoflurane and sevoflurane. Apart from equipment for traditional surgery, there are also devices for radio-surgery and mini-invasive surgery at the facility.

All the information about each patient of the clinic, including laboratory findings, are meticulously registered

and kept on record. There are electronic patient archives. Students work with the system at the clinic under supervision. Primary records are moreover drawn up also as a hard copy and all the written protocols are kept on file.

The facility specializes in the following fields: internal medicine, reproductive medicine, surgery and endoscopy, stomatology, endocrinology and cardiology. The clinic also performs ophthalmological examinations of patients. The clinic has the following specialists on staff: avian medicine (PhD), medicine of small mammals (PhD, European Veterinary Specialist in Zoological Medicine (small mammals) and reptilian medicine (PhD, European Veterinary Specialist in Zoological Medicine (herpetology). These specialists are available at the clinic on a daily basis during regular working hours.

Veterinary practitioners collaborate with the clinic and the clinic serves as a reference facility for the avian and reptilian diseases and the diseases of small mammals. Veterinary practitioners take part in the teaching of 6th year students.

Since 2004, the Avian and Exotic Animal Clinic, together with its counterpart at the University of Veterinary Medicine Vienna, has been hosting international specialized clinical courses (Summer School for Exotic Medicine and Surgery) for Czech and foreign veterinary surgeons.

The clinic was entrusted with the organization of specialization courses of the European School for Advanced Veterinary Studies (ESAVS), held under the auspices of the Université du Luxemburg. As of 2012, the Avian and Exotic Animal Clinic has the status of Faculty of Veterinary Science Partner in Veterinary Education for the University of Sydney internship program. The clinic also organizes international courses and externships.

The clinic's specialists also facilitate national courses, internships and training for veterinary practitioners, organized in collaboration with trade organizations and associations (CSAVA – Czech Small Animal Veterinary Association, CAZWV – Czech Association of Zoo and Wildlife Veterinarians, KVL CR – Chamber of Veterinary Surgeons of the Czech Republic).

7.1.9.3. Equine Clinic

The Equine Clinic is a reference facility with modern equipment that is not available out in the field. Its top qualities include the department of anaesthesiology and resuscitation, ICU for foals, arthroscopy and other surgical methods, including trans-endoscopic application of laser surgery and the possibility of using a high-speed treadmill for stress tests. Students take part in all the examinations and therapy. The Equine Clinic collaborates with a horse rescue services which is equipped for the recovery of horses and transport of acute and recumbent patients.

Most of the Equine Clinic patients (80-90%) are referred by field veterinarians and are sent to the clinic for the purposes of more advanced diagnostics, or for surgical therapy and intensive care. Other owners bring horses to the clinic without prior reference.

Veterinary surgeons on the staff of the Equine clinic specialize in various sub-disciplines of internal medicine, surgery, orthopaedics and obstetrics, but all are able to perform acute stabilization and treatment of patients with various health issues.

An anesthesiologist and a surgeon are available nonstop for emergency care, as is a specialist in intensive neonatological care depending on the season (foaling season).

Relations with field practitioners are extremely superior, field veterinarians take part in the teaching of 6th year students when the students spend one part of their practice period at the clinic and the other part in the field. Field veterinarians refer their patients to the clinic and receive feedback. The clinic takes an active part in post-graduate education of field veterinarian for which it uses both its premises and staff.

The clinic actively collaborates with other departments and clinics at the faculty, whether in the taking and processing of samples, or professional consultations.

The administrative patient system is kept both as hard copy and in electronic form (admission book and VETIS electronic system); the electronic system within the entire faculty is connected to the central laboratory. Students work with the system at the clinic under supervision. VETIS further allows for accurate connection to medi-

Preparing a patient in the operating theatre of the Equine Clinic

Training involving cows with permanent rumen cannulas

cine storage. Patient data and examination results, together with the final report, are kept as hard copies in the storage premises of the clinic.

7.1.9.4. Ruminant and Swine Clinic

Compared to veterinary care provided at other clinics in practice, the veterinary care provided by the Ruminant and Swine Clinic is of a considerably higher quality.

The swine section of the clinic is equipped with specially appointed stables where groups of piglets (pigs) can be kept with a view to their case history and clinical picture. Each patient undergoes an individual clinical examination, and is subsequently observed for a minimum of 9 hours per day in terms of development of the patient's health condition and effectiveness of the treatment. Clinical samples are obtained from each patient for the purposes of laboratory diagnostics focusing on both contagious and non-contagious diseases. Each patient thus undergoes a comprehensive examination, and in light of the results of clinical and laboratory diagnostics, individual therapy is administered daily. If need be, imaging diagnostic methods (X-ray and sonography) are used. Each patient is monitored closely in terms of effectiveness of the treatment. Based on the comprehensive diagnostics of individual patients of a certain age group, measures of a prophylactic and therapeutic nature are proposed to the breeders of the examined pigs. In extraordinary cases where treatment is unsuccessful, the animal is put down and subsequently subjected to a pathological-anatomical examination. Samples for laboratory analysis are taken from animals which had to be put down. Clinical patient care is thus provided at expert level, the objective to diagnose the condition precisely and set treatment protocols in such a way as to achieve high effectiveness. Treatment is only problematic in those cases when the sick patients are delivered to the clinic too late in light of the progress of their illness.

The ruminant section of the clinic focuses on the demonstration of clinical diagnostic method required to teach about certain diseases. It performs the requisite laboratory examinations in order to confirm the hypothetical diagnosis. After the expiry of two weeks, the patients are returned to the owner who does not pay any costs associated with the stay of the animal at the clinic, its diagnostics and treatment.

The Ruminant and Swine Clinic also provides primary veterinary care to referred patients. Most pigs coming from farms come to the swine section of the clinic immediately after they are selected for a primary examination by the breeder. This approach is applied with the consent of the veterinary surgeon who attends to the animals at the breeding facility. The patients arriving at the clinic have thus not undergone any examination or treatment previously.

Cattle (cows and calves) are brought to the clinic as referred patients depending on the disease currently addressed in practical training lessons. In isolated cases, small ruminants are admitted as patients requiring primary care.

The Ruminant and Swine Clinic also provides specialized veterinary care. At the swine section of the clinic, the relevant specializations are internal ailments (infectious and non-infectious), productive and reproductive disorders (gynaecology and obstetrics, as well as andrology). Surgery specialization is called for in isolated cases.

The ruminant section of the clinic caters to internal ailments and productive disorders. A specialized surgeon is also on the staff. If the case concerns reproductive problems, the relevant specialist in obstetrics, gynaecology and andrology takes part. Specialists may be involved on any day, including the weekend.

The Ruminant and Swine Clinic works closely with veterinary practitioners. Veterinary practitioners approach the swine section of the clinic to request assistance, traditionally in the diagnostics of swine diseases. Collaboration may also have the form of referral of animal patients for examination at the clinic. Veterinary practitioners commonly request consultations if unsure about diagnostics and prevention. The clinic collaborates with several dozen veterinary practitioners who also take part in the clinical training of 6th year students at pig farms.

The ruminant section of the clinic collaborates with several dozen veterinary practitioners who take part in the clinical training of 6th year students at cattle farms.

The Ruminant and Swine Clinic keeps a specialized patient registration system. At the swine section of the clinic, the patient is marked with a unique registration number and entered into the central animal register kept by the section. A case record is created for each patient both as a hard copy and in electronic form. The hard copy case records are available in the individual stables while the elec-

tronic form can be looked up on computer. The condition of each patient and results of clinical examinations are recorded into the case record every day. At the same time, records are kept of any administration of medicine, dosage, batch and protective period. Results of laboratory examinations and preventative interventions are also entered in the case records. If any surgery is performed, a comprehensive record of the surgery is drawn up. If a pathological-anatomical examination was made, the autopsy protocol is included in the patient's case record. Students may access the records under supervision. Pigs who were hospitalized do not return to the farm of origin. The stay of ruminants is ended after approximately two weeks, and the animal is returned to the breeder.

7.1.10 Ratios

Ratios expressing the availability of animals for clinical training in proportion to the last full year of clinical training, and the availability of necropsies for student training in proportion to the number of last year students.

Table 7.5 Animals available for clinical training expressed as a ratio to the number of students in the last year of clinical training

R11:	no. of students graduating annually / no. of food-producing animals seen at the Faculty	=	178,4 / 409	=	1 / 0,44 : 2,29
R12:	no. of students graduating annually / no. of individual food animal consultations outside the Faculty	=	178,4 / 24364	=	1 / 0,01 : 136,57
R13:	no. of students graduating annually / no. of herd health	=	178,4 / 749	=	1 / 0,24 : 4,20
R14:	no. of students graduating annually / no. of equine cases	=	178,4 / 1153	=	1 / 0,15 : 6,46
R15:	no. of students graduating annually / no. of poultry/rabbit cases	=	178,4 / 1471	=	1 / 0,12 : 8,25
R16:	no. of students graduating annually / no. of companion animals seen at Faculty	=	178,4 / 13325	=	1 / 0,01 : 74,69
R17:	no. of students graduating annually / poultry (flock)/rabbits (production units) seen	=	178,4 / 7,7	=	1 / 23,27 : 0,043

Table 7.6 Animals available for necropsies

R18:	no. of students graduating annually / no of necropsies food producing animals + equines	=	178,4 / 596	=	1 / 0,30 : 3,34
R19:	no. of students graduating annually / no. of poultry/rabbits	=	178,4 / 312	=	1 / 0,57 : 1,75
R20:	no. of students graduating annually / no of necropsies companion animals	=	178,4 / 353	=	1 / 0,51 : 1,98

7.1.11 Other species

As regards other animal species, consideration is given to teaching material for the diseases of game, fish and bees.

7.1.11.1 Game

Cadavers found on hunting grounds administered by hunting association are obtained for lessons in game diseases. The animals are autopsied in the autopsy room of the Department of Ecology and Diseases of Game, Fish and Bees. Numbers of necropsies are provided in the table below.

Table: No. of necropsies (entire carcasses) in the past three years – game

Species	No. of necropsies			average
	2012	2011	2010	
game (roe deer, pheasant, partridge, quail, hare)	27	126	140	97

Other samples from the field are obtained for the purposes of parasitological examination, or for the diagnostics of viral and bacterial diseases. Training also includes the topic of immobilization and anaesthesia demonstrated on University campus and at the School Agricultural Farm (mouflons, or fallow deer).

The department also provides veterinary care to animal rearing facilities. Numbers of patients are provided in the table below.

Table : Number of patients seen during extramural lessons in the past three years – game

Species	No. of patients			Average
	2012	2011	2010	
game	35	22	26	

7.1.11.2 Fish

In lessons on diseases of the fish, fish obtained from fish-pond operators are used. The department has a fish-keeping facility where the fish are kept until used in courses. The department addresses cases of fish diseases and fish kill. The number of necropsies performed in connection with fish diseases is indicated in the table. Necropsies are also performed in order to monitor fish health in water-supply reservoirs.

Training is fish diseases at the Department of Ecology and Diseases of Game, Fish and Bees

Table: No. of necropsies (entire carcasses) in the past three years – fish

Species	No. of necropsies			Average
	2012	2011	2010	
Fish	257	173	126	138

The department also addresses cases of sick fish on an out-patient basis. Numbers of outpatient cases in the field of fish diseases are provided in the table below.

Table : No. of cases: a) received for consultation, and b) hospitalized in the past three years – fish

Species	No. of cases 2012		No. of cases 2011		No. of cases 2010		Average
	out-patient	hospit.	out-patient	hospit.	out-patient	hospit.	
Fish	19	0	26	0	13	0	19

The department also examines sick and dead fish in order to diagnose fish diseases in ponds and in water bodies in the field. The numbers are provided in the table below.

Table: Number of patients visited during extramural lessons in the past three years – fish

Species	No. of patients			Average
	2012	2011	2010	
Fish	53	89	0	47

The bee colonies kept on campus are used in training in diseases of bees

7.1.11.3 Bees

In the teaching of diseases of bees, bee colonies kept on campus, i.e., 22 hives, are used. Diagnostic activities include the examination of samples taken from colonies in the field by beekeepers with whom the department co-operates.

7.2 Comments

A great quantity of animals and other material of animal origin is used at the University for teaching purposes.

Anatomy lessons take place in quality premises which include facilities for the acquisition, processing and utilization, in the teaching process, of anatomical specimens, including a large anatomical autopsy room. The quantity of carcasses, organs and tissues for anatomical autopsies and skeletal and other specimens make adequate instruction possible. The fact that the autopsy room is accessible to students for self-directed learning using bodies, specimens and skeletons outside regular courses is a great asset, and students make ample use of this opportunity.

Pathology is taught in the building and facility designed for pathological morphology. In keeping with the current trend based on practical training requirements, it focuses both on pathological autopsies of animal carcasses and on pathohistological diagnostics based on biopsy samples from animals. In 2012 and 2013, the building underwent a general remodelling and extension in the context of modernization of all the pathology facilities at the University; during that time, necropsies were performed in a substitute autopsy room and other autopsy rooms on campus (e.g., the autopsy room of the Small Animal Clinic, the autopsy room of the Avian and Exotic Animal Clinic, the autopsy room of the Equine Clinic, the autopsy room of the Ruminant and Swine Clinic, the autopsy room of the Department of Biology and Wildlife Diseases).

Facilities of the University and in particular the School Agricultural Farm where animals are reared, are used in animal production courses; the size of the herds at the School Agricultural Farm makes it possible to use them not only in

animal production lessons but also in some areas of clinical training. Animals from the School Agricultural Farm are used for teaching purposes to a great extent.

Food hygiene classes cover the entire range of food commodities (i.e., fatstock carcasses, organs, meat, fish, poultry, eggs, milk, cheese and dairy products, honey) and use the abattoir on campus and the abattoir in Tišnov, the Meat and Fish Technology Workshop and the Dairy Pilot Technology Plant on campus, as well as other facilities and laboratories at the University. The number of bodies inspected by students during the teaching processes, and the quantity of other materials used to teach food hygiene, shows that the University greatly supports training in this field.

Patient-based teaching at the University is possible because of the four large clinics with a great number of patients covering the entire range of veterinary medicine. The clinics have recently been modernized to a considerable extent. Thanks to the University's credit and the proactive of teachers – veterinary surgeons – high numbers of patients come, both dogs and cats (including special and highly sophisticated surgeries), as well as horses (including special and highly sophisticated surgeries) where many patients come from abroad, but also birds, reptiles and small mammals, including exotic animals, whereby the clinic has a high number of patients spanning its entire range thanks to its approach and credit. The high number of rabbits at the University's clinic is interesting, and shows that the public is increasingly interested in keeping rabbits as pets. Contrary to that, the number of clinical patients at the University is low in the poultry category which is in keeping with the current trend whereby poultry rearing is shifting from small-scale to large-scale operations, and with that, diagnostics is shifting towards more or less post-mortem diagnostics, or clinical diagnostics performed directly at the poultry farms. Due to infection prophylaxis, entry into the breeding facilities is prohibited, and cadavers from poultry farms and poultry (pheasant) rearing at the University's School Agricultural Farm are used in teaching. As regards pigs, a sufficient number of patients is brought from rearing facilities and abattoirs because entry into most pig breeding facilities is prohibited due to infection prophylaxis. As regards cattle, the number of animals on cattle farms in the Czech Republic is declining, and as a result, so is the interest in patient hospitalization; the number of patients at the clinic is thus supplemented, to a considerable extent, by teaching on cattle farms through the mobile clinic, teaching on cattle farms and on the University's School Agricultural Farm.

The mobile clinic service performed by the University is rather extensive, and focuses, to a significant extent, on reproductive disorders, gynaecology and obstetrics, in addition to internal medicine.

Diseases of game are taught using dead animals, or using the University's game enclosure and hunting grounds. Fish diseases are taught using fish obtained for teaching

The number of rabbits shows a growing interest in rabbits as companion animals

purposes, bee diseases are taught using bee colonies kept on campus.

7.3 Suggestions

The University is equipped very well in terms of its ability to provide the entire range of important animal species and animal material for the teaching of students, and its clinics and facilities work very well for the provision of veterinary care and veterinary training of students.

Nevertheless, in recent years, the University felt it lacked its own facility for the housing of poultry or birds for clinical training purposes. In the past, the Avian and Exotic Animal Clinic had housing for a limited number of poultry but lost it in the process of the University's remodelling activities. Therefore, a small building was designed and is currently being built on campus: the Centre for Avian Medicine which includes premises for the housing of poultry and birds, a seminar dedicated to poultry and avian diseases, and other support facilities. At the same time (in light of the limited access to poultry farms for teaching purposes due to infection prophylaxis at large-scale poultry farms), the University ought to consider establishing a small poultry rearing facility at the School Agricultural Farm.

Visualization of the building of the Centre for Avian Medicine

In order to supplement the full range of all animal species reared by the University itself, it would be appropriate to establish a small fish pond at the School Agricultural Farm so that fish could be reared for training purposes. The University purchases fish from private producers but if it established a pond of its own, it would bring further opportunities for training in this area. The pond has already been designed for the School Agricultural Farm complex, and its establishment depends only on sufficient funding on the part of the University.

LIBRARY AND LEARNING RESOURCES

8.1 Factual information

8.1.1 Library and other information technology services

Study literature and other printed documents at the University are available to students at the University Library and libraries in individual departments and clinics. Electronic information sources can be accessed via all computers at the University and the Kaunic Student Residence Hall, and from home through the EZ-proxy service.

8.1.1.1 Main library

The University Library was newly built and opened on March 9, 2012. It is a very modern facilities which provides students with an environment for study in a large structured reading room and in group or individual reading rooms. It provides students with access to textbooks, lecture notes, journals and other specialized literature both in Czech and in English, and both as a lending library and a reading library. Students may further work in computer rooms with access to specialized information databases in the University Library. The University Library also lends study literature to students.

The University Library is a part of the Study and Information Centre which falls under the Rectorate in the organizational structure and which is managed by the Vice-rector for Science, Research and Foreign Relations (the University's Study and Information Centre includes the University Library and the Acta veterinaria Brno journal). The activities of the University Library are coordinated by the University's Library Board headed by the Vice-rector.

The actual operation of the University Library is managed by the head of the Study and Information Centre of the University. Its opening hours are scheduled in such a way to meet the study requirements of students.

The University Library is open 55 hours a week, as follows:

Monday	from 7.30 a.m. till 7.30 p.m.	12 hours
Tuesday	from 7.30 a.m. till 7.30 p.m.	12 hours
Wednesday	from 7.30 a.m. till 7.30 p.m.	12 hours
Thursday	from 7.30 a.m. till 7.30 p.m.	12 hours
Friday	from 8 a.m. till 3:00 p.m.	7 hours

The University Library is a part of the Study and Information Centre

The University Library

Users can use two multi-purpose printers which use chip cards for identification to print and copy. Scanning was added to the services available: a new scanner was installed on the library premises, and four electronic book readers can be borrowed.

The University Library is a university facility catering to students of veterinary medicine, veterinary hygiene and ecology and students of pharmacy. Most of the library stock consists of literature on veterinary medicine and veterinary hygiene. There are 124 reading places for students in the library. WIFI is available throughout the building.

There are 8 full-time staff at the library (1 director, 6 librarians, 1 secretary) and 0 part-time staff, the University Library thus has 8 FTEs.

Specialized literature and computer access:	
books, lecture notes and other specialized literature in total	50,892
of that, books, lecture notes, specialized literature available in the reading room	22,348
No. of hard copy journal subscriptions	89
No. of electronic journal subscriptions	131
access to electronic journals within databases (estimated)	9,000
number of computers in the reading room and in individual booths (for self-directed learning)	32
number of computers in the computer room for self-study (SIC groundfloor)	46

Students make ample use of the University Library for study purposes. In 2012, the number of registered users was 2,489. The open space design offers a pleasant space for study, as well as adequate technical equipment. The newly open library was received by students and the professional public alike with great interest which persists and has been growing. The great increase in the visiting rate is clear from the turnstiles: in 2012, they recorded 43,555 passes.

The library also provides bibliographic and information services (1,121 requests in 2012) and search services (111 requests in 2012). The library also trains students in working with information sources and electronic databases.

The University Library also catalogues specialized literature available in individual departments and clinics. In 2012, electronic retro-cataloguing of the University Library and libraries found at the individual clinics and departments was completed (it took several years – from 2007 till 2012).

The University Library further provides students with access to single-discipline and multi-disciplinary electronic information sources: American Chemical Society, BioOne 1,2, CAB Abstracts, COS Pivot, EBSCO, ENVIROnetBASE, ESPM , FSTA, Reaxys Royal Society of Chemistry, ScienceDirect, SciFinder, Scopus, SpringerLink, Web of Knowledge, Willey, Zoological Record. The bibliographic database, Web of Knowledge, and the Web of Science and Journal Citation Reports (JCR) within it are used most frequently: during the course of the year, users

from UVPS Brno entered nearly 100 thousand inquiries. The number of full texts displayed in the full-text database ScienceDirect reached 67,917. The meta search engine Naviga is also available.

The University Library also procures the publication of electronic lecture notes at UVPS Brno. The total number of publications published in 2012 was 42, of that, there were 26 lecture notes, 9 omnibuses, 4 monographs and 3 handbooks.

8.1.1.2 Subsidiary libraries

Specialized literature is available in the libraries of individual departments and clinics at the faculties to staff or students in relation to their work at the clinic or department (dissertations, etc.).

The library stock of departments and clinics numbers 50,130 library units in total (books, textbooks, lecture notes), plus journals according to the specialization of the clinic or department. In 2012, 164 borrowings were recorded in the libraries at clinics or departments (the low number is due to the fact that literature is mostly studied at the premises of the clinic or department).

Computers for student use

Students do not use access to departmental or clinic libraries much in their studies because the University Library offers sufficient room for study and an adequate range of specialized literature.

8.2 Comments

The University Library is a modern facility which offers the University's students space for study, access to study literature and electronic information sources. It is widely used by the students. The number of places for study, number of computers and number of accesses to internet connection for the students' own computers (directly or through WIFI) appears to be adequate. The range of study literature is adequate, access to electronic information sources covers all the literary databases relevant to the study of both tracks of veterinary studies, i.e., veterinary medicine or veterinary hygiene and ecology. Opening hours of the University Library, other library services and staffing are adequate.

The University does not expect any significant changes with regard to the University Library in light of the fact that the University was built and opened in early 2012.

8.3 Suggestions

By building a new and modern library, the University achieved marked progress in the modernization of the study environment for self-directed learning by students, expansion of the range of study literature on offer, computer access for student self-directed learning and access to electronic databases and literature sources. A recommendation for the upcoming period may be to continue supplementing the library stock (books, textbooks, lecture notes) and journals at the University Library in Czech and in English, and to maintain access to specialized electronic information sources and specialized and scientific databases.

STUDENT ADMISSION AND ENROLMENT

9.1 Undergraduate courses

9.1.1 Undergraduate student numbers

9.1.1.1 Student numbers

In 2012, the number of students at the University of Veterinary and Pharmaceutical Sciences Brno in both tracks (Veterinary Medicine and Veterinary Hygiene and Ecology) was 1,544. Of that, female students accounted for 82.8% and male students for 17.2%. The total number of foreign students was 23.1% and the number of foreign students in the English study programme was 11.5%.

Table 9.1: Undergraduate student composition in the year prior to visitation (2012)

Total number of undergraduate students	1544
Total number of male students	265
Total number of female students	1,279
Foreign students	356
▮ from EU countries	319
▮ from non-EU countries	37

Note: The number of self-paying foreign students in the English study programme in 2012 was 177 (i.e., 11.5%)

9.1.1.2 Minimum number of years for successful completion of study

The minimum number of years required for a successful completion of veterinary training is 6 years (i.e., MNY = 6). Study is successfully completed (2012 figure) approx. 63.6% of students, i.e., of the 313 students admitted in 2007, 199 successfully completed their studies, and 114 failed to complete their studies.

Most students graduate after the standard 6 years of study, however, there are graduates who take longer to complete because they failed in their studies and failed to pass the requisite examinations in a particular year, in rare cases in several years of study (in such case, they must earn the credits required to pass to another year of study but their studies are extended by 1 year, or by several years in exceptional cases); or students may extend the period of study due to a foreign internship which prevented them from attending classes in accordance with the standard curriculum (in such case, they must earn the credits required to pass to another year of study but their studies are extended by 1 year).

The Lecture hall at the Department of Biology and Wildlife Diseases

9.1.2 Student admission

9.1.2.1 Applications for study

Applicants for study are admitted for veterinary study at UVPS Brno by way of an admission procedure. The applicant must submit the application for study by the end of February (or mid-March, as the case may be). If interested in studying veterinary medicine, the applicant applies to the Faculty of Veterinary medicine (FVM), if interested in veterinary food hygiene and food animals, to the Faculty of Veterinary Hygiene and Ecology (FVHE).

9.1.2.2 Admission procedure

In the admission procedure, the following is taken into consideration: success of study at the secondary school (average annual grades in the last four years of secondary school, and/or average grade achieved in the school-leaving examination), knowledge of biology and chemistry ascertained by a written test administered in the admission procedure at the University (applicants take the tests on the scheduled day of the admission procedure, and the tests are graded anonymously, under an assigned code number), and a demonstrable interest in and other qualifications for the study (to be demonstrated for instance by a specialized publication in biology or chemistry, completion of a higher-level language examination in English or another language and demonstration of a certificate, etc.).

The following system is set up for the admission procedure: a chairman/chairwoman and supervisors to oversee the tests, a board to perform anonymous marking of the written tests and a board to summarize the outcome of the admission procedure are appointed.

The faculties set up a scoring system, which is approved by the faculty's Academic Senate and published (on its webpage). The system allocates points for secondary school results, for biology and chemistry knowledge, demonstrated interest and other prerequisites, where applicable (language examinations, publications, contests and competitions at secondary school level, for instance, in biology, etc.).

The faculties have a system in place for the English study programme as well. It is approved by the faculty's Academic Senate and published (on its webpage). The system allocates points for biology and chemistry knowledge.

The scores for each study programme and for the Czech study programme and the English study programme separately are added up and the applicants ranked according to the scores achieved. Every faculty admits applicants with the highest scores up to the level corresponding to the prescribed intake number. This obligation stems from the law. As the number of applicants is 3.93 times higher than the number of students the University is able to admit, the best applicants are accepted in both tracks of study.

The number of applicants in both tracks and the intake over the past five years is provided in the table below.

Written examinations in biology and chemistry are an important part of the admission procedure

Table 9.2: Intake of students in the past five years

Year	Number applying for admission	Number admitted	
		"standard" intake	other entry mode *
2012	1,475	283	51
2011	1,464	348	43
2010	1,412	297	36
2009	1,261	310	31
2008	1,194	313	20
Average	1,361.2	310.2	36.2

** Other entry mode in the table includes students admitted to the English study programme.*

9.1.2.3 Admission

The number of applicants that can be admitted for study and that would be financed by the state is set by the Ministry of Education, Youth and Physical Education. This number (*numerus clausus*) comprises applicants from the Czech Republic and applicants from the Slovak Republic (pursuant to international treaties) taught in Czech. The number is set on the basis of a calculation made by the Ministry of Education, Youth and Physical Education which is based on a complex calculation for the determination of the number of funded students at universities in the Czech Republic, designed to reflect the number of students at the University, the Ministry of Education, Youth and Physical Education's plan of reducing the number of students at universities in recent years, and the performance indicators of the university set by the Ministry of Education, Youth and Physical Education.

The University may admit fewer students but it is reflected in a reduction of its budget. The University may admit more students but they will not be funded by the state.

In addition to the number of students so determined, the University also admits students from abroad who are taught in English and pay for their studies themselves. Last year, the number of students admitted and taught in Czech was reduced and partly replaced with a higher number of self-paying students who study in English.

Applicants come from various secondary schools and may thus possess varying degrees of knowledge and aptitude for university studies. The admission procedure is therefore set up for the assessment of long-term study results (from secondary school), knowledge in the principal disciplines required for veterinary training (i.e., biology and chemistry), and, where applicable, for the assessment of further prerequisites giving gifted students an edge. This system equalizes the requisite minimum level of knowledge from previous study for university studies in the applicants admitted. Students are not admitted outside this system, with the exception of students in the English study programme who generally go through the admission procedure in the country of origin, or directly at UVPS Brno, as the case may be.

Matriculation of new students

In the upcoming years, the Ministry of Education, Youth and Physical Education will strive to reduce the number of university students funded by the state due to the great increase of the number of university students in the last 20 years and problems associated with their financing. Although the number of students in veterinary training at UVPS Brno did not increase so greatly, the reduction of the number of students financed in this manner will also apply to veterinary training. UVPS Brno responds to this trend pursued by the Ministry of Education, Youth and Physical Education by reducing the number of students admitted to the Czech programme of its own initiative, and by supplementing the number with students studying in English and paying for their studies (a significant share already in 2012). The University will use the funds from self-paying students to compensate for any decline in state funding related to the reduction of the prescribed number of applicants to be admitted.

9.1.3 Student flow

9.1.3.1 Number of students

In 2012, there was a total of 1,544 students in the two tracks of veterinary study at the University. The numbers of students in individual years in 2012 is provided in the table below.

Table 9.3a: Total number of undergraduate veterinary students

Number of students present in 2012		Number of additionally admitted students
1st year	309	0
2nd year	273	11
3rd year	248	12
4th year	191	2
5th year	239	0
6th year (MNY)	259	0
> 6th year	0	0
Number of undergraduate veterinary students (present in 2012)	1,519	25
Total	1,544	

Note: The number of additionally admitted students represents the number of students who failed in their studies, reapplied and were readmitted for study on the basis of their admission procedure results.

Students who were admitted in 2007 and who studied successfully in 2012, were distributed among the six years in such way that in 2012, most of the students were in their 6th year and balance in the 5th year (i.e., these are students attending 6th year but due to the fact that they for instance have yet to pass certain examinations, they are only in their 5th year). The student flow is shown in the table below.

Table 9.3b: Flow of undergraduate veterinary students

Number of students admitted in 2007		Number of additionally admitted students
1st year	0	0
2nd year	0	0
3rd year	0	0
4th year	0	0
5th year	28	0
6th year (MNY)	171	3
> 6th year	0	0
Number of undergraduate veterinary students (of those admitted in 2007)	199	3
Total	202	

The number of all veterinary students in 2012 was 1,544, and further non-veterinary students was 467 (students of the non-veterinary Bachelor's programme and the follow-up non-veterinary Master's programme); in total, a total of 2,011 students studied at the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene in 2012.

9.1.3.2 Completion of requirements

For the student to complete a year of study, he/she must earn the appropriate number of credits for the respective year of study. The Recommended Study Plan is designed in such a way that the students is to earn 60 credits in every study year. However, the conditions of the credit study system are set up in such a way that the student does not have to earn all 60 credits for the respective year of study but may earn a lower number of credits as indicated in the Study and Examination Code:

in the 1st year of study in order to pass to the 2nd year
46+ credits 60 credits as a standard
in the 2nd year of study in order to pass to the 3rd year
100+ credits 120 credits as a standard
in the 3rd year of study in order to pass to the 4th year
150+ credits 180 credits as a standard
in the 4th year of study in order to pass to the 5th year
200+ credits 240 credits as a standard
in the 5th year of study in order to pass to the 6th year
250+ credits 300 credits as a standard

The student entering the 1st through 5th year of study in accordance with the Recommended Study Plan will earn a total of 300 credits at the end of the 5th year under standard circumstances. If the student fails to pass any exams pursuant to the Recommended Study Plan but has a sufficient number of credits to progress to the following year of study, he/she generally studies a year longer, i.e., takes 6 years to complete the 1st through 5th years of courses.

To progress to the last, 6th year of study pursuant to the Recommended Study Plan, the student must comply with all the requirements prescribed by the Recommended Study Plan with respect to the 1st through 5th years of study, i.e., the student must attend and complete all the compulsory subjects (compulsory subjects of the core curriculum and compulsory subjects in the differentiation track), as well as a minimum of 4 of the compulsory-elective subjects, practical training work at the University's clinics, compulsory extramural practice in veterinary laboratory diagnostics, and practical training work at an abattoir, earning a minimum of 300 credits in the 1st through 5th years of study as a result.

In the 6th year, students attend training modules and sit for the individual final state examinations (where, depending on the choice of compulsory-elective subjects, the student may earn 60 or more credits). Having passed the final state examinations, the student thus completes his/her studies with 360 or more credits for the entire course of study.

To complete his/her studies successfully, the student must comply with all the requirements prescribed by the Recommended Study Plan with respect to the 1st through 5th years of study, i.e., the student must attend and com-

Students before final state examinations

plete all the compulsory subjects (compulsory subjects of the core curriculum and compulsory subjects in the differentiation track), as well as a minimum of 4 of the compulsory-elective subjects, practical training work at the University's clinics, compulsory extramural practice in veterinary laboratory diagnostics, practical training work at an abattoir and training modules, and pass the respective individual final state examination. Under the law, when the student passes the last final state examination, he/she ceases to be a student and becomes a veterinary study graduate. The University awards him/her a veterinary surgeon diploma at the graduation ceremony.

9.1.3.3 Number of graduates

The number of veterinary students who graduated from the University over the past five years is provided in the table below.

Table 9.4: Number of students graduating annually over the past five years

Year	Number graduating
2012	202
2011	192
2010	198
2009	184
2008	175
Average	190.2

Number of students graduating annually from the individual tracks (FVM, FVHE) over the past five years

Year	Number graduating FVM	Number graduating FVHE
2012	159	43
2011	148	44
2010	151	47
2009	139	45
2008	135	40
Average	146.4	43.8

The increase of FVM graduates in the last three years includes graduates of the English study programme (2012 = 11 graduates, 2011 = 8 graduates, 2010 = 6 graduates).

The average number of graduates over the past 33 years (since 1980) is 115 graduates for FVM, and 40 graduates for FVHE.

9.1.3.4 Average duration of studies

The standard duration of study in both tracks of veterinary training is 6 years. However, the study takes longer on average because some students do not complete their course over the standard period, or spend time abroad on scholarship and then take more than the standard 6 years to complete their course. The average duration of studies is provided in the table below.

Table 9.5: Average duration of studies (distribution of students in years)

Students studying in 2012	Number
Duration of study of 6 years	194
Duration of study of 6 years +1	55
Duration of study of 6 years +2	5
Duration of study of 6 years +3	2
Duration of study of 6 years +4	2
Duration of study of 6 years +5	1
Duration of study of 6 years +> 5	0

9.2 Comments

Students starting their studies have completed secondary school (evidenced by their school-leaving certificate) and have an adequate knowledge of biology and chemistry (verified by means of the entrance examination).

The number of students in both tracks ought to be commensurate in particular to teaching premises, material provisions, number of animals available for teaching purposes, number of autopsies, number of clinical patients representing important animal species, the scope of the mobile clinic and other requirements on veterinary training. The number of students currently conforms to veterinary training facilities, the University currently intends to reduce the number of students slightly rather than to increase it.

While the number of applicants admitted for study is influenced by the University's veterinary study capacity, funds allocated by the state per veterinary student (to maintain the University's overall budget), and reflects the impact of private veterinary practice and state veterinary administration (focus on two differentiation tracks) and the number of veterinary practitioners required (veterinary surgeons succeeding in practice), it also takes the view of the veterinary practice on the number of graduates into consideration (the plan to reduce the number of applicants admitted).

The University's premises, facilities, number of animals kept, number of autopsies, number of patients, mobile

Graduating students in a joint photo

clinics and other conditions at the University, as well as the structure and set up of the study programmes in both differentiation tracks create adequate study conditions for the current student numbers.

The share of graduates in the number of applicants admitted for study shows that the number of unsuccessful students is rather high (36.5%). In the veterinary medicine track (FVM), the drop-out rate is 22.8%, in the food hygiene track, the drop-out rate is 62.0%. The difference between the two differentiation tracks is due to the difference between the interest groups of applicant populations from which the veterinary medicine applicants on the one hand, and food hygiene applicants on the other hand originate. The requirements posed by the courses in the two differentiation tracks are the same. The differences in these population groups lead to different study success rates.

The number of graduates in the FVM differentiation track is higher as compared to the long-term average. To some extent, this reflects the significant expansion of private clinical practice focusing on pet animals (in particular dogs, cats, birds, reptiles, small mammals, horses) in the Czech Republic over the last 20 years. The number of graduates in the FVHE differentiation track is virtually the same as the long-term average.

9.3 Suggestions

The number of applicants admitted could be lower, however, a reduction of the number of applicants admitted could have an adverse impact on the University's budget in the university financing system which is based on the number of students. Despite that, the University plans not to increase the number of applicants admitted, and to reduce the number of applicants slightly. The potential drop in the volume of funding provided by the Ministry of Education, Youth and Physical Education would be replaced with financing from other sources.

While the drop-out rate reflects the great requirements posed by veterinary training, it is nonetheless rather high. This is due to the fact that veterinary training is difficult overall, and despite measures consisting in counseling available at Departments of Student Affairs at the individual faculties, implementation of modern educational methods (multi-media classes, multi-media study texts, etc.), implementation of a credit system (a certain relaxation of the educational process), application of the differentiation approach in particular in higher years (whereby students can elect subjects), the drop-out rate in veterinary study will probably remain on the higher side even in the future.

The average duration of study reflects the high requirements posed by veterinary training. The standard duration of the course is 6 years, and the University intends to maintain that. The average duration of study shows that most of the successful students study for the standard period of time of 6 years although there are students who take longer to complete their course (7 years or more). The University intends to maintain the quality of its graduates whereby not all the students are able to complete their studies successfully in 6 years (Gaussian distribution of students' abilities), and such maintenance of the graduates' quality is thus associated with a longer average duration of veterinary training.

ACADEMIC AND SUPPORT STAFF

10.1 Factual information

Academic and support staff engaged in the provision of education at the University works at the Faculty of Veterinary Medicine, the Faculty of Veterinary Hygiene and Ecology, Faculty of Pharmacy and the University's facilities, and provides education in both veterinary tracks, education in the Bachelor's and the follow-up Master's programmes focusing on food processing, education in the Bachelor's and the follow-up Master's programmes focusing on animal protection and welfare, and in the pharmacy study programme.

The number of academic teaching staff providing veterinary education, education with a focus on food processing and education with a focus on animal protection and welfare is 219.9 academic staff. Such education is completely separated from pharmaceutical education.

10.1.1. University personnel providing veterinary training

The number of academic teaching staff providing veterinary training in both differentiation tracks is 189.9. The respective academic staff work at the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology where they provide veterinary training in the individual departments and at the individual clinics. A very small number of other staff work in departments that serve the entire University (Department of Foreign Languages and History of Veterinary Medicine, Department of Sports and Physical Education), where they provide foreign languages and sports teaching.

Support staff providing veterinary training in both differentiation tracks counts 272 persons. The staff works at the Faculty of Veterinary Medicine and the Faculty of Veterinary Hygiene and Ecology, where they provide support at the individual departments and clinics directly in the veterinary training process. Further support staff works at facilities that cater to the entire University (in particular the Study and Information Centre, Centre of Information Technologies, Institute of Lifelong Learning and Informatics, internal administration of the University (which takes care of the supply of utilities, waste management, maintenance and repairs of buildings, campus maintenance, investments, etc.) and the Rectorate (which takes care of the University's man-

The Lecture room at the Clinics for Small Animals

agement, economic matters, HR matters, record keeping, archives, legal matters, administration and other activities at the University).

The number of University staff engaged in veterinary training is based on the amount of funding available to the University and long-term developments at the individual departments and clinics within sections of the individual faculties, as well as joint activities undertaken by the Rectorate. There have been no significant changes in the short run, while there has been a certain increase in the long run due to a growing volume of activities related to the provision of veterinary training, in particular the growing administrative burden caused by the magnitude of new legal regulations and new administrative duties brought about by same.

The staff numbers at individual departments and clinics (within sections) resulted from long-term developments, any potential changes fall under the province of the faculty's dean and arise from the departments and clinics' load in terms of teaching, research, veterinary activities and other academic activities. Growth of the number of staff is limited by the funding available to the faculty.

Academic teaching positions are filled by means of a selection procedure. While the University has no problem filling these posts, given that the salaries paid at the University are lower than income earned in veterinary practice, it is not always possible to fill academic teaching posts with the best staff (for instance, graduates with the best study results). The academic teaching staff is stable to a significant extent, turnover in individual cases generally occurs in the youngest age bracket (due to change of residence, obtaining a job with better pay, etc.), or in staff who retire. A growing number of applicants per teaching job opening is a long-term trend. A significant number of new academic staff are recruited from among doctoral students (post-graduate courses).

Table 10.1: Personnel in the establishment provided for veterinary training

	Budgeted posts (FTE)		Non-budgeted posts (FTE)		Total (FTE)	
1. Academic staff	VS	NVS	VS	NVS	VS	NVS
Teaching staff (total FTE)	142	31.1	0	0	142	31.1
Research staff (total FTE)	5.9	3.3	0.4	0.6	6.3	3.9
Others (FTE)	2.5	0	4.1	0	6.6	0
Total FTE	150.4	34.4	4.5	0.6	154.9	35
Total FTE (VS + NVS)	184.8		5.1		189.9	
FTE providing last year teaching	75.5		1.6*		77.1	
2. Support staff						
a) responsible for the care and treatment of animals	39.4		4		43.4	
b) responsible for the preparation of practical training and clinical teaching	65.3		1.9		67.2	
c) responsible for administration, general services, maintenance, etc.	133.5		18.1		151.6	
d) engaged in research work	5.8		4		9.8	
e) others (please specify)	0		0		0	
Total support staff	244		28		272	
3. Total staff	428.8		33.1		461.9	

** = In the last year of training, a further 273 veterinary surgeons take part in the training: they provide modular training on a rota basis by animal species. They are not paid by the University but have the status of teachers vis-à-vis the student pursuant to an authorization granted by the University (Equine Diseases = 42, Diseases of Dogs and Cats = 143, Ruminant Diseases = 120, Swine Diseases = 17, Poultry Diseases = 27, Avian, Reptile and Small Mammal Diseases = 39).*

Table 10.2: Allocation of academic (veterinary surgeon and non-veterinary surgeon) teaching staff – expressed as FTE – and support staff to the various departments

Department/clinic name	Academic teaching staff										Support staff		
	Full professor		Associate professor		Assistant professor		Assistant		Other		Technical/ (b + d + e)	Animal carers (a)	Admin./ (c)
	VS	NVS	VS	NVS	VS	NVS	VS	NVS	VS	NVS			
Department of Anatomy, Histology and Embryology	1	0	1	0.5	4.7	1	2	0	0	0	3.5	0	2.5
Department of Physiology	1	0.5	0	0.3	3.2	0	3	0	0	0	4	0	1.5
Department of Pharmacology and Pharmacy	0.8	0	0	0	3.6	0	0.7	0	0	0	1.2	0.5	0.7
Department of Infectious Diseases and Microbiology	4.5	0	1	0.2	3.7	0.9	4.7	1.5	0	0	9.2	1.5	4.5
Department of Pathology and Parasitology	1.9	0	1	0.5	3	0	1.5	1	0	0	4.4	1	6
Department of Animal Genetics	1	0	0	0	1	1	0	2	0	0	1	0	2
Ruminant and Swine Clinic	1	0	5	0	6.2	1	3.3	0	1	0	5.9	9.5	6.5
Equine Clinic	1	0	1	0	7	0	1.5	0	2.1	0	1	9	4
Large Animal Clinical Laboratory	0	0	1	0	0	0	0	0	0	0	6.5	0	0
Small Animal Clinic	2	0	0	0	14.2	0	6	0	2.5	0	0.7	15.9	12.4
Avian and Exotic Animal Clinic	1	0	0	0	7	0	1	0	0	0	1	4	2
Small Animal Clinical Laboratory	0	0	0	0	0	0	1	0	0	0	4.2	0	0.9
FVM research (inst. research, CEITEC, grants, etc.)	0	0	0	0	0	0	0	0	3.8	1.1	4.4	0	0
Dean's Office – FVM	0	0	0	0	0	0	0	0	0	0	0	0	5
Department of Biology and Wildlife Diseases	1	0	2	0	1	0.5	0.5	0	0	0	2	0	1
Department of Ecology and Diseases of Game, Fish and Bees	1	1	1	0	1	0.5	0	0.5	0	0	2	0	1
Department of Animal Nutrition	0	1	0	0	2	0	0	0	0	0	2	1	1
Department of Animal Husbandry and Animal Hygiene	1	0	0	1	1	0	1	0	0	0	1	0	0.4
Department of Biochemistry and Biophysics	1	1	2	0	2	1	1	0.5	0	0	4.6	0	1
Department of Meat Hygiene and Technology	1	0	2	0	1	1	0.5	0	0	0	4	0	1
Department of Milk Hygiene and Technology	1	0	1	0.5	3.5	1	0	0	0	0	4	0	1
Department of Vegetable Foodstuff Hygiene and Technology	0	0	1	0	1	0	0	0.4	0	0	2	0	1
Department of Veterinary Public Health, Animal Protection and Welfare	2	0	2	2	1	0.5	2	0	0	0	3	1	1
FVHE research (inst. research, CEITEC, grants, etc.)	0	0	0	0	0	0	0	0	2.5	2.8	5.4	0	0
Dean's Office – FVHE	0	0	0	0	0	0	0	0	0	0	0	0	4.5
Department of Foreign Languages and History of Veterinary Medicine	0	0	0	0	1	2.3	0	3	1	0	0	0	2
Department of Sports and Physical Education	0	0	0	0	0	2	0	1	0	0	0	0	1.5
Rectorate (rectorate – SIC, CIT, ICVI, internal management, rector's office, etc.)	0	0	0	0	0	0	0	0	0	0	0	0	87.2

The academic teaching staff is engaged in teaching, research, veterinary activities and other academic activities at the university. There are financial incentives designed to motivate the staff to take a pro-active part in the University's activities, for instance, an incentive in the form of a salary component to remunerate research and publication depending on the quantity and quality of work published, incentive pay also applies to teaching in the English study programme depending on the extent of teaching, and to veterinary activities depending on the clinic's income from such activities. Nevertheless, there are also staff members who run a private consultancy or diagnostic practice outside their working hours, or have a private veterinary practice. The law does not prohibit such activities outside working hours at the University. The University has no tools for regulating such activities after hours. Such activities are motivated by the income, which is higher than that earned at the University. The University does not and cannot possess information on such activities taking place outside the University but it is estimated that these are only isolated cases. Nonetheless, experience gained in private practice, in diagnostics and consultancy, or clinical experience of teaching staff gained outside the University and in a different environment help expand the experience and skills of the teacher in his/her field, and these can subsequently be transferred to the teaching of students. There is no transfer of clients outside the University, and if so, it is negligible as shown by the high numbers of clinical patients at the University in all the different areas in which it is involved.

Academic teaching staff has rather ample opportunities to attend science conferences and meetings. Funding for that purposes comes from the funds designated for science and research, and a great number of University staff attend conferences at the University, in the Czech Republic, and in particular conferences abroad, and not only within Europe. Financial consideration for conference attendance has the form of payment of costs of conference attendance by the University (travel expenses, accommodation and board, conference fees, poster costs, costs of publication of results obtained).

Academic teaching staff may go on sabbatical leave, however, sabbatical leave is associated with preparation for a habilitation or professorial process. Due to the teaching load, scientific and research activities and their follow-up at the University, the work load of individual departments and clinics and the responsibility of staff for the operations of departments and clinics, the option of sabbatical leave is not used at the University.

10.2 Ratios relating to the staffing of training

$$R1: \frac{\text{no. total academic FTE in veterinary training}}{\text{no. undergraduate veterinary students}} = \frac{189,9}{1544} = \frac{1}{0,12} : 8,13$$

$$R2: \frac{\text{no. of total FTE at Faculty}}{\text{no. undergraduate students at Faculty}} = \frac{219,9}{2011} = \frac{1}{0,11} : 9,15$$

$$R3: \frac{\text{no. total vet. staff FTE in veterinary training}}{\text{no. undergraduate veterinary students}} = \frac{154,9}{1544} = \frac{1}{0,10} : 9,97$$

$$R4: \frac{\text{no. total vet. staff FTE in veterinary training}}{\text{no. students graduating annually}} = \frac{154,9}{178,4} = \frac{1}{0,87} : 1,15$$

$$R5: \frac{\text{no. total vet. staff FTE in veterinary training}}{\text{no. total FTE support staff in veterinary training}} = \frac{189,9}{272} = \frac{1}{0,70} : 1,43$$

10.3 Comments

The number of staff in the individual categories reflects the requirements posed by teaching, science and research, provision of veterinary care and other academic activities, and is influenced by the amount of funding available to the University. While a higher number of staff and the resultant reduction of the teaching load on the part of the teaching academic staff is conceivable, the funding available to the University does not make any extensive changes of this kind possible.

Remuneration of academic teaching staff as regards base salaries is as follows:

Assistant	EUR 600 per month
Assistant professor	EUR 800 per month
Associate professor	EUR 1,000 per month
Full professor	EUR 1,200 per month

Staff members receive extra pay depending on their activities for teaching, science and research, grant and project work, veterinary activities, teaching in the English study programme, department or clinic management, and other. Such extra pay may be at minimum level, or may exceed the equivalent of a monthly salary depending on the extent of the respective staff member's activities.

Salaries of academic teaching staff at the University reach approx. EUR 1,400 per month on average, and as such, it is 1.4 times higher than the average salary in the Czech Republic. Nevertheless, income earned by veterinary surgeons in particular in private veterinary practice at quality clinics is substantially higher (exact information is not known).

Teaching in English is one of the activities that enable academic staff to supplement their base salaries

Salaries of support staff at the University reach approx. EUR 780 per month, and as such are below the Czech Republic's average salary level (the average salary is EUR 1,000, per month).

The University does not have a problem filling academic teaching positions but the fact that salaries at the University are lower than salaries in private veterinary practice means that in some cases, excellent candidates (e.g., graduates with the best study results) do not apply for academic teaching positions, although the post of a university teacher is considered socially prestigious. Changes in academic teaching staff only occur in individual cases.

There is no problem filling support staff positions although the salaries are very low in many positions. This is due to the number of people looking for work in the region and striving to find jobs.

The share (percentage) of veterinary surgeons in the number of academic teaching staff taking part in veterinary training is 81.6% which is a ratio suitable for the provision of veterinary training at the University. Veterinary surgeons provide clinical training, hygiene training and pre-clinical training. Veterinary surgeons and non-veterinary surgeons provide teaching in basic sciences and animal production subjects. Non-veterinary surgeons provide foreign language and sports teaching.

10.4 Suggestions

Funds designated for salaries of the academic teaching staff are distributed in the form of base salaries and incentive pay; the latter may be rather high in the case of active staff. Nevertheless, compared to private veterinary practice, base salaries of academic teaching staff would need to be raised; however, such increase is limited by the amount of funding for teaching obtained from the Ministry of Education, Youth and Physical Education.

Funds designated for salaries of the support are distributed in the form of base salaries and incentive pay. Overall, the salaries of many support staff are very low (as compared to analogous salaries in other institutions), and the base salaries of support staff would need to be increased; however, such increase is once again limited by the amount of funding for teaching obtained from the Ministry of Education, Youth and Physical Education.

CONTINUING EDUCATION

11.1 Factual information

The University of Veterinary and Pharmaceutical Sciences Brno is involved in the organization of continuing education. Continuing education at the University is organized by the Institute of Lifelong Learning and Informatics which falls under the Rectorate and is headed by the Vice-rector for Education. The Institute of Lifelong Learning and Informatics proper is managed by the head of the institute. Educational activities within the individual educational events are carried out by the University's teachers or by practitioners.

UVPS Brno organizes training of veterinary surgeons and other persons pursuant to Act No. 246/1992 Coll., on the Protection of Animals against Cruelty (training for persons performing state supervision of animal protection, training for persons managing experiments on animals, training for persons performing experiments on animals).

UVPS further conducts other training stemming from the law (training persons who examine hunted down animals, training persons who transport animals, and other).

UVPS also organizes Courses for the catching of stray and abandoned animals, and their treatment and care, including care in animal shelters, and for the collection and safe removal of cadavers in hobby breeding facilities, Course of insemination techniques with a special focus on cattle, sheep, goats, Course of insemination techniques with a special focus on horses, Course for vendors of regulated medicines, Course for bee colony inspectors.

At the end of the course, the attendees' knowledge is officially verified and the graduates receive certificates that authorize them to perform the activities concerned.

The University of Veterinary and Pharmaceutical Sciences Brno provides a number of other continuing education courses, for instance, Course of administrative management in the practice of veterinary administration authorities, Poultry farming course, Course on health safety of the production and processing of animal source foods, etc. At the end of the course, the attendees' knowledge is officially verified and the graduates receive certificates attesting their participation in the course.

The University of Veterinary and Pharmaceutical Sciences Brno further offers the University of the Third Age intended in particular for senior citizens, the topics being Man and Animal, and Man and Healthy Food. At

Continuing education courses

Students of the "University of the Third Age"

the end of the course, the attendees' knowledge is officially verified and the graduates receive certificates attesting their participation in the course. These courses are very popular and the University is not able to admit all the applicants.

The University of Veterinary and Pharmaceutical Sciences Brno organizes a number of other special interest educational activities both for the University staff and for the public (for instance, Management and marketing in science, Coaching – a modern method for human development and management, Course for prospective applicants for study).

In 2012, a total of 54 courses with 1,906 attendees was held.

The University further offers training by way of summer courses ("summer schools") in collaboration with foreign universities or for foreign participants (Summer School of Surgery, Summer School of Exotic Medicine, Summer School of Food Hygiene). Further, in collaboration with the University of Vienna, the University established Training Centre for Avian Medicine. In the last two years (2012-2013), the University has served as an EU Training Centre

– Better training for Safer Food (with a focus on meat and meat products),

The University's teachers also lecture at numerous educational events organized by specialized associations of veterinary surgeons of the Czech Republic.

The University runs an electronic database, Vettox, which can be accessed by veterinary specialists and which provides information and advice in the area of first aid and in cases of acute and chronic toxicoses in animals

11.2 Comments

Continuing education offered by the University can be deemed to be of a very good quality standard. It relies on experienced teachers working at the University and on practitioners with whom the University has been working on a long-term basis. Most of the continuing education courses have been running at the University for many years, and the University has had many years of experience with the organization of this type of training.

In addition to teachers from the University, state veterinary surgeons who have experience in the areas of state veterinary administration and state veterinary care, or supervision and protection of animals against cruelty, lecture in continuing education courses for state veterinary surgeons, training courses for veterinary surgeons and other persons pursuant to animal protection laws, and training courses held pursuant to legal regulations in order to obtain authorizations for the respective activities, to a substantial extent (in some cases, over 50% depending on circumstances).

11.3 Suggestions

A recommendation for the future may be a greater degree of cooperation between the University and the Chamber of Veterinary Surgeons of the Czech Republic in the organization of continuing education courses for private veterinary surgeons.

POSTGRADUATE EDUCATION

12.1 Factual information

The University of Veterinary and Pharmaceutical Sciences Brno offers the following post-graduate education to veterinary surgeons:

- specialty post-graduate education
  - national specialty post-graduate education
  - international specialty post-graduate education
- research post-graduate education.

12.1.1. National specialty post-graduate education and international specialty post-graduate education – specialty training National specialty post-graduate education

The University of Veterinary and Pharmaceutical Sciences Brno organizes specialty training of veterinary surgeons at national level.

At national level, post-graduate training is offered to veterinary surgeons wishing to specialize as state veterinary surgeons and to obtain board certifications of the first and second degrees. Postgraduate education of state veterinary surgeons is provided for in Act No. 166/1999 Coll., on Veterinary Care. Graduates obtain board certifications of the first degree for state veterinary surgeons, and board certifications of the second degree for state veterinary surgeons, respectively. Through the board certification process at the end of the programme, knowledge is tested thoroughly and attested, whereby the graduates are authorized to manage veterinary activities in the state veterinary administration (this is usually associated with a pay rise). The programmes are conducted pursuant to an agreement between the University of Veterinary and Pharmaceutical Sciences Brno and the State Veterinary Administration of the Czech Republic. However, no official degree with a basis in the law is conferred upon completion.

The University does not organize specialty training for private veterinary surgeons. Organization of such training depends on the interest on the part of the Chamber of Veterinary Surgeons of the Czech Republic and support afforded to such training by the bodies of the Chamber of Veterinary Surgeons of the Czech Republic. The University has been recommending for an extended period of time that such specialty training programme for clinical veterinary surgeons be established. Upon com-

National specialty post-graduate education

pletion of such specialty training, a certificate of specialization in private veterinary practice could be issued (e.g., canine diseases, feline diseases, avian diseases, equine diseases, swine diseases, ruminant diseases, etc.). Such post-graduate training programme could be based on the act on the Act on the Chamber of Veterinary Surgeons of the Czech Republic. However, once again, no official degree with a basis in the law would be conferred upon completion of such specialty training of private veterinary surgeons.

Pursuant to Act No. 111/1998 Coll., on Universities, the University cannot provide specialty postgraduate clinical education resulting in a clinical specialty degree. Those interested in obtaining a specialty postgraduate clinical education continue their clinical training at the University by attending a science postgraduate course in clinical fields, and obtain a PhD. upon completion.

Table 12.1.1: Clinical specialty training

Clinical discipline	No. of interns	No. of residents	Diploma or title anticipated
-	-	-	-

International specialty post-graduate education

At the international level, post-graduate training organized by the European Board of Veterinary Specialization (EBVS) enabled some teachers to obtain a European specialty diploma for the discipline in question in other European countries. The University can offer European specialty training through which European veterinary specialization can be obtained in those disciplines in which it has European specialists. There are 9 teachers at the University with European specialty clinical training (ECEIM 2x, ECBVHM 3x, ECZM 2x, EVPC 1x, ECVS 1x, ECVP 1x, ECVPH 1x).

The University may take part in European veterinary specialty training leading to European clinical specialization in two specializations: ECEIM (European College of Equine Internal Medicine), ECVS (European College of Veterinary Surgery). There is currently 1 resident at the University in the European specialty clinical training programme in surgery (specialty training leading to ECVS degree).

Exam in national specialty post-graduate education

12.1.2. Research education programmes

The University of Veterinary and Pharmaceutical Sciences Brno offers a postgraduate science programme in which a Ph.D. degree can be obtained. Training takes part in disciplines accredited by the Accreditation Board of the Ministry of Education, Youth and Physical Education.

Students are admitted to the postgraduate programme by way of an admission procedure designed to test their capacity for scientific work and their knowledge in the field concerned. The student has a study plan which includes the obligation to pass examinations in subjects prescribed for that field of study, to engage in scientific and research work related to the topic of the student's PhD thesis, and to take part in the teaching process in the field, as the case may be. The topic of the student's PhD thesis is set and a supervisor, or a specialist supervisor, appointed. The standard duration of study is 4 years (in exceptional cases, it may be extended). The student is obliged to publish new scientific findings based on results obtained through research in at least one journal with an impact factor in the course of scientific work. The study is supervised and assessed by Course Review Board composed of representatives of the respective discipline from the University, as well as other experts from other universities and research institutions. The student completes his/her studies by defending his/her dissertation and sitting for the final state doctoral examination. The student earns a Ph.D. upon successful completion.

Table 12.2: Number of students enrolled in different programmes

Degree	Fulltime	Part time	Duration
PhD veterinarian	65	36	4
PhD non-veterinarian	60	24	4
Other doctoral level [1)]	0	0	0
Total	125	60	

Funding for postgraduate science training comes from funding obtained by the University's teachers for grant and project work (usually by the supervisor for the student supervised by him/her), institutional research funding (funds provided by the Ministry of Education, Youth and Physical Education), funding for contractual research from companies and institutions that commission research from the University, or other funds obtained for instance by the University's veterinary activities. Students enrolled in the postgraduate science are involved in research con-

Research in a laboratory

ducted by the clinic or department, and his/her research activities are thus financed out of the sources listed above.

The student himself/herself may obtain funds for research from the University's Internal Grant Agency which provides funding for specific university research, intended to finance projects implemented by students enrolled in accredited doctoral or Master's study programmes.

A student enrolled in postgraduate science programmes (in fulltime study form) receives a scholarship (salary) from funding provided by the Ministry of Education, Youth and Physical Education. The scholarship is very low (in the 1st year of study, EUR 220 per month, in the 2nd year, EUR 260 per month, and in the 3rd and 4th years, EUR 250 per month). The student may obtain further funding by way of grants allocated by the University's Internal Grant Agency (max. EUR 1,200 per year), or by way of science grants granted by grant agencies if the student is involved in a science grant project.

Outside quality control of postgraduate science training with a Ph.D. awarded upon completion is performed by the Accreditation Board of the Ministry of Education, Youth and Physical Education. Quality control is performed when an application for accreditation or re-accreditation of the subject field is submitted, generally once in every four to eight years (the features assessed include for instance the focus of the subject field, expert staffing of the Course Review Board, staffing in terms of supervisors and director of studies, scientific standard and publication, the ability to obtain funding for postgraduate studies, numbers of students in the subject fields). A further outside quality control is performed in the process of comprehensive assessment of postgraduate science training with a Ph.D. awarded upon completion; the assessment includes the assessment of the quality of individual student dissertations in terms of form and content, scientific and research activities and publications of the Course Review Board members, supervisors and directors of studies, documentation pertaining to the programme. The assessment is performed *in situ* by an expert team designated by the Accreditation Board, and includes interviews with representatives of individual subject fields and students. The final report resulting from the comprehensive quality assessment of postgraduate training is reviewed and discussed by the Accreditation Board and depending on the position of the Accreditation Board, the University gains the authorization to offer the Ph.D. postgraduate programme in the respective subject fields for the respective time period (8 or 4 years).

12.2 Comments

The number of applicants admitted into the postgraduate veterinary science programme at the University is 47 per year on average, of that, 24 graduate successfully and 28 drop out. The drop-out is largely caused by students

leaving to pursue a career in private practice where salaries are higher.

Postgraduate science training	2012	2011	2010	Average
No. admitted	44	38	58	47
No. of students	185	210	226	207
No. of graduates	32	17	23	24
Drop-out	37	18	30	28

The ratio between students – veterinary surgeons and students – non-veterinary surgeons is 55:45. Subject fields with a clinical focus are studied by veterinary surgeons, subject field with a non-clinical focus, in particular those close to food science, natural sciences and other fields are taken up both by veterinary surgeons and other graduates (food science, natural sciences, agriculture, medicine).

12.3 Suggestions

As regards postgraduate science training, it is recommended to address the issue of low scholarship (salary) paid to the students out of funding provided by the Ministry of Education, Youth and Physical Education. The University solves this problem by providing a further scholarship (salary) to the students via its Internal Grant Agency or science grants provided by grant agencies if the student is involved in a science grant project. Nevertheless, low salaries of students enrolled in postgraduate science programs is a problem encountered by all universities in the Czech Republic and the Ministry of Education, Youth and Physical Education is currently working to resolve same; however, the outcome depends on the amount of funding allocated to the Ministry of Education, Youth and Physical Education out of the budget of the Czech Republic. The low salaries paid to students enrolled in postgraduate science programs is often the reason for their drop-out before successful completion.

A recommendation for future periods could be for the University and the Chamber of Veterinary Surgeons of the Czech Republic (KVL ČR) to elaborate and implement a long-term system of continuing education for veterinary surgeons, upon the completion of which the attendees would receive a certificate attesting their specialization in private veterinary practice (e.g., dogs diseases, cats diseases, equine diseases, swine diseases, diseases of ruminants, etc.). The University has been recommending for a long time that such a specialty programme for clinical veterinary surgeons should be set up. However, such training would depend on the interest on the part of the Chamber of Veterinary Surgeons of the Czech Republic and support afforded to such training by the bodies of the Chamber of Veterinary Surgeons of the Czech Republic.

RESEARCH

13.1 Factual information

Research at the University of Veterinary and Pharmaceutical Sciences Brno enabling undergraduate students to obtain experience in research work is organized as follows.

Students may, depending on their interest, take part in research work conducted at clinics and departments. Students who select Specialized Work as their compulsory elective subject in the 5th year as one of the compulsory electives for their final state *examen rigorisum* are usually involved in such research work.

Research activities are financed out of funding available for research, i.e., research funding of the respective clinic or department. Such funding consists of funds obtained for the purpose of grant and project work (grants from grant agencies), institutional research funding (funds provided by the Ministry of Education, Youth and Physical Education), funding for contractual research from companies and institutions that commission research from the University, or other funds obtained for instance by the University's veterinary activities.

Further options for funding of student research work are funds from the University's Internal Grant Agency (IGA UVPS), which provides funds for specific university research intended for projects implemented by students within accredited Master's programmes. The student elaborates a project for IGA UVPS in accordance with instructions (in consultation with the teacher supervising specialized work). Based on the outcome of project assessment, IGA UVPS decides to accept or reject the project. If the project is accepted, the student receives project funding for 1 year. The student then works on the project. On completion, the student must write a final report on project work and to present the results of his/her research at a student conference organized by IGA UVPS, write an article for publication and provide evidence of its acceptance for publication by a specialized or science journal (within 18 months of completion of project work). Specific university research conducted by students represents a direct integration of the University's scientific and research activities on the one hand, and its educational activities on the other hand, strengthens the position of students in the University's scientific and research activities and offers new opportunities for further research activities in the process of their training at the University of Veterinary and Pharmaceutical Sciences Brno.

Undergraduate students may take part in research conducted by clinics or departments if interested

Table: No. of students who elect Specialized Work

	2012	2011	2010	2009	2008	Average
No. of 6th year students	202	192	192	184	175	189
No. of students who elected Specialized Work	25	18	17	8	37	21
% of students who elected Specialized Work	12.4	9.4	8.9	4.4	21.1	11.1

The extent of student research work related to the compulsory elective subject of Specialized Work in the curriculum is 300 periods.

The number of undergraduate students who elect Specialized Work is around 11.1%, the figures for the last three years are provided in the table below.

13.2 Comments

The University enables students to take part in research activities in the course of their studies, either by taking part in grant work performed by clinics or departments, or by working on their own smaller projects under IGA UVPS. Students become involved in research work in particular in connection with the study of the compulsory elective subject of Specialized Work as one of the compulsory electives for their final state *examen rigorisum*.

13.3 Suggestions

Opportunities for students to take an active part in research activities conducted at the University appear to be adequate.

The "Conquerors of Infections" painting dominates the assembly hall of the University of Veterinary and Pharmaceutical Sciences Brno; it depicts Lazzaro Spallanzani, Joseph Lister, Gerhard Domagk, Robert Koch, Sir Alexander Fleming, Louis Pasteur, Antoni van Leuwenhoek, Ilya Ilyich Mechnikov and Dmitri Iosifovich Ivanovski