

# UNIVERSITY OF VETERINARY MEDICINE AND PHARMACY IN KOŠICE



## SELF EVALUATION REPORT

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#### **ABBREVIATIONS USED IN THE DOCUMENT**

**ACRU:** Association of Carpathian Region Universities **AIS:** Academic Information System **ARL:** Advanced Rapid Library ARRA: Academic Ranking and Rating Agency AS: Academic Senate ATC: Aqua Terra Club **BIP**: Border Inspection Post BUC: Bodø University College (from January 2011 UiN in Bodø) **CEGA:** Cultural and Educational Grant Agency **CRP**: Central Registry of Publications CVS: Chamber of Veterinary Surgeons of the Slovak Republic **DVFA:** District Veterinary and Food Administration **DVM**: Doctor of Veterinary Medicine EAEVE: European Association of Establishments for Veterinary Education **EC:** Equestrian Centre **ECB:** Editorial Centre and Bookshop ECBHM: European College of Bovine Health Management **ECOVE**: European Committee on Veterinary Education ECTS: European Credit Transfer System **EHEA**: European Higher Education Area EIR: Electronic Information Resources **ERA**: European Research Area **EU**: European Union **EUA:** European University Association FBA: Faculty of Biosciences and Aquaculture FBA UIN IN Bodø: Faculty of Biosciences and Aquaculture, University of Nordland in Bodø FS: National Electronic Student Administrative System FVE: Federation of Veterinarians of Europe GVM: General Veterinary Medicine HMS: Occupational Health. Environment and Safety IPEVS: Institute of Postgraduate Education of Veterinary Surgeons in Košice JBPAS: Joint Bachelor Programme in Animal Science **JEC**: Joint Education Committee MARD: Ministry of Agriculture and Rural Development of the Slovak Republic MESRS: Ministry of Education, Science, Research and Sport of the Slovak Republic NFSA: Norwegian Food Safety Authority NISPEZ: National Information System for Access to Electronic Information Resources **NOK:** Norwegian Krone NOKUT: Norwegian Agency for Quality Assurance in Education **ORIA:** Library's Search Service SAS: Slovak Academy of Sciences of the Slovak Republic SGA: Slovak Grant Agency (VEGA) SRDA: Slovak Research and Development Agency (APVV) **SSC:** Student Scientific Conference SVFA: State Veterinary and Food Administration of the Slovak Republic SVFI: State Veterinary and Food Institute UF: University Farm in Zemplínska Teplica UFBD: University Facility for Breeding and Diseases of Wild Living Animals, Fish and Bees in Rozhanovce UiN: University of Nordland UVMP in Košice: University of Veterinary Medicine and Pharmacy in Košice VetNEST: Veterinary Network of Students Staff Transfer

Please provide an outline of the main features of the history of the Faculty in the period since the last evaluation visit or, if there has not been a previous visit, in the last ten (10) years.

It should cover,

• the main organisational changes

• new regulations relating to teaching

• new buildings or major items of equipment

• main changes to the study programme

• important decisions made by the management of the Faculty, or by the authorities responsible for it major problems encountered by the Faculty, whether resolved or not.

The University of Veterinary Medicine and Pharmacy in Košice (UVMP in Košice), established as the Veterinary College in Košice, is the only institution providing undergraduate, graduate and postgraduate veterinary education in the Slovak Republic. With the introduction of a new accredited study programme in pharmacy in the academic year 2006/2007 a change of the name to the "University of Veterinary Medicine and Pharmacy in Košice" was requested by the university. Following a consent granted by the Accreditation Commission of the Slovak Republic and the approval of the Academic Senate of UVM in Košice, the entire legislative process was concluded by the National Council of the Slovak Republic at its meeting on 1 December 2009, where the new name – the "University of Veterinary Medicine and Pharmacy in Košice" was endorsed, effective as of 15 January 2010. These changes were accompanied by a change in the university logo. The new logo retained the form and the colours of the original logo of the Veterinary College in Košice consisting of a bevelled letter "V" and the Staff of Asclepius with a serpent coiled around it. In 2008, its shape became circular with the name of the university on the circumference of the circle. The new study programme which had induced the name change was referred to by adding a pair of scales and supplementing the name of the university in the existing logo.

UVMP in Košice is a one faculty university providing education in bachelor study programmes *Cynology, Safety of Food and Feed, Animal Science, and Man-Animal Relationship and its Use in Canistherapy and Hippotherapy*, DVM (Doctor of Veterinary Medicine) degree study programmes, which include *General Veterinary Medicine* and *Food Hygiene*, and master study programmes in *Pharmacy* and *Market and Food Quality*.

UVMP in Košice was evaluated on 23 - 30 October 2005. The report of the visit was approved by the Joint Education Committee (JEC) of the European Association of Establishments for Veterinary Education (EAEVE) and the Federation of Veterinarians of Europe (FVE) on 4 July 2006. JEC established one Category 1 deficiency: "The facilities and provision for equine treatment, surgery, hospitalisation and care must be improved" as regards equipment and personnel. The university made efforts to rectify the deficiency and asked for a revisit in 2011. The revisit took place on 28 and 29 March by László Fodor and Borut Zemljič, members of the European Committee on Veterinary Education (ECOVE). The university provided a detailed summary on the changes implemented to rectify the category 1 deficiency. At the meeting of ECOVE held on 12 - 13 April 2011, it was decided that the category 1 deficiency had been rectified, and within meaning of the directives and the requirements for veterinary education stipulated in Article 38 of EC Directive 2005/36, the university was informed of its "APPROVED" status. The following changes have been made at UVMP in Košice since the last evaluation:

#### 1. Main organisational changes

Since the last evaluation, there have been changes in the organisational structure of the university and the former 8 departments and 4 clinics have been transformed into 14 departments and 5 clinics, out of which 10 departments and 5 clinics are used in veterinary education. The departments are divided into institutes and the clinics can be divided into smaller sections. Three new departments were created in relation to teaching pharmacy, one of which is common to all study programmes offered by the university. The position of Public Relations Officer was created in 2007 and filled in 2008.

#### 2. New regulations relating to teaching

Organisational changes have been implemented following mainly the requirement for a species-

based approach in teaching clinical subjects, and the study plan for the study programme in General Veterinary Medicine (GVM) was adapted accordingly.

#### 3. New buildings or major items of equipment

Following the changes in the organisational structure and the study plan, many university buildings have been adapted, modernised and provided with technical equipment.

The former temporary animal housing rooms located in Building 18 were pulled down and new modern rooms were built in their place and are now used by the Clinic of Horses and the Clinic of Ruminants. A similar transformation has been taking place in Building 19 where new modern rooms for the Clinic of Swine and the Clinic of Ruminants are being built. Experimental animal quarters and a separate room for keeping dogs for educational purposes will be placed here, too. A completely new Building 40 – the university veterinary hospital for small animals (Section of Surgery, Orthopaedics, Roentgenology and Reproduction and Institute of Epizootiology and Preventive Veterinary Medicine) - is under construction and is scheduled to be completed approximately at the time of the visit by the EAEVE expert group (October 2015). It will be connected to Building 26, which houses the Section of Internal Diseases of the Small Animal Clinic and the Clinic of Birds, Exotic and Free-Living Animals.

The lecture theatres, practice rooms and laboratories in Buildings 1, 2, 3, 4, 5, 6, 10, 12, 16 and 17 have been modernised. The teaching rooms and the administrative offices in Buildings 35 and 36 were fully adapted to suit their purpose.

The teaching rooms and animal housing rooms at the Equestrian Centre (EC) in Košice, the University Facility for Breeding and Diseases of Wild-Living Animals, Fish and Bees in Rozhanovce (UFBD) and the University Farm (UF) in Zemplínska Teplica were reconstructed and adapted for use in teaching clinical subjects of good quality.

A complex adaptation of the Aqua Terra Club (ATC), which forms a special unit of the Clinic of Birds, Exotic and Free-Living Animals, was carried out, including its aquaria, terrariums, lighting, and wiring.

More than  $\notin$  10 million were invested into alterations of buildings, reconstruction work, and adaptations with investment projects during the period under evaluation. More than  $\notin$  1.1 million were invested into construction of a clinical animal housing facility (Building 18). Additional  $\notin$  2.09 million (Building 19),  $\notin$  2.6 million (Building 40) and  $\notin$  0.52 million (Building 34) were obtained for construction or reconstruction of the aforementioned buildings.

More than  $\notin$  21 million were spent on purchase of diagnostic and laboratory equipment. The clinical and laboratory diagnostics was significantly improved by new equipment (e.g. a portable digital X-ray system, endoscopes, ultrasound and ECG devices, medical monitors, upgraded diagnostic laboratories – ELISA, HPLC, blood gas and acid-base analysis systems, electrophoresis, and atomic absorption spectrophotometry, PCR analysis systems, etc.). In the last year, the university obtained a budget of  $\notin$  2.8 million for equipment in the newly-built and reconstructed buildings and rooms.

#### 4. Main changes to the study programme

Based on the recommendations made by the evaluation team, both qualitative and quantitative changes have been made in the GVM study programme. A credit system of study was established and has been implemented since the academic year 2007/2008 pursuant to Decree No. 614/2002 of the Ministry of Education, Science, Research and Sport of the Slovak Republic (MESRS). Adjustments to the numbers of credits in different years of study were made to enable students to earn the standard number of 60 credits throughout the academic year. Credits are also awarded for practices and passing of state examinations. A state examination in *Hygiene, Food Safety and Quality* was included in the 5<sup>th</sup> year of study along with a state examination in *Contagious Diseases of Animals, Environmental Protection and Veterinary Legislation* to ensure that the graduates are prepared to provide veterinary and food hygiene services and work in the field of state veterinary medicine. Obligatory elective subjects (electives) and optional subjects were included in the 6<sup>th</sup> year of study after completing obligatory clinical disciplines. The names of the subjects were modified and new subjects were introduced in accordance with Directive 2005/36 EC; *Revision of the EU Professional Qualifications Directive* (PQD) – FVE).

The 'Diploma Supplement' was introduced, issued in Slovak and English in accordance with the Bologna Process and the Act No. 131/2002 of Law Code on Higher Education and on Changes and Supplements to Some Acts (the Higher Education Act). New internal regulations governing the

educational process were drawn up and approved.

The curricula of other European veterinary establishments were taken into consideration when the study plan and the subjects to be included in the different years of study and semesters were being prepared with the aim to facilitate and promote mobility of our students and the students from other European veterinary establishments within Socrates/Erasmus, CEEPUS programmes and other projects based on bilateral agreements.

A new credit system of study was developed and has been fully implemented in the GVM study programme, and regular student assessment of the teachers and the quality of teaching process was introduced, based on voluntary principle.

5. Important decisions made by the management of the Faculty or by the authorities responsible for it

Several strategic decisions have been made over the past ten years, which are documented in the annual reports of the university for the respective years, with the following decisions being of particular importance:

- adopting of a new organisational structure of the university effective as of 1 September 2007,
- adopting of new study plans for the study programmes GVM, Food Hygiene and Cynology in accordance with the new organisational structure of the university, recommendations in the EAEVE evaluation report and the credit system of study effective as of the academic year 2007/2008,
- sale of real estate land at 11 Podhradová Street with the aim to build student dormitories with a pre-emptive right of accommodation given to the students of UVMP in Košice for the period of 25 years following the date of entry into force of the final building approval,
- adaptation of the accommodation facility at the UF a crucial investment in the adaptation of premises for several units of the university
- adaptation of the stables at the EC of UVMP in Košice,
- modification of a contract with International Medicine Studies, s.r.o., concerning the student recruitment and support services relating to foreign study in the English language,
- termination of a contract with Globalnet, a.s. concerning provision of ICT services, and establishing of the university ICT department,
- termination of a contract with Q-Pack, s.r.o.,
- launching of operation of the slaughterhouse MABIT, s. r. o., in Zemplínska Teplica in 2008,
- establishing a university editorial centre,
- systemisation of teaching jobs at UVMP in Košice in accordance with the reorganisation of the university and adoption of new study plans,
- creating conditions for the establishment of the Košice Mounted Police Department of the Presidium of the Police Force of the Slovak Republic in the region of Eastern Slovakia at the EC.
- 6. Major problems encountered by the Faculty, whether resolved or not

The major problems encountered by the university at present include:

- a) inadequate funding from the state budget and the budget insufficient for the development of the university,
- b) legislative barrier faced by universities when attempting to directly draw on funding from the EU development funds,
- c) centralised, complicated and ineffective system of absorption of financial resources that have already been allocated from the state budget via the State Treasury,
- d) insufficient rewarding of the university employees at all levels,
- e) absence of optimal age structure of the academic staff,
- f) shortcomings regarding the technical equipment at some university workplaces.

University of Nordland (UiN) is one of eight universities in Norway, offering a dynamic, modern learning environment for research-based education and research at academic level. It was ordained as a university in January 2011. UiN is an ECTS accredited institution, offering degrees at undergraduate, postgraduate and doctoral levels in many academic disciplines. UiN, based in Bodø in Nordland county, Norway, currently has more than 6000 enrolled students and 640 staff.

UiN has established collaboration with international partners around the globe. The university's programmes are supported by well-qualified staff and state-of-the-art learning facilities. The university is

organized into four faculties; Business School UiN, Faculty of Professional Studies, Faculty of Social Sciences and Faculty of Biosciences and Aquaculture (FBA).

FBA was established in 1971. It has 411 registered students (autumn of 2014) and 106 employees (scientific, technical and administrative staff). The faculty has staff and students from 24 countries and the percentage of international students is about 12 %. It has state-of-the-art research facilities on campus in Bodø and a research station for aquatic studies.

Two universities, UiN in Bodø (Norway), and UVMP in Košice (Slovak Republic), signed a contract regulating a Joint Bachelor Programme in Animal Science (JBPAS) on the 1<sup>st</sup> April 2010. The background for starting this joint programme is based on the fact that Norway only educates about half of the veterinarians needed in the country. Based on this joint programme as well as the fast growth of the Norwegian aquaculture industry, UiN has an ambition to start education of veterinarians for the aquaculture industry beyond 2020.

The JBPAS was first launched in the academic year 2010/2011 at UiN. The JBPAS is a 3-year programme where the first part (semester 1, 2 and 3), takes place at the Faculty of Biosciences and Aquaculture (FBA) at UiN. The second part (semester 4, 5 and 6), takes place at UVMP in Košice.

It is designed according to the standards set by the EU Directive 2005/36. The study plan, number of hours of lectures, practical lessons, seminars, professional lessons, and the length of field experience, were developed after discussion and consideration of comments of both institutions and relevant authorities in the two countries. This is confirmed in the agreement approved by the Academic Senate of UVMP in Košice (AS) and the BUC Quality of Education Committee and subsequently authorized by the Scientific Board of UVMP and the BUC Board.

Based on the above facts, self-evaluation report contains the required data from both universities – UVMP in Košice and FBA UiN in Bodø.

#### **Chapter 1. OBJECTIVES**

#### **1.1 FACTUAL INFORMATION**

Indicate whether there is an official list of the overall objectives of the Faculty.

If this is the case; please indicate these.

Who determines the official list of objectives of the Faculty?

By what procedure is this list revised?

Do you have a permanent system for assessing the achievement of the Faculty's general objectives? If so, please describe it.

If there is no official list, please indicate the objectives that guide the Faculty's operation.

#### FACTUAL INFORMATION – UVMP in KOŠICE

The mission of UVMP in Košice, as a part of the European Higher Education Area (EHEA) and common European Research Area (ERA), is to develop a harmonious personality, knowledge, wisdom, goodness and creativity in man and to contribute to development of education, science, culture and health for the welfare of the whole society and development of knowledge-based society. UVMP in Košice as a public higher education institution fulfils its mission within the system of higher education institutions in compliance with the Higher Education Act, particularly by providing the highest level professional education in the field of veterinary medicine, food hygiene and environmental protection and, first of all, produces graduates in the regulated profession who hold the degree Doctor of Veterinary Medicine, in accordance with the Directive 2005/36/EC of the European Parliament and of the Council of 7 September, 2005. UVMP in Košice is the only institution of its kind providing higher veterinary education in the Slovak Republic. The principal objective of UVMP in Košice is to provide pre-graduate and post-graduate higher veterinary education based on original scientific research in the field of veterinary sciences. Together with other higher education institutions in the Slovak Republic, UVMP in Košice plays an essential role in the concept of knowledge-based society towards meeting the goals of the Lisbon Strategy and the continuation of the Bologna Process.

The aims of UVMP in Košice have been set:

- according to legislative provisions relating to higher education set by the Higher Education Act. This Act lays down the rules of systemic solutions to the development of higher education institutions and states that higher education institutions are top educational, scientific and artistic institutions. The major task of higher education institutions in fulfilling their mission is to provide higher education and creative scientific research. Additional general objective of higher education institutions is to preserve and extend the existing knowledge and, according to their specific orientation, to carry out scientific, research and other creative activities in various branches of knowledge. According to § 2, Section 10 of the Higher Education Act, each higher education institution shall state its mission and aims in the form of long-term strategic plan of the establishment.
- in agreement with the aims in the field of education set by MESRS. The aims in the field of higher education are specified in the Long-Term Strategic Plan of the State Science and Technology Policy of the MESRS. This long-term plan is based on the Programme Declaration of the Government of SR. In the long-term plan the MESRS states that the higher education institutions as the producers of new knowledge and discoveries play an irreplaceable role in the system of further education and emphasizes the need for the effective use of their potential. The long-term plan of the MESRS is updated annually and these updates identify the preference sectors in which the further development of higher education institutions is supported by the ministry. The ministry highlights the necessity of innovation of profiles of the graduates and adjustment of the content of study programmes to the needs of practice and rapid societal changes. In general, employers expect the following from university graduates:
  - adequate knowledge and practical skills necessary for performance of specialised professional activities,
  - maintaining high performance and initiative over a long period,
  - flexibility and ability to identify and solve problems,
  - professional satisfaction,

- continuous education in the field of professional activities (post-graduate or lifelong education),
- ability to interact socially with co-workers in order to strengthen progressive interpersonal relations,
- ability to communicate in foreign language and
- fulfilling other requirements resulting from corporate culture and the profession.
- the Long-Term Strategic Plan of UVMP in Košice, prepared and approved for the period of 2012 2017, which is updated annually on the basis of meeting its goals in the previous year and on the basis of other needs related to assurance of high level of veterinary education and research. Implementation of aims and intentions set by the Long-Term Strategic Plan is evaluated annually in the Annual Report of UVMP in Košice.

The Long-Term Strategic Plan of UVMP in Košice is prepared and submitted for discussion and approval to the relevant bodies of the university according to § 2, section 10, and § 9 Section 1 j) of the Higher Education Act.

The current Long-Term Strategic Plan is the follow-up of the Long-Term Strategic Plan approved for the period of 2003 - 2010.

The Long-Term Strategic Plan is based predominantly on the following:

- the Higher Education Act,
- the Bologna Process in higher education,
- the *Report on the visitation (Evaluation Report) to UVMP in Košice* by the expert group of EAEVE in July 2006, within the programme of evaluation of veterinary education in Europe, in agreement with the Directive 2005/36/EC, and the *Report on the Stage 1 revisit to UVMP in Košice* by the expert group of EAEVE in March 2011,
- the *Evaluation report of UVMP in Košice* by *European University Association* (EUA), of July 2007, conducted within institutional evaluation of higher education establishments in the Slovak Republic,
- the Evaluation Report Complex Accreditation of the activities of UVMP in Košice by the Accreditation Commission of the Slovak Republic of October 2008, within complex accreditation of higher education establishments in the Slovak Republic,
- evaluation reports of the Academic Ranking and Rating Agency (ARRA), published annually at the end of each calendar year,
- the programme of regional development of Košice Self-governing Region,
- the programme of development of Košice.

According to the § 2, Section 10, of the Higher Education Act, every higher education institution is liable to state its mission and aims in the form of long-term strategic plan of the institution, in agreement with § 1, sections 2 - 4 of the above Act. The Long-Term Strategic Plan of UVMP in Košice is an open document setting strategic goals for education, scientific, research, developmental and entrepreneurial activities, taking into consideration their organisational, financial and investment securing.

The Long-Term Strategic Plan of UVMP in Košice contains university intentions in individual fields of its activities and must be prepared for a period of minimum six years, as stated by the Higher Education Act, and is updated every year. The long-term strategic plan is elaborated by the University Management, discussed by Rector's Collegium, Scientific Board and Administrative Board of UVMP in Košice, and is approved by the AS and the Scientific Board of UVMP in Košice. The annually updated versions are discussed by the Administrative Board and approved by the AS and the Scientific Board of UVMP in Košice. The updated versions of the Long-Term Strategic Plan are published on the university website and sent to the MESRS.

The relevant Long-Term Strategic Plan for the development of UVMP in Košice for the period of 2012 – 2017, prepared by the University Management, was approved by the Academic Senate of UVMP in Košice on May 14, 2012, and by the Scientific Board on April 24, 2012. It includes the basic goals and directions of development in the following principal areas:

- education activities (Annex 1.1),
- scientific-research activities and collaboration with foreign institutions (Annex 1.2),
- material-technical support of education, scientific and research activities (Annex 1.3),

- quality assessment (Annex 1.4).

#### FACTUAL INFORMATION – FBA UIN IN BODØ

Located at the unique coastline of northern Norway, UiN attracts national and international students interested in marine biosciences. FBA provides an inspiring study environment with high quality research-based education. The future efforts in education focus on research in aquaculture, marine ecology, marine genomics and applied animal sciences, all supporting to UiN's strategic area; "Blue growth".

The FBA vision is "to contribute to the development of a sustainable bio-economy" The mission is "To be an international arena in the High North for education, research and knowledge dissemination in aquaculture and marine ecology, fostered by a unique genomic platform and characterised by strong interaction between the disciplines". FBA is meeting the needs for employment and value creation in the knowledge based bio-economy. These objectives follow the university's principles as stated on the university's website (http://www.uin.no/en/about-uin/Documents/UiN%20Strategic%20Plan%202012-2016.pdf).

The current strategic plan of FBA on research and teaching, for the period 2011-2016 was approved by the Faculty Board on November 21st, 2011. Since then, the strategy has been supported by annual action plans, approved by the Faculty Board. In general terms, the main objectives in education and teaching are (a detailed strategic plan can been found at: http://www.uin.no/no/om-uin/fakulteter-og-sentre/fakultet-for-biovitenskap-og-akvakultur/Sider/Strategiplan.aspx):

Deliver relevant, high quality research-based education at Bachelor's and Master's levels for future employments. This will be achieved through training students on proper academic, generic and vocational tools and - wherever appropriate - by integrating other academic disciplines at UiN. Study programs will be tailored to cater to the regional, national and international demands in human resources. The quality and relevance of the study programmes are continuously evaluated by implementing an internal evaluation scheme as well as conducting market studies.

Enhance the research quality and productivity to make FBA a prime centre within defined niches for the three strategic research areas Aquaculture, Marine Ecology and Marine Genomics. Parts of the work within Marine Ecology and Marine Genomics will be related to the research within aquaculture, but these two research groups will also focus on other relevant areas. The main goal is to contribute to the establishment of a blue/green bioscience axis in Norway.

On June 12<sup>th</sup>, 2014 the preparation of a new strategy for the period 2016-2019 started. On November 27<sup>th</sup> 2014, the new strategic plan was presented to the Board. Although this new plan has not been approved yet, the principles reflect the continuous efforts of FBA to offer high quality, research-based education.

#### **1.2 COMMENTS**

In your view, to what extent are the objectives achieved? What, in your view, are the main strengths and weaknesses of the Faculty?

#### **COMMENTS - UVMP IN KOŠICE**

The regular assessment of objectives set by the Long-Term Strategic Plan of UVMP in Košice leads to the conclusion that UVMP in Košice fulfils them continuously. The education and research activities result in producing graduates with adequate professional knowledge and practical skills that allow them to carry out competently all professional veterinary activities. They are able to react flexibly to practical situations, identify and solve problems and show an interest in continuing their professional development. In accordance with its mission, UVMP in Košice has been positively evaluated in the area of veterinary sciences. The scientific research activities of UVMP in Košice form a solid basis for high quality of education of students and represent the university at the national and international levels. In addition, UVMP in Košice develops international collaboration by supporting joint projects with higher education establishments and other institutions abroad. Clinical activities of UVMP in Košice are very important for the education and practical training of future veterinary doctors and for setting the basis for

clinical research and providing preventive-curative services to clients. By means of these clinical activities and communication with the public the society forms an overall picture of the university and opinion on the position and role of veterinarians in the society. Regarding the contacts with practice, the university fulfils an important role in the field of professional postgraduate education and advisory-consultation activities. The interconnection with practice provides an important feedback about readiness of graduates to become successful on the job market. The field of evaluation of quality and development of university is an important part of activity of higher education establishments reflecting compliance with criteria and standards of education and research at the national and international levels, but particularly from the point of view of management of processes resulting in assurance and increasing of quality of individual activities.

Main strengths of the university:

- 1. UVMP in Košice belongs among the eight top universities in the Slovak Republic.
- 2. Membership in the EAEVE, VetNEST (Veterinary Network of Students Staff Transfer) and ACRU (Association of Carpathian Region Universities). The present seat of ACRU is at UVMP in Košice.
- 3. Providing unique education in the regulated profession veterinary doctor, in agreement with the Directive 2005/36/EC amended by Council Directive 2013/55/EU.
- 4. The organization structure of UVMP in Košice enables more effective use of workforce, instruments and laboratory equipment as well as multidisciplinary approach to research projects.
- 5. Teaching of clinical disciplines is organised according to animal species and this system applies also to organisation of clinics and clinical activities.
- 6. Major reconstruction of the Clinic of Swine provided new facilities for teaching and clinical training involving diseases of pigs.
- 7. By adaptation and reconstruction of original buildings, new classrooms and laboratories were created at a number of departments.
- 8. Gradual building-up and reconstruction of existing clinical facilities, including housing facilities.
- 9. Complying with principles of the Bologna Process by accreditation of the study programmes of first, second and third levels of higher education in accordance with the Higher Education Act.
- 10. Existence and increased use of specialised establishments of UVMP in Košice (UF, UFBD, EC) for teaching of pre-clinical and clinical disciplines.
- 11. Establishment of an effective system of clinical training in collaboration with the heads of clinics, including evidence and checking on acquiring practical skills by the students, necessary for their professional clinical practice immediately after graduation (*OIE recommendations on the Competencies of graduating veterinarians "Day 1 graduates" to assure high-quality of National Veterinary Services*), which is recorded in the clinical practice record book.
- 12. Relatively high mobility of students within the ERASMUS and CEEPUS programmes involving both outcoming and incoming students.
- 13. Contractual collaboration with the Chamber of Veterinary Surgeons of SR (CVS) and the State Veterinary and Food Administration of SR (SVFA) regarding obligatory practice and short-term stay of students at their institutions.
- 14. Regular *Evaluation of teachers and study subjects* by students, conductive to upgrading the quality of teaching.
- 15. Existence of centres of excellence, established through resources from EU structural funds for the purpose of building-up and improving research infrastructure within the operation programme Research and Development.
- 16. UVMP in Košice has its own dormitories where besides accommodation the students have at their disposal also some space for extra-curricular activities and spare-time clubs and can use the adjoining sports facilities.
- 17. The established *European Credit Transfer and Accumulation System* at all three levels of higher education.
- 18. Revision and optimisation of the curriculum of the study programme "General Veterinary Medicine" involving the following:
  - a) Implementation of core curriculum supplemented with elective subjects, which takes into consideration prospective practicing of veterinary medicine in the following basic areas: *SVFA and other components of the state administration* (official veterinarians); *CVS* (private veterinary

surgeon); practicing in the field of *laboratory diagnosis, scientific research, environmental* protection and animal welfare,

- b) Possibility to include electives in the curricula according to the current situation, requirements of students and the needs of practice,
- c) Clinical training at individual clinics organised according to animal species,
- d) Teaching extended by new clinical study subjects and clinical practice and short-term stays at university clinics, private ambulances and other clinics in the Slovak Republic and abroad,
- e) Close collaboration with SVFA, CVS and food producing and processing plants that enables high quality professional practice of students at state veterinary diagnostic institutes, District offices of the SVFA, food producing plants, private veterinary ambulances and also ensures high quality of lifelong education,
- f) Participation of top scientists from institutes of the Slovak Academy of Sciences of SR (SAS) and representatives of the SVFA and specialists from practice in the teaching process,
- g) Prominent scientists and professionals from state veterinary institutes, SVFA, and experienced practical veterinarians from CVS are appointed members of examination commissions for state exams.
- 19. Extended opportunities of our graduates (in agreement with conclusions of the EAEVE project titled Vet. Prof. 2020) on job market due to strengthening the issue of food safety in the Slovak Republic (new legislation, inspection procedures, stress on food safety etc.) and in the EU, as high participation of veterinarians oriented on food safety is expected in this area.
- 20. Professional guarantee of continuous education of veterinarians, organized together with the Institute of Postgraduate Education of Veterinary Surgeons in Košice (IPVES), provided to state veterinary doctors and private veterinarians in the form of 1<sup>st</sup> and 2<sup>nd</sup> attestations and courses on relevant professional topics.
- 21. Priorities of scientific research at UVMP in Košice with relatively high success within SR in obtaining grants from the Slovak Grant Agency (SGA/VEGA).
- 22. Annual evaluation of publication activities at organisational unit and personal level for the purpose of monitoring and maintenance of the number and quality of published scientific and professional papers.
- 23. Involvement of students in scientific research at UVMP in Košice in the form of student scientific activities with the opportunity to present their studies at the Student Scientific Conference with international participation, organised annually by UVMP in Košice.
- 24. Long-term position among the top universities in the Slovak Republic in evaluations conducted periodically by ranking and rating agencies.
- 25. Existence of the system of evaluation of the quality of education (study subjects and teachers) by students.

Main weaknesses of the university:

- 1. Insufficient financing from the state budget, financing policy according to the number of students and not quality of universities. The insufficient finances allocated to UVMP in Košice are the limiting factor of university development. The changing methods of financing of higher education institutions in the Slovak Republic in dependence on the percentage of gross national product affect the Long-Term Strategic Plan of UVMP in Košice and require resourceful decisions from the university management in order to fulfil the short-term goals.
- 2. High workload of teachers and students.
- 3. Insufficient remuneration of teachers which is most visible in the youngest teacher categories.
- 4. Higher mean age of the teaching staff, particularly in categories professor and assistant professor.
- 5. Atomization of scientific-research activities into small closed groups.
- 6. Low motivation of the creative staff to actively apply for projects and publish their results in CC journals and other journals with impact factor.
- 7. Inadequate interconnection of the scientific research, entrepreneurial sector and production spheres.
- 8. Despite improved infrastructure in many organisational units, some of them still lack adequate equipment in the field of laboratory and diagnostic technique (top instruments, particularly CT, MRI and similar) which could contribute to outstanding position of the university as a diagnostic centre for Slovakia.
- 9. Lack of European diploma-holding professionals in individual specialisations of veterinary medicine.

- 10. Not fully completed infrastructure of clinics, such as central admission facility and space for hospitalisation and isolation of patients.
- 11. Not yet established central evidence of clinical activities at all clinics.
- 12. Relatively low number of publications in recognized scientific journals abroad despite high active participation of the university staff in national and international scientific conferences.
- 13. Absence of university scientific journal included in international databases of scientific journals, such as CC, Scopus or WOS.
- 14. Insufficient interest of students in teaching process evaluation.

#### **COMMENTS – FBA UIN IN BODØ**

Main strengths of the FBA:

- 1. FBA is situated in county with the largest aquaculture production and thus there is growing interest by the students to participate in the relevant programs that the Faculty is responsible of. In addition, the increased interest by the aquaculture industry to strengthen their collaboration with the Faculty
- 2. In an international evaluation of Norwegian faculties and institutes providing research based education and research within biosciences, FBA got a grading from fair to excellent. The report suggested some improvements and changes that have been performed by the faculty.
- 3. All research facilities are either on campus or very close to the campus at the marine research station. The faculty has over the past years successfully applied for research grants and has today a solid research portfolio.
- 4. Lab facilities used for research and education are very advanced and updated. The genomic platform is the most modern in Norway. There are specialised labs for health studies as well as a lab for virology. One of the research groups is well recognised working on gut heath in fish.
- 5. The collaboration with UVMP in Košice has offered UiN unique competencies within Animal Sciences, to the benefit for students and the FBA academic and technical staff.
- 6. The staff include both Norwegians and foreigners, which helps to create an extensive network of partners both at a national and international level.
- 7. The JBPAS is the second program in Norway that offers the option for Norwegians and students from the Nordic countries to start training in Animal Sciences, which can conclude in an approved veterinary degree at UVMP in Košice, Slovakia. The experience so far is that there is a high number of applicants per study place offered for the JBPAS. The faculty will this year start a new programme in Animal Care and will therefore, employ three more veterinarians, preferably with a dr. degree, educational experience as well as experience from research financed by the Research Council of Norway or other national or international institutions offering research grants.

Main weaknesses of the FBA

- 1. UiN is a young university focusing on taking a national and international position to make it easy to recruit talented scientists with relevant academic profile.
- 2. FBA is a profiled faculty with focus into aquaculture and aquatic biosciences. Terrestrial animals and terrestrial science has not been a focused area.
- 3. Animal science is a new education offered by UiN and it is in the process to be a well-established study programme.
- 4. UiN competes with Norwegian University of Life Sciences when it comes to position and students interested in Animal Sciences.

#### **1.3 SUGGESTIONS**

If you are not satisfied with the situation, please list your suggestions for change in order of importance and describe any factors which are limiting the further development of your Faculty.

#### **SUGGESTIONS - UVMP IN KOŠICE**

UVMP in Košice has been successful in meeting the objectives and intentions established in its Long-Term Strategic Plan what is documented by the results presented in Annual Reports of UVMP in

Košice. However, there are also risks which could affect negatively the current positive development in quality assurance of veterinary education at UVMP in Košice. This involves first of all insufficient financial support from the state budget as the high financial demands of veterinary education have not been considered in this respect. The Act on higher education institutions sets systemic aspects for the development of these institutions, however, real financing from the state budget and the respective budget grants fall significantly behind the public requirements. The remuneration of university staff, particularly of teachers and scientists, is inadequate. Insufficient state subsidies allocated by the MESRS do not allow the university to increase adequately staff salaries or give motivating salary supplements. In the long-term, inadequate funds are allocated from the state budget to scientific research, material-technical support, improvement of infrastructure and acquisition of new equipment for existing units. This lack of financial support may result in decreased quality of teaching, moral deterioration of infrastructure and materialtechnical support of education, and in problems with providing adequate practical training. Awareness of all these problems at the level of central authorities managing higher education in Slovakia is therefore essential as it could allow the university to increase the number of teachers, decrease their workload, increase quality of education, produce more space for scientific research and increase the activity of staff towards its involvement in national and international projects. This would contribute, at the same time, to continuous progress in adaptation and reconstruction work and speed up providing better conditions for all activities of UVMP in Košice.

There is a space for improvement regarding equipment available for scientific research and education activities. Solution of this problem depends also on finances obtained through grants and developmental projects. We presume improvement in this area as UVMP in Košice obtains annually some resources from national grant agencies, but more effort is needed to obtain grants from abroad and from participation in international projects.

The overall activities of the university at management, economical and administrative levels are made more difficult due to frequent changes in legislation and administrative requirements of state authorities. Reduction of administrative requirements would significantly decrease the burden and increase effectiveness of UVMP in Košice in activities related to assurance of quality and all basic aims resulting from its mission.

#### SUGGESTIONS – FBA UIN IN BODØ

The faculty has ambitious plans for further development within the veterinarian disciplines with a strategic goal to offer a complete educational programme for veterinarians. One step in this direction is to offer a joint Ph.D. degree together with UVMP in Košice in the near future. A joint application for financing such a programme has already been filed, but despite success or not, the plans for this will be worked on. The two institutions also arranged a seminar in November 2015 to strengthen the research collaboration, and there was a call for a follow-up meeting in Slovakia in May with representatives from both institutions.

In 2015, FBA starts a new programme in Animal Care. The faculty is in the process to employ three more veterinarians, preferably with a dr. degree, educational experience as well as experience from research financed by the Research Council of Norway or other national or international institutions offering research grants.

The plans for the construction of the new 'blue building' for the Faculty will increase the laboratory capacity, improve the learning environment and make the faculty even more interesting arena for studies and research.

#### **Chapter 2. ORGANISATION**

#### **2.1 FACTUAL INFORMATION**

#### FACTUAL INFORMATION-UVMP IN KOŠICE

#### **Details of the Faculty (University)**

Name of the Faculty: University of Veterinary Medicine and Pharmacy in Košice Address: Komenského 73, 041 81 Košice, Slovak Republic Telephone: +421 55 6325293 Fax: +421 915 923195 Website: http://www.uvlf.sk E-mail: jana.mojzisova@uvlf.sk Title and name of Head of the Faculty: Prof. Jana Mojžišová, DVM, PhD. (the Rector)

#### - Is the Faculty within a university? If so, please give address of the university.

UVMP in Košice was established by the Act of the Slovak National Council No. 1/1950 of the Civil Code (of 16 December 1949) as the Veterinary College in Košice. It is the sole institution of this kind for undergraduate and postgraduate university veterinary education in the Slovak Republic. The name was changed to the University of Veterinary Medicine in Košice by the Act of the Slovak National Council No. 137/1992 of the Code on Amendment of the Name of the Veterinary College in Košice. The change to its present name - the University of Veterinary Medicine and Pharmacy in Košice was introduced by the Act of the Slovak National Council No. 569/2009 of the Code on Amendment of the Name of the University of Veterinary Medicine in Košice.

UVMP in Košice is a one faculty university and is not part of another institution.

#### - Details of the competent authority overseeing the Faculty.

UVMP in Košice is part of a network of accredited public higher education institutions funded mainly by allocation of funds from the state budget. It is an autonomous university and its activities, in terms of adherence to financial discipline rules and adherence to the rules regulating activities of universities laid down by the Higher Education Act are supervised by MESRS.

The Ministry is the central body of the state administration of the Slovak Republic for nursery schools, primary, secondary and higher education establishments, school facilities, lifelong learning, science and technology, and for the state's support for sports and youth. The address of the Ministry is Stromová 1, 813 30 Bratislava, tel.: +421 02 59374 369, website: http://www.minedu.sk.

Details of the competent authority overseeing UVMP in Košice are described in Annex 2.1.

The Ministry is headed by the Minister who is in charge of its activities.

The Ministry is divided into divisions. The divisions are divided into departments and the departments can be divided into units. A division is the basic organisational level of management and decision-making, a holder of tasks of the Ministry according to the defined areas of specific professional activities. The Minister can establish a separate department, a separate unit or other specialised units of the Ministry.

Higher education institutions are under the responsibility of the Division of Higher Education Institutions, which is managed by the General Director. The Division is further divided into the Secretariat of the General Director, the Higher Education Department, the Science and Technology Department, the Centre for Recognition of Qualifications, the Department of State and European Science and Technology Policy, the Department of International Cooperation and International Research and Development Organisations, the Department for Implementation of State Policy and the European and International Research and Development Initiatives, and the Lifelong Learning Department.

## Indicate the rules concerning the appointment of the elected officials of the Faculty (Dean, Vice-Dean, Heads of Department, etc)

#### **Rector of the university**

The Rector is the statutory representative of the university. He/she manages the university, acts on its behalf, and represents the university externally. The Rector is accountable for his/her activities to the AS of the university, unless stipulated otherwise by legislation. The Rector of UVMP in Košice is appointed and dismissed by the President of the Slovak Republic on the basis of a proposal from the AS. The proposal is presented to the President by the Minister of Education, Science, Research and Sport of the Slovak Republic, to whom it is first presented by the AS of UVMP in Košice within 15 days of adopting the decision. The AS puts forward a proposal for the Rector's dismissal whenever he/she has been lawfully convicted of an intentional crime, or if an unconditional confinement has been imposed on him/her, or if he/she resigns from the office. The Rector's term of office is four years. The office of the Rector of UVMP in Košice may not be held by the same person for longer than two consecutive terms.

#### Vice-Rectors of the university

The Vice-Rectors of UVMP in Košice act as the Rector's deputies to the extent which he/she determines. The Vice-Rectors are appointed and dismissed by the Rector, subject to the approval of the AS. The Vice-Rectors' term of office is four years. The office of a Vice-Rector of UVMP in Košice may not be held by the same person for longer than two consecutive terms. The number of Vice-Rectors and the scope of their activities are regulated by the internal guideline of UVMP in Košice ("Organisation Guidelines of UVMP").

#### **University Management**

The Management of UVMP in Košice (the Management) is a standing advisory body of the Rector. The full members of the Management are the Rector, Vice-Rectors and the Bursar. The meetings of the Management may be attended by other invited university staff members (the Chairman of the AS, the Chairman of the Basic Organisation of the Trade Union of Workers in Education and Science). The Management is convened by the Rector on a weekly basis or more frequently, if necessary.

#### Heads of academic departments and heads of clinics

Activities of academic departments and clinics are managed by the heads of departments and the heads of clinics, who are directly accountable for their activities to the Rector. They are nominated and dismissed by the Rector based on internal selection procedure conducted in accordance with the Higher Education Act, applying the principles of the selection procedure for filling posts of university teachers, researchers, professors, associate professors and management personnel after the Rector's entry into office. Based on a proposal from the Management and the Presidium of the AS, a committee for the internal selection procedure is established by the Rector. The posts of heads of departments of medical orientation and clinics are filled by graduates of veterinary medicine establishments who possess qualifications appropriate for a leadership position. Their term of office is four years.

#### Management personnel

The management personnel of UVMP in Košice are the heads at the Rectorate's offices, departments and units, the heads of academic departments, the heads of clinics and institutes and their departments, the heads of units for education, science, research, development and IT and the heads of special facilities of UVMP in Košice.

The management personnel is appointed and dismissed by the Rector based on the results of a selection procedure. Heads of academic departments, clinics, institutes and the heads of the clinics' or the institutes' departments are appointed on the basis of the results of an internal selection procedure. The management personnel's term of office is 4 years.

## - Provide a diagram of the administrative structures showing the Faculty in relation to the university and ministerial structure of which it is part.

In accordance with the Higher Education Act, the role of higher education institutions in building a knowledge-based society is being reinforced, there is space for establishing links between higher

education and societal needs, a European dimension of higher education is promoted through joint study programmes and by new regulations concerning operation of higher education institutions from the EU member states in Slovakia.

A public university is a self-governing institution governed by public law, which is established and abolished by an act. The act also establishes its name, classification and seat. UVMP in Košice is one of 20 public higher education institutions in Slovakia and it is managed according to the following structure:



- Provide a diagram of the internal administrative structure of the Faculty itself (councils, committees, departments, etc.)





Academic departments and clinics are basic organisational units of the university for teaching, educational, scientific and research activities. They purposefully prepare students for the needs of practice ensuring that study subjects and scientific disciplines are developed mainly on the basis of scientific research.

The activities of the academic departments and the clinics are managed by the heads of departments and heads of clinics, who are directly accountable for their activities to the Rector.



Organisation chart of academic departments and clinics at UVMP in Košice

Institute of Dairy Hygiene and Technology



#### Self-sustaining units, special facilities, and special interest clubs at UVMP in Košice



### - Describe, briefly the responsibilities, constitution and function of the main administrative bodies (councils, committees etc.)

#### Academic Senate of UVMP in Košice

The AS is composed of elected representatives of the academic community (university teachers and researchers working full-time, and UVMP students). It is the highest self-governing (proactive, supervisory, coordinating and standard-setting) representative body of the university. At present it has 21 members, 14 in the Chamber of Employees and 7 in the Chamber of Students, with one PhD student representing PhD students in the full-time form of study. A term of office of the AS of UVMP in Košice lasts four years. The scope of action of the AS is regulated by the Higher Education Act and the internal guidelines of UVMP in Košice.

#### Scientific Board of UVMP in Košice

The Scientific Board of UVMP in Košice is the highest professional academic body of UVMP in Košice whose remit is laid down by the Higher Education Act and the internal guidelines of UVMP in Košice.

The Scientific Board of UVMP in Košice has 30 members. They are appointed and dismissed by the Rector of UVMP in Košice after the approval of the AS. Ten members of the Scientific Board are not members of the academic community.

The members of the Scientific Board are appointed for a four-year term of office, which starts on the day of the approval by the AS of UVMP. This applies also to those members of the Scientific Board who have been co-opted onto the Board after the start of the four-year term of office (i.e. the term of office of such Board members shall end on the expiry of the four-year appointment period of the Scientific Board acting as a collegial body).

The members of the Scientific Board are UVMP professors and associate professors, renowned scientists in the field of veterinary science, pharmacy and related sciences in different research areas, and leading veterinary practitioners and pharmacists (state administration, research, other professional veterinary activities).

#### Board of Trustees of UVMP in Košice

The Board of Trustees of UVMP in Košice as a public university is a body which, within its remit laid down by the Higher Education Act, supports the links between the university and the society. It promotes public interest in the activities of the university, particularly in connection with the use of its assets and funds granted to the university by the state. The Board of Trustees of UVMP in Košice was established in October 2002.

The Board of Trustees has 14 members, who are appointed and dismissed by the Minister of Education of the Slovak Republic. Six members of the Board are selected by the Minister after a prior opinion of the Rector. Another six members of the Board are proposed for appointment by the Rector, with the consent of the AS of the UVMP in Košice. One member of the Board is proposed to the Minister for appointment by the staff representatives of the AS and one member by the student representatives of the AS.

The Board of Trustees comprise primarily representatives of the public life, entrepreneurial area, territorial self-government and representatives of central bodies of the state administration responsible for education, financing, economy and social area. Members of the Board of Trustees may not be UVMP employees, except those appointed by the AS. A proposal for dismissal of a member of the Board of Trustees is presented to the Minister by the body which has proposed his/her appointment. In the case of the Board members proposed by the Rector, their dismissal may be proposed also by the AS. The Board members who have been selected for appointment by the Minister may be dismissed by the Minister only at his/her own discretion.

The rules of procedure of the Board of Trustees are regulated by its statute, approved by the Minister at the Rector's proposal after the consent of the AS. The meetings of the Board of Trustees are called by its Chairman at least twice a year. The meetings of the Board of Trustees are open to the public.

#### **Rector's Collegium**

The Rector's Collegium of UVMP in Košice is a permanent advisory body of the Rector. The members of the Collegium are Vice-Rectors, the Bursar, the heads of departments and clinics, the heads of

special facilities and self-sustaining structures. The number of members may be increased by the Rector, if deemed necessary. The Collegium is called by the Rector, as needed, but at least twice in a semester. The Rector's Collegium discusses important issues concerning the activities and management of the university, it ensures that the information from the Management is disseminated within the university departments, discusses the implementation of main tasks of the university and ensures that they are fulfilled.

#### Committees of UVMP in Košice

Other advisory bodies of the university managed by the Vice-Rectors, who are responsible for their corresponding areas of university activities, are the Disciplinary Committee for employees, the Disciplinary Committee for students, the Editorial and Publishing Committee, the Ethics Committee for handling animals, the Economic Committee, the Committee for Health and Safety at Work, the Committee for Quality Assurance with CAF (Common Assessment Framework), the Committee for Mobility of Students and Teachers, The Committee for Scientific and Research Activities, the Committee for Field Practice, Professional Training and Internships, the Website Committee, the Liquidation Committee, the Wage Committee, the Pedagogical Committee, the Admission Committee, the Social Committee, the Asset Disposal Committee.

#### Indicate the involvement of the veterinary profession and general public in the running of the Faculty

The posts of heads of departments of medical orientation and clinics are filled by graduates of veterinary medicine establishments who possess qualifications appropriate for a leadership position.

UVMP in Košice cooperates closely with SVFA, which is a public administration authority regulated by the Act on Veterinary Care and in the field of the food surveillance by the Act on Foodstuffs, and with the CVS, which is a self-governing professional association of private veterinarians in Slovakia.

In addition to experts from among UVMP teachers, the Scientific Board consists of renowned experts in veterinary science, pharmacy and related sciences, as well as leading veterinary practitioners and pharmacists (SVFA, CVS, SAS, and similar organisations).

In accordance with national legislation, at least one third of the UVMP Ethics Committee members are independent from the establishment of the user whose project is under evaluation, or from its founder (employees of DVFA Košice - city). The Chairman of the Ethics Committee is a person independent from the establishment of the user whose project is under evaluation (an employee of the DVFA Košice- city).

#### FACTUAL INFORMATION-FBA UiN in BODØ

Details of the FBA (as of May 2015)

Address: **Fakultet for biovitenskap og akvakultur (Faculty of Biosciences and Aquaculture)** Universitetet i Nordland Street address: Universitetsalleen 11, 8049 Bodø Postal address: Postboks 1490, 8049 Bodø Tlf: +47755 17350 Website: www.uin.no/en/fba E-mail: postmottak@uin.no

#### Dr. Reid Hole

Dean Tlf: +47 75 51 73 58 E-mail: reid.hole@uin.no

#### Nina Ellingsen Høiskar

Faculty Director Tlf: +47 75 51 73 30 E-mail: nina.ellingsen.hoiskar@uin.no

#### Professor Kiron Viswanath Pro-dean Tlf: +47 75 51 73 99 E-mail: kiron.visvanath@uin.no Professor Ketil Eiane Vice-dean for education Tel +47 755 17333 E-mail: ketil.eiane@uin.no

#### Administrative structure of UiN

UiN is an independent institution under public-sector administration and is supervised by the Ministry of Education and Research (KD) as determined by the Norwegian parliament under the Universities' and University Colleges Act (2005).



#### University Board

The Board is the highest management organ for UiN. The Board is responsible for the maintenance of a high academic standard at the institution, and ensuring that the University is managed efficiently and in accordance with relevant laws, rules and regulations. The Board determines the strategy, goals and expected results for the institution, and ensures that daily management is carried out in accordance with the same. The Board is responsible for allocation of economic resources, auditing and reporting.

#### Rector

The rector is the University's managing director, with responsibility for the institution's academic and administrative operations in accordance with frameworks and directives from the University Board. The Rector is the secretary of the Board and prepares and delivers, in consultation with the leader of the Board, the items, which are presented to the Board. The Rector is responsible for implementing decisions adopted by the Board, including those relating to allocation of resources and property.

#### **Pro-Rector**

The Pro-Rector is the Rector's proxy and the leader of the Committee for Quality Assurance of Study Programs and the Learning Environment Committee. The Pro-Rector has particular responsibility for education quality.

#### **University Director**

The University Director ensures, on behalf of the Rector, comprehensive management of administrative and technical functions at UiN.

#### Assistant University Director

The Assistant University Director is the University Director's proxy and has particular responsibility for organizational development and coordination of central administrative functions. Central administration is managed by the Personnel and Organizational Director, the Director for Finance, the Director for Studies and Research, the IT Director and the University Library Director.

The University Director and Assistance Director maintain a staff with responsibility for tasks related to development projects, institutional governance and marketing and communications.

#### **University Committees**

#### **Research Committee**

The committee determines and implements strategies associated with research and dissemination of research with regard to the university's focus areas and frameworks outlines by the Board and Rector in the University budget.

The Rector leads the committee. The committee is comprised of the Deans of the four faculties and representatives from the institutions doctoral research programmes. The Pro-Rector acts as substitute for the Rector, and likewise the Pro-Deans for the Deans. Research Administration acts as secretary for the committee.

The research committee, through collaboration with the academic communities at UiN, strives to be a driving force in strengthening, stimulating and further development of the institution.

#### Committee for Quality Assurance of Study

It is an executive committee for the University Board, which advises upon and implements strategies associated with studies and education at UiN.

#### Learning Environment Committee

The learning environment committee looks at everything from the design of the physical surroundings to the psychosocial domain. The committee reports on student and staff complaints relating to the learning environment, and may present opinions about the same. Half of the committee is comprised of students, including the leader of the Student Parliament, who also functions as the leader of the committee every other year.

#### International Committee

The International Committee is a central function at University of Nordland for stimulating activities related to internationalisation at the faculties and among students and researchers.

Regular meetings provide an opportunity for representatives to report on completed, current and planned activities, which, together, comprise the university's international engagement.

The committee works as a driving force for general internationalisation of the institution, as well as forum for dialogue between departments, faculties and students.

Significant focus is placed on: international study programmes, exchange, development of the collaborative agreements portfolio, and academic and administrative professional development and mobility.

#### Administrative structure of FBA



#### **Faculty Board**

Faculty Board of FBA is the highest administrative body and is responsible for setting overarching goals, priorities and strategies for FBA.

#### Dean

The Dean is responsible for the daily management of the faculty and reports to the Faculty Board and the Rector.

#### **Faculty Director**

The **Faculty Director** is the faculty board's secretary and, as a representative of the University Director, is the head of the faculty administration. He/she conducts regular discussions and negotiation meetings (IDF) with the main representatives of employee organizations.

#### **Education Board**

This board (UVU, Undervisningsutvalget) is primarily an advisory to the Dean body for FBA on Bachelor and MSc level education. It has the responsibility for the quality assurance of all faculty's undergraduate and master programmes and it consists of the Vice-dean for education (chairman), the program coordinators for each of the bachelor's degree and master programs, as well as two students representing respectively.

#### **Research Board**

The Research Board (FU, Forskningsutvalget) is an advisory body to the Dean. Within defined areas FU has delegated authority to make decisions on behalf of the faculty.

#### **Research Groups Leaders**

They are responsible to keep track of all research activities of their groups and make sure that all the internal regulations and rules are followed, including proper training and risk assessment in all new research projects. They can also decide on the group's budget.

#### **2.2 COMMENTS**

#### **COMMENTS - UVMP IN KOŠICE**

The organisation of UVMP in Košice reflects its needs in the area of education, science, research, and other activities, particularly those related to the contact with veterinary practice. It builds on more than 65-years' experience and takes into account the needs of the current modern management methods used at such establishments in Slovakia. It fully respects all provisions laid down by generally binding legal regulations, particularly Directive 2005/36/EC as amended and at national level by the Higher Education Act.

#### **COMMENTS - FBA UIN IN BODØ**

No comments.

#### **2.3 SUGGESTIONS**

#### SUGGESTIONS - UVMP IN KOŠICE

The current organisational structure of the university builds on long own experience enriched by the experience of other similar institutions. It is a result of implemented recommendations made by the Evaluation Committee in 2005, a long patient discussion and a consensus at all levels of management and operation of the university. Therefore, we do not foresee any radical changes in the near future.

#### **SUGGESTIONS - FBA UIN IN BODØ**

No further suggestions.

#### **Chapter 3. FINANCES**

#### **3.1 FACTUAL INFORMATION**

#### **3.1.1 GENERAL INFORMATION**

#### **GENERAL INFORMATION – UVMP IN KOŠICE**

#### Indicate whether the Faculty's current financial model (system) meets the Faculty's mission.

#### In addition please specify:

- How the allocation of funding (including public funding) to the Faculty is determined, and by what body.
- If the allocation of funds, or any significant proportion of it, is linked to a particular factor (e.g. student numbers, research output), please describe this.
- How the basis for funding the Faculty compares with those teaching other courses (e.g. whether veterinary training receives a higher budget weighting compared to other disciplines). How the allocation of funds within the Faculty is decided.
- What are the mechanisms for funding major equipment and its replacement?
- The mechanism(s) for funding capital expenditure (e.g. building work, major items of equipment) and how decisions are taken in this matter.
- The mechanism(s) to provide the necessary support for building maintenance and how decisions are taken in this matter.

UVMP in Košice obtains financial resources for education, research and other activities from several sources – through subsidies allocated by the MESRS, structural funds of the EU, grant network, entrepreneurial activities and through tuitions and study related fees from self-funding students. This financial model corresponds to the university's mission.

Financial resources from the state budget are allocated to the university by the MESRS, according to funding of higher education, approved by the State Budget Act for the respective year.

Allocation of subsidies from the state budget follows strict rules described in the methodology of allocation of subsidies from the state budget to public higher education for each respective year. The subsidies from the state budget to a public higher education institution are allocated under a contract for implementation of activities in the following four areas:

- implementation of accredited study programmes,
- research and development activities,
- development of the higher education institution,
- student welfare.

The subsidy for accredited study programmes implementation depends primarily upon the number of students, number of graduates, economic demands on study programme implementation, classification of higher education institution, graduates unemployment rate, quality and other aspects important for providing higher education.

The subsidy for implementation of accredited study programmes takes the form of standard transfer or capital transfer. Except for financial resources allocated to specific purposes and for the total sum paid as wages and salaries. There are no binding instructions for internal structure determining the use of subsidy by the universities. When determining the subsidy amount allocated for implementation of accredited study programmes for individual public higher education institutions by the Ministry the following internal structure is used:

- subsidy for salaries and insurance,
- subsidy for goods and services,
- subsidy for specifics,
- subsidy for capital investments.

Part of subsidy for salaries and insurance itemized according to publication activities is allocated among individual higher education institutions according to the share of their publications in overall publication activities of all higher education institutions. Considered are publication activities of PhD. students and university staff recorded in the central register of publication activity over the period of previous two years. The respective share of each higher education institution is calculated as quotient of the number of recalculated number of publication outputs of the respective higher education institution and total recalculated number of publication outputs. When calculating the funds allocated for wages and salaries for individual institutions the budget necessary for administration and operation of the institution is also considered. This calculation is based on the recalculated number of students, and to each public higher education institution is allocated a bulk sum for 50 central administrative and operation employees, and per every 45 recalculated students above 1 800 recalculated students it is provided financial sum for one additional central administrative and operation employee.

Of all study branches in which the  $1^{st}$  and  $2^{nd}$  level or combined  $1^{st}$  and  $2^{nd}$  level education is provided by higher education institutions in the Slovak Republic, the education of veterinary medicine students is financially the most demanding. This is taken into consideration by the MESRS when allocating subsidies from the state budget by using a coefficient which is the highest for study branches taught at our university (Annex 3.1).

The allocated budget is used to provide education, research and university operations on the basis of a financial plan approved every year by the AS and Administrative Board of UVMP in Košice. Obtained budget is allocated to individual departments and clinics at the beginning of each semester according to the extent of practical teaching and training within individual study subjects. In addition, all expenses related to energy and services, maintenance of buildings and purchase of financially expensive equipment and materials are covered centrally.

Decisions on financing expensive equipment and its replacement are based on the Long-Term Strategic Plan of UVMP in Košice for the period of 2012 - 2017. The respective decisions are made by the university Management after discussing individual tasks and implementation plans with the AS, Scientific Board or Rector's Collegium.

Capital expenditures are covered from capital financial resources which can be allocated to the university from the state budget in the form of specific subsidy or obtained within competition from EU structural funds. Setting up new structures or purchase of expensive equipment is based on the objectives set in the Long-Term Strategic Plan of UVMP in Košice for years 2012 - 2017. The respective decisions are made by the Management of UVMP in Košice in agreement with the approved financial limits and are subject to control of the AS and Administrative Board.

Financial support for necessary maintenance of buildings is allocated according to the financial plan of UVMP in Košice for each respective year and should take into consideration the real situation and justification of such work. The decision is made by the Management of UVMP in Košice in agreement with the approved financial limits.

#### **GENERAL INFORMATION – FBA UIN IN BODØ**

UiN follows the same regulations as other universities in Norway. University of Nordland has four faculties and the following overview applies to the FBA.

The allocation of funding is mainly depends on the annual public funding by the Norwegian government. Public funding is about 77 % of the total funding for FBA. The Ministry of Education and Research has established a model to allocate funds to institutions within the higher education sector. This model consists of a basic allocation and several incentive components.

The basic allocation of funding contributes about 82 % of total funding. This allocation is adjusted each year according to wages and inflation cost. The remainder of public funding is the incentive components, which include:

- Educational credits (student points, ECTS) produced in the last measured year.
- Students that have been on an exchange study for more than 3 months.
- Publishing activities are rewarded based on the type of publishing (book, paper, etc.) and publishing channel.
- EU-funded research projects are rewarded with credits for each Norwegian krone (NOK) paid for by the EU.
- National research projects are rewarded with credits for each Norwegian krone (NOK) paid for by the Norwegian Research Council.
- PhDs completed in the last measured year. In 2015, the reward for a completed PhD is about 39,600 € (336,669 NOK).

There are six categories of funding in the higher education sector. The education of veterinary students, human medicine and dentistry are funded at the highest level (category A) by the Norwegian government. The lower level studies at FBA is in category E which in 2015 gives the total funding for a full-time student of about  $5,177 \in (44,000 \text{ NOK})$ .

The allocation of funds within UiN depends on an internal financing model. The model is similar to the national funding model and distributes incentive components to the faculties.

The funding of major equipment and its replacement is derived from three sources:

- Annual funding allocated to the faculties by UiN.
- Funds set aside by the Faculty Board in the budget. These funds are applied for by the Research groups and allocated by FBA's management team using pre-decided criteria.
- Externally financed research projects.

The university buildings and infrastructure are owned by the Norwegian government and Statsbygg is administrating the property. UiN pays monthly rent and maintenance. The cost for building work and building maintenance are mainly provided for through the budget of the University's Technical Services.

#### **3.1.2 INFORMATION ON EXTRA INCOME**

What percentage of income from the following sources does the veterinary teaching Faculty have to give to other bodies (university, etc.)?
clinical or diagnostic work:
research grants:
other (please explain):
Please indicate whether students:
pay tuition/registration fees,
How much these are,
How they are decided,
How the funds are distributed.

#### **INFORMATION ON EXTRA INCOME – UVMP IN KOŠICE**

UVMP in Košice is a one-faculty university. Therefore, it is irrelevant to speak about giving percentage of income to other bodies. According to approval by the AS, 15 % of income for running expenses from individual project grants is transferred to central university budget to cover the energy and services expenses related to work on these projects. The costs of clinical diagnostic services provided to paying clients correspond to the price list set by UVMP in Košice and are subject to the rules set for distribution of profits from such activities.

Students in the daily form of studies at UVMP in Košice do not pay tuition fee. Only students in the external form of studies, and students studying in the daily form, but in other, than official language, are subjected to the payment of tuition fees. Those students in the daily form of studies who exceed the standard length of study are required to pay tuition fee as well. Tuition fee and other fees for various administrative actions are set in the price list approved by the AS, which is a part of the Internal Regulation of UVMP in Košice No. 38 "Tuition fee and other fees associated with the study at UVMP in Košice effective for the respective academic year". The financial resources obtained in this way serve exclusively for securing the students' needs and the Management of UVMP in Košice decides about their distribution (Annex 3.2).

#### INFORMATION ON EXTRA INCOME – FBA UIN IN BODØ

All students studying at UiN, except ERASMUS students and exchange students from other partner institutions, must pay the semester fee. The semester fee covers general administrative costs and are not tuition fees. In accordance with current Norwegian education policy, UiN does not charge tuition fees. The semester fee at UiN is currently NOK 815. This amount covers the following fees:

- NOK 530 to the Student Welfare Organization

- NOK 265 to Kopinor (the university's agent for licensing and use of copyrighted materials for educational purposes).
- NOK 20 to Norwegian Students' and Academics' Assistance Fund (SAIH)\*

\*The contribution to SAIH is voluntary. If you do not wish to contribute to SAIH the total semester fee is NOK 795

#### **3.1.3 OUTLINE OF INCOME (REVENUE) AND EXPENSES**

#### **OUTLINE OF INCOME (REVENUE) AND EXPENSES – UVMP IN KOŠICE**

#### Table 3.1 Income/revenue (in €)

	State (govern	iment)	Income from univer			
Year	Allocated to university administered apart from Faculty	Allocated directly to University	Services provided by UVMP in Košice	Research	Total	
2014	Not applicable	10 905 927	2 882 463	46 713	13 835 103	
2013	Not applicable	10 076 863	2 566 972	59 967	12 703 802	
2012	Not applicable	9 313 136	2 594	43 343	11 950 821	

#### **Table 3.2 Expenditures**

	Earnings					
Year	Salaries and wages	Teaching support	Research support	Support of clinical activities	Other <sup>1)</sup>	Total
				activities		
2014	5 311 881	4 445 596	650 123	398 327	2 629 176	13 435 103
2013	5 148 796	3 586 684	843 056	398 327	2 526 939	12 503 802
2012	4 997 739	3 529 717	357 353	398 327	2 537 685	11 820 821

1) services, energy, water and sewer services

#### OUTLINE OF INCOME (REVENUE) AND EXPENSES – FBA UIN IN BODØ

#### Table 3.3 Income/Revenue and Expenditure (in million NOK)

	2014	2013	2012
Income			
Public funding	56.5	54.5	50.6
Other income	1.0	0.4	0.4
Research projects	21.9	16.7	22.4
Expenditure			
Salaries	55.5	48.3	47.5
Investments	4.2	3.5	4.9
Consumables	17.6	14.0	13.6
Other costs	0.8	3.4	4.6

#### **3.2 COMMENTS**

- Teaching establishments never have enough finance. Please comment on any of the "Guidelines and Requirements" that are particularly difficult to fulfil in the present financial situation. Please make any comments that you feel would help the experts concerning the Faculty's finances.
- What is your number one priority for the use of any increased funding?
- Comment on the degree of autonomy and flexibility available to the Faculty in financial matters.

- Comment on the percentage of income from services that the Faculty is allowed to retain for its own use, and in particular on the extent to which loss of this income acts as a disincentive for the services concerned.
- Please make any other general comments that you feel would help the experts concerning the Faculty's finances.

#### **COMMENTS – UVMP IN KOŠICE**

The priority of UVMP in Košice is completion of clinical facilities by providing them with the newest diagnostic equipment. To enable this, a combination of resources from state budget subsidies and EU structural funds is necessary.

The university is completely autonomous with respect to its financing which also presumes flexibility in using available financial sources. Financial plan of UVMP in Košice is developed by the university Management and spendings are controlled by the AS.

With regard to the fact that UVMP in Košice is a one faculty university, all income from services provided by the university is retained for its own use.

State funding of UVMP activities is inadequate in the long term and thus also at the present the university must make an effort to obtain additional resources to provide high quality education and carry out research in the veterinary field of science. Another big task is obtaining resources needed for co-financing of projects implemented within EU structural funds, not only for covering the obligatory 5 % of the project sum but also for covering the so-called raised costs, i.e. covering the costs associated with successful completion of planned activities which, however, due to bureaucratic impediments, cannot be included in the project budget. This puts huge pressure on the university budget.

#### **COMMENTS – FBA UIN IN BODØ**

The budget of UiN depends on the incentive scheme set by the Ministry of Education. This scheme includes research and teaching and according to the scheme between 70-80 % of the money goes to the faculty that produced the results and the rest is used for common purposes and services.

#### **3.3 SUGGESTIONS**

If you are not satisfied with the situation, please list any shortcomings and provide suggestions – in order of importance and describe any factors which are limiting the further development of your Faculty.

#### **SUGGESTIONS – UVMP IN KOŠICE**

The funding from the state budget is inadequate. This situation is mostly due to the low percentage of gross national product allocated by state to education. This can be changed only by Members of the National Council of the Slovak Republic by approving a state budget that would take into consideration justified requirements of education institutions at all levels, including the higher education institutions. Distribution of allocated and by other ways obtained financial resources within the university is balanced and corresponds to the approved criteria and acceptable justified requirements of individual university units.

Factors limiting further development of the university:

- inadequate funding from the state budget in general,
- inadequate capital funds allocated to universities,
- obligatory 5 % financial participation in implementation of projects from EU structural funds.

#### SUGGESTIONS – FBA UIN IN BODØ

It is of great importance that the Faculty's administration is constantly updated and trained to cope with the new challenges in the national and international research calls, as well as in the educational environment.

#### **Chapter 4. CURRICULUM**

#### **4.1 FACTUAL INFORMATION**

- a) Indicate whether there is a defined national curriculum and (if applicable) how and by what body decisions are taken on this
- b) Describe the degree of freedom that the Faculty has to change the curriculum
- c) Outline how decisions on curriculum matters and course content are taken within the Faculty
- d) Outline how decisions are taken on the allocation of hours between the various subjects and on the balance between theoretical and practical teaching (Tables 4.1, 4.2 and 4.3)
- e) Indicate the presence and disposition of an integrated curriculum. Describe the degree of integration present and the amount of time devoted for EU- and non-EU-listed subjects (Table 4.4)

UVMP in Košice is the only university providing veterinary education in the Slovak Republic. Therefore, no national curriculum has been developed. The study plan and the content of the subjects are based on the traditional focus of veterinary education in Slovakia, the field practice requirements, the requirements of SVFA, the MESRS and the Accreditation Commission, by which individual study programmes are accredited. The EAEVE Report on the Visit to UVMP in Košice in July 2006 (the evaluation report), drawn up within the evaluation of the European veterinary education in accordance with Directive 2005/36/EC as amended by Directive 2013/55/EU, was also taken into account. The trends in veterinary education which derived from the EAEVE general assemblies and their agendas concerning veterinary study programmes were also incorporated into teaching veterinary medicine.

The requirements laid down by MESRS are included in the Higher Education Act. The requirements set out in Sections 50, 51, 53, 54b, 61, 62 and 63 of the Higher Education Act were crucial to the content development of a study programme for veterinary surgeons. In addition to the requirements of veterinary practice, the study plan development was based on the requirements set out in Act No. 39/2007 Coll. on Veterinary Care as amended.

During the study plan (curriculum) development process, the graduates' focus and employability were considered. The allocation of hours between the various subjects, their mutual linkages, and the balance between the practical and theoretical part of the teaching process were based on the discussions among the subject heads, the institutes, the subject guarantors, the university Management, and the EAEVE indicators.

Any modifications to the study plan are made as a result of discussions among the members of the Pedagogical Committee, which submits them for approval by the AS. The study plan is then submitted for approval by the Scientific Board of UVMP in Košice. Suggestions from students and experts from practice are taken into account during this process. The responsibility for the study plan deriving from the Higher Education Act lies with UVMP in Košice. Study plans, number of hours of lectures, seminars, practical exercises, the length of practices and short-term practical training within the various subjects and the balance between theoretical and practical part of the teaching process are based on the EAEVE instruction indicators.

The current study plan for obtaining a DVM degree is integrated, which means that along with the subjects defined by Directive 2005/36/EC, UVMP students must complete some additional obligatory subjects (listed in Table 4.4). The students are also offered a list of obligatory elective subjects (electives) and optional subjects to choose from in a given semester according to their interest. The obligatory elective and optional subjects are linked to the obligatory subjects and extend the knowledge in a given area. By decision of the university Scientific Board, the number and content of the obligatory elective and optional subjects is flexible and they can be supplemented according to the students' interest, needs of practice, etc. Similarly, the study plan for a BSc degree in Animal Science was also discussed and subject to approval.

The Joint Bachelor Programme in Animal Science (JBPAS) offers a basic biological education. The first three semesters (semester 1, 2 and 3, in total 1.5 year) of the bachelor's degree take place at UiN and cover fundamental biological topics such as cellular biology, physiology, microbiology and ecology. The programme then continues at UVMP in Košice, where students complete the last three semesters (semester 4, 5 and 6, in total 1.5 years). Thus, this programme aims to give the students an introduction to veterinary medical science.

Upon completion of the programme, the students receive a joint issued diploma from UiN and UVMP, a transcript of records and a diploma supplement from UVPM in Košice. The diploma supplement is issued in English and meets European standards. These students can continue their studies at UVMP in Košice to obtain a veterinary degree (Doctor of Veterinary Medicine) if they pass the state examinations.

The programme meets the requirements set by Norwegian Agency for Quality Assurance in Education (NOKUT). All changes in the existing curriculum require an approval by the Education Board of the Faculty of Biosciences and Aquaculture (FBA). Major changes in subjects related to the JBPAS require an approval from UVMP in Košice as well. Required changes are submitted by the Course Coordinators every autumn semester and are implemented the following academic year. At the end of each academic year, the Programme Coordinators submit an annual report to the Education Board. The study administration submits also an annual report to the Education Board. Based on both reports, the Education Board submits recommendations to the Dean who approves it on behalf of the faculty. Thereafter, the document is submitted to the administration at UiN who presents it to the Board of Directors at UiN. The Board has the authority to either approve or reject it.

#### 4.1.1 POWER OF SUBJECTS AND TYPES OF TRAINING

#### 4.1.1.1 POWER OF SUBJECT

1. "Core" subjects taken by every student

2. "Electives" which each student must select from a list of permissible subjects

3. Obligatory extramural work

#### Study Programme in General Veterinary Medicine (GVM)

UVMP in Košice provides education in the basic subjects listed in Directive 2005/36/EC of the EU, which are obligatory for all students in the GVM study programme. The basic subjects in the first three years of study convey basic knowledge (basic subjects and basic sciences) of natural sciences along with the basics of agriculture and the related subjects such as biology, chemistry, anatomy, histology, physics, physiology, biochemistry, genetics, biomathematics, animal husbandry, nutrition, pathological physiology, pharmacology, toxicology and microbiology. These basic subjects equip the students with basic knowledge of topography, structure and function of organs, tissues and the whole animal body, and form the basis for studying specific subjects with a veterinary–therapeutic focus, and the prevention-oriented subjects dealing with environmental protection, ecology and production of healthy foods and raw materials of animal origin.

*Clinical sciences.* Study in subsequent years covers theoretical and practical part of clinical subjects following a species-based approach. These subjects include pathology, obstetrics, clinical medicine and surgery, parasitology, preventive veterinary medicine, radiology, public veterinary medicine and public health, veterinary legislation and forensic veterinary medicine, therapeutics, and propaedeutics. Teaching clinical skills is an essential part of education in veterinary medicine. At the clinics, the students familiarize themselves with a patient's medical history, examine the patient, and establish diagnosis based on the clinical signs and the results of clinical, imagining and metabolic tests in relation to the anamnesis. They propose appropriate therapeutic procedures, make prognoses and communicate with the clients.

*Animal production.* The veterinary study plan also includes subjects in animal production, animal nutrition, agronomy, rural economics, animal husbandry, veterinary hygiene and ethology, and animal protection.

*Food hygiene/Public health.* The study involves subjects focused on food hygiene (inspection and control of food of animal origin, food hygiene and technology, and food legislation).

*Professional competences.* The student acquires professional managerial skills within the subjects covering veterinary practice management, veterinary certification and report writing.

In addition to 327 credits from obligatory subjects, the students must obtain 33 credits from obligatory elective subjects. The value of obligatory subjects is three credits.

The students engage in obligatory extramural activities at the SVFIs, DVFAs, in food-processing enterprises (e.g. milk and dairy production establishments) and with private veterinary surgeons, members of CVS. The scope of activities, their organisation and the student numbers are detailed in Chapter 4.1.4.

#### Joint Bachelor Programme in Animal Science

The students must earn a minimum of 180 credits, out of which 171 credits must be from obligatory subjects and 9 credits from obligatory elective subjects. The obligatory subjects, which include Chemistry and biophysics, Ecology and biodiversity, Introduction to aquaculture, Biochemistry, Cellular biology, Genetics and evolution, Animal Physiology, Microbiology, Histology and embryology, Veterinary ethics and legislation, Livestock farming (Animal husbandry), Veterinary anatomy and histology, Veterinary clinical sciences, Animal nutrition, Animal hygiene, welfare and behaviour of Animals, Introduction to veterinary epizootiology, Introduction to pharmacology, Preventive veterinary medicine, sanitation and protection of public health, Food safety and Fish breeding, create sufficient space for acquiring knowledge that enables the students to continue their studies at a doctoral level. The choice of obligatory subjects is supplemented by Biomathematics and Statistics, and Latin Terminology.

Students are obliged to complete at least one obligatory elective subject in each year of study. There are 5 obligatory elective subjects to choose from.

No extramural activities are performed by the students during their studies.

#### 4.1.1.2 TYPES OF TRAINING

There cannot be absolute distinction between the terms used to distinguish between different types of training. Overlap is inevitable. The following descriptions are derived from the definitions presented in the section 'Main Indicators' of Annex I.

#### Study Programme in General Veterinary Medicine

The study programme consists of educational activities for students, particularly lectures, seminars, laboratory exercises, desk-based activities, non-clinical work and clinical work.

#### Joint Bachelor Programme in Animal Science

The curriculum of the first 3 semesters at FBA includes different forms of teaching, such as lectures, seminars, self-directed learning, desk-based and laboratory practical exercises. Table 4.1 shows the allocation of curriculum hours between the different types of training for all courses of semesters 1, 2, and 3.

#### **4.1.1.2.1** Theoretical training

Lectures convey theoretical knowledge. Lectures are given to an entire or partial annual intake of students. Teaching may be with or without the use of teaching aids or of demonstration animals or specimens. The essential characteristic is that there is no active involvement of the students in the material discussed. They listen and do not handle

Seminars (sometimes called tutorials or supervised group work) are teaching sessions directed towards a smaller group of students during which they work on their own, or as a team, on part of the theory, prepared from manuscript notes, photocopied documents, articles and bibliographic references. Information is illustrated and knowledge extended by the presentation of audio-visual material, exercises, discussions and, if possible, case work

Self directed learning are sessions of individual students making use of defined teaching material provided by the Faculty (e.g. e-learning)

#### Study Programme in General Veterinary Medicine

Theoretical training is provided in the form of lectures, seminars and self-directed learning. Lectures are delivered in the lecture rooms to the entire class at the same time. Lectures are a passive form of theoretical training without active involvement of students. Participation in lectures is obligatory at the discretion of the subject guarantor. Seminars are given mainly in the selected obligatory elective and optional subjects in smaller student groups under the supervision of an appointed teacher. Self-directed individual learning is made use of in certain subjects, in which e-learning has been introduced.
#### Joint Bachelor Programme in Animal Science

Lectures are theoretical training that conveys theoretical knowledge, complements textbooks or notes and provides current information. The lectures are delivered to all students enrolled in a semester, although they are not obligatory. Lecturers use audiovisual aids, including slide presentations and videos. The students at the beginning of each course are provided with a list of sources and course books in English. Lecturers also use material from their own research. The main purpose is to teach the students how to use basic concepts and principles and how to think critically. Students are involved in asking questions or taking part in brief discussions.

Seminars (tutorials or group work) are supervised teaching sessions directed towards a smaller group of students during which they work on their own, or as a team, on part of the theory. Information is illustrated and knowledge extended by the presentation of audio-visual material, exercises, discussions and, if possible, case studies. Following some lectures, group work continues in small rooms on furthering certain topics. Curriculum hours allocated to preparation for seminars and preparation of presentations have been included in self-directed learning.

Self-directed learning is included in the ECTS of every course. It refers to self-learning sessions that allow students to further research a certain topic of their academic curriculum and write an independent essay under the supervision of the corresponding faculty member (reading the literature, discussions with the supervisor, preparation of presentation). Furthermore, self-directed learning also includes study work of the student (for reading textbooks, preparing for examinations, sitting the exams etc.). The hours for sitting in the exams or multiple-choice tests are included in Table 4.1, but not the rest and thus the total number of hours per course is higher than the presented number.

#### 4.1.1.2.2 Supervised practical training

• Laboratory and desk based work. Includes teaching sessions where students themselves actively perform laboratory experiments, use microscopes for the examination of histological or pathological specimens. It also includes work on documents and idea-formulation without the handling of animals, organs, objects or products (e.g. essay work, clinical case studies, handling of herd-health monitoring programmes, risk-assessment computer-aided exercises).

• Non-clinical animal work. These are teaching sessions where students themselves work on normal animals, on objects, products, carcasses etc. (e.g. animal husbandry, ante mortem and post mortem inspection, food hygiene, etc.) and perform dissection or necropsy.

• Clinical work. These are strictly hands-on procedures by students which include work on normal animals in a clinical environment, on organs and clinical subjects including individual patients and herds, making use of the relevant diagnostic data. Surgery or propaedeutical hands-on work on organ systems on cadavers to practice clinical techniques are also classified as clinical work.

#### Study Programme in General Veterinary Medicine

The laboratory work and desk-based work involves performing various laboratory experiments, with the students working on their own, using microscopes to examine histology slides mainly from animals with altered health. In addition, the students work with documentation and express their observations without handling animals, objects or products.

During non-clinical animal work, the students themselves examine healthy animals, objects, products, carcasses and perform dissections or post-mortem examinations.

Clinical work is ensured at the university clinics, where the students can perform various activities typical of veterinary profession. Following the approval of new study plans, which had been drawn up in accordance with the veterinary education requirements, the former 4 specialised clinics (internal diseases, obstetrics and gynaecology, surgery, orthopaedics and radiology) were reorganised into 5 species-based clinics as part of the changes in the organisational structure of the university units in 2007. Establishing the species-based clinics constitutes a substantial improvement in the system of teaching animal diseases and in the students' acquisition of practical clinical experience. This significant change has derived from the social demand for veterinary surgeons, who must be ready to perform practical clinical activities as part of their profession, i.e. veterinary professionals, who are fully prepared to deal with a specific animal species or a variety of them. In addition to the hands-on experience gained at the clinics on the university's central premises, UVMP's special facilities are also available for practical clinical work,

offering further opportunities for practical training to the university students. The facilities include the UF, which supplies the main types of farm animals (cattle, swine and small ruminants); the UFBD, which provides certain game and fish species and bees; and the Equestrian Centre (EC), which provides horses.

# Joint Bachelor Programme in Animal Science

Laboratory and desk-based work refers to teaching sessions where students themselves perform laboratory experiments and analyses. It also includes work on the preparation of laboratory reports, where they describe and analyze the results of the laboratory or desk-based exercises.



# 4.1.2 UNDERGRADUATE CURRICULUM FOLLOWED BY ALL STUDENTS

## 4.1.2.1 CURRICULUM HOURS

This section makes a distinction between curriculum hours to be taken by every student and those offered as electives or within a given track. Specific information is also requested on subjects other than those specified in table 4.2.

## Table 4.1: General table of curriculum hours taken by all students

Year				Hours of traini	ing			
of study	Theoretic	al training		Supervised P	ractical T	raining	Other (G)	Total
	Lectures (A)	Seminars (B)	Self- directed learning (C)	Laboratory and desk- based work (D)	Non- clinical animal work (E)	Clinical training (F)		
1	247	36	26	149	133	0	20	611
2	273	13	33	199	158	0	20	696
3	351	20	24	278	81	20	0	774
4	338	58	9	144	120	176	0	845
5	390	23	0	94	65	351	0	923
6	221	28	0	0	0	260	24	533
Total	1820	178	92	864	557	807	64	4382

Study Programme in General Veterinary Medicine

Year				Hours of train	ing			
of	Theoretic	al training		Supervised	Practical Tr	aining	Other	Total
study							(G)	
	Lectures	Seminars	Self-	Laboratory	Non-	Clinical		
	(A)	<b>(B)</b>	directed	and desk-	clinical	training		
			learning	based work	animal	<b>(F)</b>		
			(C)	(D)	work			
					<b>(E)</b>			
1	156	0	12	222	0	0	0	390
2	221	51	25	164	46	0	0	507
3	247	14	12	134	65	74	0	546
Total	624	65	49	520	111	74	0	1443

Joint Bachelor Programme in Animal Science

	Cubinot			Π	ining of twin	54			
		Theoretical	training		Supervise	d practical	training	Other (G)	Total
		Lectures (A)	Seminars (B)	Self-directed learning (C)	Laboratory and desk- based work (D)	Non- clinical animal work (E)	Clinical training (F)		
Ι.	Basic Subjects								
а	Physics	26		4	22				52
q	Chemistry	26			39				65
c	Animal biology	45	30	6	21				102
d	Plant biology	20	3		18				41
в	Biomathematics	13		6				20	39
	TOTAL:	130	33	16	100	0	0	20	299
2.	Basic Sciences								
а	Anatomy (incl. histology and embryology)	104		16		179			299
q	Physiology	52		6	36	36			130
$\mathcal{C}$	Biochemistry, cellular and molecular biology	52	9		72				130
d	Genetics (incl. molecular genetics)	26			26				52
в	Pharmacology and pharmacy	48			26				74
f	Toxicology (incl. environmental pollution)	26		2	24				52
00	Microbiology (incl. virology, bacteriology and mycology)	52		9	59				117
Ч	Immunology	26		2	24				52
Ι	Epidemiology (incl. scientific and technical information and documentation methods)	52	9	3	20	36			117
j	Professional ethics	13		6	20				39
	TOTAL:	451	12	41	307	251	0	0	1062
3.	Clinical Sciences								

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

Study Programme in General Veterinary Medicine

a	Obstetrics	26	3		3		20		52
q	Pathology (including pathological anatomy)	104		5	50	101			260
с	Parasitology	52			65				117
р	Clinical medicine and surgery (including anaesthesiology)	39					52		91
	Clinical lectures on various domestic animal,	520	7		70		611		1208
в	poultry and other animal species including rabbit								
f	Field veterinary medicine (ambulatory clinics)								
60	Preventive veterinary medicine	13					26		39
Ч	Diagnostic imaging (including radiology)	13	26						39
i	Reproduction and reproductive disorders	26					26		52
j.	State veterinary medicine and public health	10		9	14				30
k	Veterinary legislation and forensic medicine	26	10		16				52
1	Therapeutics	4			26				30
	Propaedeutics (including laboratory diagnostic								
ш	methods)	52			6		72		130
	TOTAL:	885	46	11	250	101	807	0	2100
4.	Animal production								
а	Animal production	36			14	22			72
q	Animal nutrition	104	40		46	18			208
С	Agronomy	13			13				26
d	Economics	13		6				20	39
в	Animal husbandry	16			8	8			32
f	Veterinary hygiene	52	6	6	42				106
60	Animal ethology and protection	26		4	9	13			52
	TOTAL:	260	46	16	132	61	0	20	535
5.	Food Hygiene/ Public Health								
	Inspection and control of foodstuffs of animal								
a	origin or foodstuffs of animal origin and the								
	respective feedstuff production unit	13		2	13	37			65
q	Food hygiene and technology	78		6	56	87			227
c	Food science including legislation		13						13
d	Practical training					20			20

	TOTAL:	91	13	8	69	144	0	0	325
6.	Professional Knowledge								
a	Practice management		14					12	26
q	Veterinary certification and report writing	3			9				6
c	Career planning and opportunities		14					12	26
	TOTAL:	3	28	0	9	0	0	24	61
	TOTAL	1820	178	92	864	557	807	64	4382

Joint Bachelor Programme in Animal Science

	Subject			Η	ours of traini	ng			
		Theoretical (	raining		Supervise	d practical t	raining	Other (G)	Total
		Lectures (A)	Seminar s (B)	Self-directed learning v(C)	Laboratory and desk- based work (D)	Non- clinical animal work (E)	Clinical training (F)		
1.	Basic Subjects								
а	Physics	10			15				25
q	Chemistry	16			24				40
c	Animal biology	42	0	6	54	0	0	0	102
q	Plant biology	10	6	3	6				28
e	Biomathematics	26	2	2	22				52
	TOTAL:	104	11	11	121	0	0	0	247
2.	Basic Sciences								0
а	Toxicology	26			39				65
q	Biochemistry, cellular and molecular biology	65	3	9	56	0	0	0	130
c	Genetics	26		3	36				65
q	Physiology	52	2	5	52	6	0	0	117
e	Microbiology	26	9	3	30				65

f	Immunology	26	3	3	20				52
ad	Anatomy	78	3	6	54	54	0	0	195
h	Professional ethics		14						14
i	Pharmacology and pharmacy	26	2		24				52
	TOTAL:	325	33	26	311	60	0	0	755
3.	Clinical Sciences								0
а	State veterinary medicine and public health		9		9				12
q	Propaedeutics	26					52		78
c	Preventive veterinary medicine	68	4	4	22	22	0	0	91
	TOTAL:	65	10	4	28	22	52	0	181
4.	Animal production								0
а	Animal husbandry	52	5	2	6	23	16	0	104
q	Veterinary hygiene	14	2	2	10				28
с	Animal ethology and protection	12	2	2	8				24
q	Animal nutrition	26	2	2	16		9		52
	TOTAL:	104	11	8	40	23	22	0	208
5.	Food Hygiene/ Public Health								
а	Food hygiene and technology	26			20	9			52
	TOTAL:	26	0	0	20	6	0	0	52
6.	Professional Knowledge								0
	TOTAL:	0	0	0	0	0	0	0	0
	TOTAL	624	65	49	520	111	74	0	1443

Subject			H	<b>Hours of train</b>	ing			
	Theoretic	al training		Supervise	d practical t	raining	Other (G)	Total
	Lectures (A)	Seminars (B)	Self-directed learning (C)	Laboratory and desk- based work (D)	Non- clinical animal work (E)	Clinical training (F)		
Basic subjects:								
Biophysical methods in medicine		34					5	39
Radiobiology	13			26				39
Basics of ecology	26						26	52
Basics of scientific work		26						26
Basic Sciences:								
Applied cytology	13			22	4			39
Applied virology	26			26				52
Ecotoxicology		20		6				26
Animal health protection in biomedical research in accordance with the current EU legislation	26			26				52
Xenobiochemistry		26						26
Basics of genetic engineering	13	68						52
Basics of veterinary haematology	13			26				39
Clinical Sciences:								
Assisted reproduction	13					26		39
Diagnostics of the internal body environment disorders in animals	13					26		39
Diseases of laboratory animals and management of clinical experiments	26			13	9	7		52

Table 4.3: Curriculum hours in EU-listed subjects offered and to be taken as electives

Study Programme in General Veterinary Medicine

Diseases of small mammals and laboratory animals	13			10	16	39
Diseases of bees	13		7	9		26
Breeding and diseases of reptiles and terrarium animals	26			13	13	52
Clinical biochemistry		39				39
Clinical pharmacology		26				26
Clinical genetics	26		26			52
Clinical oncology of animals	13				26	39
Clinical syndromes in dogs and cats in small animal practice		13			13	26
Crisis management and biotechnics in reproduction	13	9			20	39
Nephrology and urology in small animal practice		21	9	9	9	39
Repetitorium of small animal neurology		13			26	39
Pathological biochemistry		39				39
Radiographic anatomy	13				26	39
Reproductive endocrinology					26	26
Veterinary dermatology of small animals		19			20	39
Veterinary ophtalmology	13				26	39
Veterinary stomatology and jaw orthopaedics	13				26	39
Basics of horse shoeing and orthopaedic horse shoeing	13				26	39
Zoonoses	26		26			52
Cynology		27		12		39
Cynology of rescue dogs					26	26
Homeopathic treatment of small animals		39				39
Laboratory diagnostics			39			39
Tropical veterinary medicine	26	26				52
Official veterinary surgeon	13	13				26
Training and rehabilitation of horses	13	10			29	52
Behaviour disorders in companion animals			13	13		26
Animal production:						

Fishery		10	9	10		26
Hunting		16	4	9		26
Hunting		13				13
Mountain sheep farming	13			26		39
Food Hygiene/Public Health:						
Food chemistry	26		26			52
General hygiene and food analysis	13		39			52
Safety and quality of plant products	26		39			65
Foodborne diseases	13		26			39
Professional knowledge:						
History of veterinary medicine					26	26
Basics of legislation for veterinary surgeons					26	26
Official veterinary surgeon	13	13				26

Joint Bachelor Programme in Animal Science

Subject			H	ours of train	ing			
	Theoretical 1	training		Supervis	ed practical	training	Other (G)	Total
	Lectures (A)	Seminar	Self-directed	Laborator	Non-	Clinical		
		s (B)	learning (C)	y and desk-	clinical animal	work (F)		
				based work (D)	work (E)			
Basic Subjects:	0	0	0	0	0	0	0	0
Basic Sciences:	0	0	0	0	0	0	0	0
Clinical Sciences:								
Laboratory diagnostics	26	0	0	26	0	0	0	52
Animal Production:								
Hunting	26	0	0	8	8	4	6	52
Food hygiene/Public health:	0	0	0	0	0	0	0	0
Professional knowledge:	0	0	0	0	0	0	0	0

Where a Faculty runs a "Tracking system" this should be indicated when completing Table 4.3. Separate tables should be provided for each track, e.g. Table 4.3a: Curriculum hours in EU-listed subjects to be taken in the "equine medicine track". The inherent nature of an elective is, that students make a distinction and select. However, the total number of hours to be taken by each student out of the various subject groups should be stated.

Tab. 4.4 requests information concerning curriculum hours in subjects not listed in Table 4.2 to be taken by every student. If offered as electives or within a special track, please develop separate tables (e.g. 4.4a, b...).

UVMP in Košice does not run a "tracking system".

Table 4.4: Curriculum hours in subjects not listed in Table 4.2 to be taken by each student, including Diploma work (final graduation thesis, or final graduation work)

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Subject				Hours of trai	ning			
	Theoretica	ıl training		Super	vised practi	cal	Other	Total
					training		(G)	
	Lectures	Seminars	<b>Self-directed</b>	Laboratory	Non-	Clinical		
	(¥)	( <b>B</b> )	learning (C)	and desk-	clinical	work		
				based	animal	(F)		
				work (D)	work (E)			
English/German language		104						104
Latin terminology		26						26
Diploma thesis				390				390
TOTAL		130		390				520

Joint Bachelor Programme in Animal Science

Subject				Hours of tra	ining			
	Theoretica	ıl training		Super	rvised practic training	al	Other (G)	Total
	Lectures (A)	Seminars (B)	Self-directed learning (C)	Laboratory and desk-	Nonclinical animal	Clinical work		
				based work (D)	work (E)	(F)		
Slovak language		26						26
Latin terminology		26						26
Diploma thesis				390				390
Laboratory safety - Bodø	3							3
TOTAL	3	52		390	0	0	0	445

## **4.1.3 FURTHER INFORMATION ON THE CURRICULUM**

- Provide the visiting team with highlights and any unusual or innovative aspects of the teaching programme, e.g. tracking and orientation programmes.
- State the parts of the programme that must be attended as obligatory by the students and how the attendance is verified.
- Please provide specific information on the practical clinical training;

If clinical training is be provided through obligatory clinical rotations in different areas, please give an outline description of how this is structured, in terms of:

- are such rotations a structured part of the training given to all undergraduate students?
- the total number of days or weeks of such rotations;
- the year(s) in which they occur;
- the different areas covered and the time spent in each area;
- whether attendance is full-time, for part of the day, and/or other (e.g. based on case
- needs);
- the activities and case responsibilities that students are expected to undertake.
- the group sizes in the clinical rotations
- Describe clinical exercises in which students are involved prior to the commencement of clinical rotations.
- Outline the student involvement in the emergency and hospitalisation activities of the clinics.
- Specify student participation in the activities of the mobile clinic and indicate whether or not the hours spent in the mobile (ambulatory) clinic are included in those in Table 4.2.

#### Study Programme in General Veterinary Medicine

UVMP in Košice does not run a "tracking system" at present. The students who are interested in a specialty, e.g. diseases of small animals or exotic animals, can enrol in obligatory elective subjects or optional subjects covering these topics during their studies. There are also student clubs at UVMP in Košice run by experienced clinicians, where the students can develop their interests and gain skills of animal handling, sample collection, therapeutic treatment, feeding, breeding, etc. The scope of the clubs' activities is detailed in Chapter 5.1.5.

Practical clinical student activities are performed within practical exercises as part of obligatory, obligatory elective and optional subjects taught at the university clinics according to the main animal species, in the required extent for a given year of study. The students start to acquaint themselves with practical clinical work as early as the summer semester of the 3<sup>rd</sup> study year as a part of the obligatory subject "Propaedeutics" with a total of 52 hours of practical exercises. Other subjects aimed at the development of practical skills include the obligatory subjects focusing on practical propaedeutics of other basic specialty subjects, such as General surgery and anaesthesiology (52 hours), Radiology and diagnostic imaging (26 hours), Obstetrics, reproduction and reproductive disorders (26 hours), Andrology and artificial insemination (26 hours), and Diagnostic pathology (26 hours). The students complete a total of 208 hours of practical training within these subjects. From the 4<sup>th</sup> year of study onwards, additional practical skills are acquired by the students within the obligatory subjects focused on the diseases of various animal species (Breeding and diseases of game and fish I and II, Diseases of exotic and zoo animals, amphibians and reptiles, Diseases of poultry, Small animal diseases, Diseases of horses, Diseases of ruminants, Diseases of swine) with 585 hours of practical exercise in total. The obligatory subjects offer 793 hours of practical training in total. In addition to that, the students can broaden their practical clinical skills by means of obligatory elective subjects (Breeding and diseases of reptiles and terrarium animals, Diseases of small mammals and laboratory animals) and optional subjects (small mammal diseases) according to the study plan. Moreover, the students in the 5<sup>th</sup> and 6<sup>th</sup> years of study can, depending on their area of interest, participate in clinical practice within obligatory elective subjects and optional speciality subjects, (Clinical oncology of animals, Veterinary ophtalmology, Veterinary stomatology and animal jaw orthopaedics, Assisted reproduction, Clinical syndromes in dogs and cats, Veterinary dermatology of small animals, Repetitorium of small animal neurology, Small animal nephrology and urology).

A total of 420 hours of obligatory clinical training at the clinics is another important form of gaining hands-on experience by the students. The students must spend time at all UVMP clinics and participate in all their activities from consultations, patient admittance at outpatient departments, special diagnostic examinations and therapeutic treatments, to intensive patient care under supervision of the teacher in charge of the practical training. All practical tasks and activities that the students must perform

within the clinical practices are recorded in the Clinical Practice Record Book. The students can attend a clinical practice throughout the whole year, including outside the semester period. Clinical practices are done in the 5<sup>th</sup> and the 6<sup>th</sup> year of study. Their extent and the respective semesters are detailed in Annex 4.1.

As part of practical training in the diseases of various animal species at the respective speciesbased clinics, the students engage in and perform specialised activities relating to specialization diagnostics, and therapeutic and preventive care for particular animals, depending on the clinic's orientation on a particular species. Practical exercises which form part of study subjects are done in rather small groups (8 – 12 students). Practical clinical training is usually conducted in small groups (4 – 5 students) and supervised by the teacher in charge. The UF is an important facility for practical training of students as it ensures the availability of sufficient number of animals and clinical cases. In addition to the usual, scheduled training during semester, the UF offers space for mobility of students to sick patients outside the planned training activities by means of a mobile clinic (Clinic of Ruminants). In addition to the UF, the practical training by means of a mobile clinic is also done on other farms in the Košice surrounding area, which actively cooperate with the university. A mobile clinic is also run in a similar way at the Clinic of Horses, which enables the students, under supervision of a teacher in charge, to engage in practical clinical activities with horse breeders or at the university EC.

In addition to the practical training at the university, its special facilities, and the training with breeders as part of practical clinical work during semester, the students acquire practical skills also by means of compulsory professional short-term training with private veterinarians totalling 80 hours, which the students receive after completing the summer semester of the 5<sup>th</sup> year of study. The training is one of the conditions for proceeding to the 6<sup>th</sup> year of study.

Students experience their first contact with animals and practical clinical work by means of field practice prior to enrolment on the first year of studies. The practice is done by parts, in group rotations at the UF and at the university clinics. The students become familiar with work with farm and other animals according to the species categories at the different clinics.

A proper practical clinical training and the direct engagement of the students in clinical work with animals are ensured by the university's five clinics according to the individual subjects included in the veterinary study plan. The training is mostly done in groups of 8 - 12 students.

Practical clinical training starts in the summer semester of the 3<sup>rd</sup> year of study within the obligatory subject Propaedeutics, which continues in the winter semester of the 4<sup>th</sup> year. This subject is covered by the Clinic of Swine and the Clinic of Ruminants. In the 3<sup>rd</sup> year of study, an opportunity to learn about specific diseases is opened up to the students for the first time within the subject Diseases of Bees, which is offered by the Clinic of Birds, Exotic and Free-Living Animals.

In the 4<sup>th</sup> year of study, the obligatory subjects involving practical clinical training include Obstetrics, reproduction and reproductive diseases of females (1 semester) covered by the Clinic of Horses; General surgery and anaesthesiology (2 semesters), and Radiology and diagnostic imaging (1 semester) covered by the Clinic of Small Animals; and Reproduction and reproductive diseases andrology and artificial insemination (1 semester) provided by the Clinic of Ruminants. In addition to that, practical clinical training within the obligatory subject covering the diseases of game and fish starts in the summer semester of the same year. Other subjects offering practical clinical work in the 4<sup>th</sup> year are the obligatory elective subjects Breeding and diseases of reptiles and terrarium animals, Diseases of laboratory animals and Management of clinical experiments, and Diseases of small mammals and laboratory animals, provided by the Clinic of Birds, Exotic and Free-Living Animals. In the 5<sup>th</sup> year of study, the students are provided with the practical training at the university clinics, which covers the diseases of various animal species as part of the obligatory subjects Diseases of exotic and zoo animals, amphibians and reptiles, Breeding and diseases of game and fish, Diseases of poultry, Diseases of small animals, Diseases of ruminants, Diseases of horses, and Diseases of swine. In the same year, the students can broaden their practical skills also within the obligatory elective subjects such as Assisted reproduction or Clinical oncology.

In the 6<sup>th</sup> year of study, the practical clinical training continues within the obligatory elective subjects covering the diseases of the individual animal species (Diseases of small animals, Diseases of swine, Diseases of ruminants, Diseases of horses) and the subject Herd health management. A significant opportunity for practical clinical work is a choice of obligatory elective subjects covering veterinary specialties such as Veterinary ophtalmology, Veterinary stomatology and Animal jaw orthopaedics,

Clinical syndromes in dogs and cats in small animal practice, Veterinary dermatology of small animals, Repetitorium of small animal neurology, and Nephrology and urology in small animal practice.

Clinical training at the *Small Animal Clinic* is provided at its two sections - *the Section of Surgery, Orthopaedics, Roentgenology and Reproduction and the Section of Internal Diseases*. Clinical training within the subjects included in the GVM study plan provided by the *Section of Surgery, Orthopaedics, Roentgenology and Reproduction* and the *Section of Internal Diseases* covers the topics in radiology and diagnostic imaging, general surgery and anaesthesiology, small animal reproduction, surgery and orthopaedics, radiographic anatomy, clinical animal oncology, veterinary ophtalmology and stomatology and animal jaw orthopaedics. A study group is divided into smaller groups (3 – 4 students) according to the nature of the practical training. There are practical exercises enabling the students to gain individual practical and clinical experience – suturing of skin, muscles, tendons, nerves, blood vessels and hollow organs, vascular cannulation, treatment of accidental wounds, etc. Practical training in anaesthesiology is conducted exclusively on clinical patients by conducting anaesthesia and monitoring of patients. Surgical procedures (soft-tissue surgery, orthopaedics, eye surgery and stomatology) are practised on carcasses, which enables inspecting the access to organs and cavities. Practical training also involves demonstration of clinical patients including diagnostic and therapeutic procedures and the students are given the opportunity to consider the therapeutic effect.

Compulsory clinical training at the *Clinic of Birds, Exotic and Free-Living Animals* is in the form of demonstrations, post-mortem examinations and clinical examinations in the clinic's training rooms, making use of hospitalised patients or own animals intended for practical training. The clinic has permanent stocks of poultry, pigeons, exotic birds, rabbits, guinea pigs and reptiles of various ages and species. Housing is provided on the clinic's premises also for the free-living animals within a rehabilitation station for handicapped animals. Students directly participate in the therapy and examination under supervision of a teacher on duty and the nursing staff. Interest clubs are also made use of in practical training, particularly the Aqua Terra Club, the Falconry and Raptor Rehabilitation Club, and the Small Mammal and Exotic Bird Breeders' Club. The clinic provides treatment for the sick animals kept at these clubs as part of practical training. The clubs offer space for hands-on training in fixation, animal handling and collection of clinical samples. Clinical training is also done in the form of field trips to poultry farms under supervision of an external teacher-specialist. During the practical exercises, the students work on their own to examine and dissect animals and draw up clinical protocols. Award of a credit is, inter alia, conditional upon handing in of clinical and post-mortem protocols. The practical part of the subject Diseases of exotic animals is done at the Košice ZOO under supervision of a ZOO veterinarian.

Practical clinical training at the *Clinic of Horses*, which is part of the subject *Diseases of horses*, is provided in the extent determined by the study plan, and takes place in rather small student groups on the clinic's premises and in selected establishments for animal breeding. It is done in block clinical training cycles covering selected topics concerning horse reproduction. The establishments include the horse breeding centre in Dobšiná (examination of horses prior to a breeding season, examination of pregnant mares) and the National Stud Farm in Topol'čianky (horse breeding analysis, semen collection, preparation of insemination doses). The clinic also runs special practical training programmes in horse rehabilitation, shoeing, orthopaedic shoeing and horse-riding. The obligatory practical training programme for students includes shoeing and orthopaedic shoeing, rehabilitation of orthopaedic, neurological, myopathic patients, dental care, castration of stallions, endoscopy of upper respiratory tract, trephination of sinuses, digestive tract endoscopy, handling a patient with colic, sub-palpebral cannulation for treatment of eye diseases, IV catheter insertion, rehydration therapy, total intravenous anaesthesia, controlled breathing and monitoring of vital functions of the patient under general anaesthesia during long-lasting surgical procedures, soft tissue surgery, handling of lameness, RTG, cardiology of the horse, comprehensive pre-purchase examination of the horse, diseases of foals, neurology of the horse, urology of the horse, reproductive disorders of male and female horses, artificial insemination.

Practical clinical training at the *Clinic of Ruminants* is provided by teaching the obligatory subject *Diseases of ruminants*, which includes all main specialties, i.e. internal medicine, surgery, orthopaedics, reproduction, andrology and artificial insemination, and the obligatory subjects *Andrology* and *Artificial insemination*, and *Herd health management*. The obligatory elective subjects provide the students with opportunity to gain hands-on experience in the subjects *Diagnostics of the internal body environment disorders in animals* and *Assisted reproduction* (provided jointly with the Clinic of Swine). Practical training in the diseases of ruminants in the 5<sup>th</sup> year of study (the 11<sup>th</sup> semester) are done in-house in the form of demonstrations of patients in a clinical auditorium and also externally on the nearby

livestock and small ruminant farms. The exercises can take various forms (examination of sick animals, sampling of blood or other biological material, detection of pregnancy, drug administration, orthopaedic surgery, treatment of puerperal diseases, etc.) In the subsequent semesters (the 10<sup>th</sup> and the 11<sup>th</sup> semester) in the 5<sup>th</sup> and the 6<sup>th</sup> years of study, the teaching of *Diseases of ruminants* has the form of 3-day block practical exercises, which take place at the UF. The suitable conditions at the farm enable the students to successfully complete the subject, ensuring their direct involvement. The farm also offers accommodation at its dormitories along with catering services. This enables the students to provide teacher-supervised 24hour care for the patients during the block practice. The subject Diseases of ruminants is completed after the 11<sup>th</sup> semester by taking a state examination. Practical exercises under the subject Andrology and artificial insemination are scheduled during the first ten weeks and take place in-house, in the purposedesigned practice rooms. The in-house exercises are attended by two groups in parallel and last two hours. The practical exercises in the last three weeks are conducted outside the university at the UF. Biological material for training purposes is mainly obtained from bulls, which are kept at the Clinic of Ruminants. Other animals include male goat, ram and dog, which also belong to the clinic. The practical training in Herd health management is divided into the activities on the clinic's premises and analyses of farms with dairy herds. At the clinic, the students practise using clinical indices in the evaluation of condition, nutrition and feeding of the animals, their hygiene and welfare as well as the risks of mammary gland diseases. They also become acquainted with the basic documentation and its processing. This experience is later used by the students on the farms to analyse the animal holdings with the aim of providing advice. A protocol is drawn up at the end of the practical training, with records of the findings from the farm and recommendations to the farm's management. The practical training in Diagnostics of the internal body environment disorders in animals takes place in the winter semester of the 5<sup>th</sup> year of study and includes collection and analysis of biological material from the clinic's patients and the animals from the UF with a subsequent interpretation of the results. At the end of a semester, the students work in groups of 2 -3 to analyse the results obtained from the patients and assess the severity of the internal body environment disorders. The subject Assisted reproduction is included in the studies in the 10<sup>th</sup> semester. It informs and acquaints the UVMP students with the basic and currently most widely used methodological procedures in assisted reproduction both in animal and human medicine. Practical exercises are conducted in clinical and laboratory rooms of the Clinic of Ruminants and on the UF, where the students learn the basic assisted reproduction methods and employ them in practice.

The practical clinical training at the Clinic of Swine is included in the subjects Clinical diagnostics (the 3<sup>rd</sup> and the 4<sup>th</sup> year), Diseases of swine (the 6<sup>th</sup> year) and Assisted reproduction (the 5<sup>th</sup> year). *Clinical diagnostics* in both theory and practice ensures that the students acquire basic knowledge, and methodological and diagnostic procedures for studying clinical disciplines and their practical application within the different animal species. It also synthesizes the knowledge acquired in pre-clinical disciplines. The practical training takes place in a practice room using clinically healthy livestock (horse, cattle, sheep, goat, and swine) and companion animals (dog, cat) in groups of 10 - 12 students. The students' attendance is verified individually by means of attendance lists during their compulsory weekly rotations, which last 2 hours and take place throughout the whole semester. The clinic provides practical clinical training in internal swine diseases, reproduction and andrology of swine, and special surgery and orthopaedics of swine as part of the subject *Diseases of swine*. The content, focus and aim of the practical training in the internal diseases of swine is to acquire knowledge, practical habits and skills in diagnostics, therapy, and prevention of organ, metabolic, and production swine diseases. Training in special surgery and orthopaedics focuses on using special diagnostic methods and surgical therapeutic procedures in organ diseases of piglets, gilts, sows and boars. Reproduction and Andrology of swine equips the students with knowledge of diagnostics and therapy of the swine reproductive system, application of biotechnical and biotechnological methods used in controlled reproduction in gilts, sows and boars. The practical training in Diseases of swine in the 11<sup>th</sup> and 12<sup>th</sup> semester takes the form of practical exercises in relatively small groups (9 - 12 students) on the university premises. There are also block practices on the UF and pig farms around Košice. The content of the individual block practices is tailor-made, taking into account the state of health of the animals in the holdings and the breeder's needs. The practical clinical training within the obligatory elective subject Assisted reproduction is attended by all students in the 5<sup>th</sup> year of study who have enrolled in the subject. The individual activities carried out within the training are rather timeconsuming; therefore, the training is done in the form of block practices at the Clinic of Swine and on the UF. The practical training is done in subgroups of 10 - 12 students working on their own under

supervision of a teacher, who monitors whether the students perform the individual tasks in a professional manner and oversees their safety.

In addition to the practical clinical training carried out within the obligatory and obligatory elective subjects in the extent prescribed by the study plan within the basic general subjects and the subjects according to the species-based diseases, a significant number of hours are also allocated to the clinical practices that the students must complete at the university clinics. The clinical practices are intended to enable the students to acquire the necessary practical skills and hands-on experience of working with various animal species in the area of diagnostics, therapy, and diseases prevention. They also provide the students with deeper practical knowledge within the specialties of their interest. These practices are conducted at the clinics in the 5<sup>th</sup> and the 6<sup>th</sup> year of study. During the practice, the students work under supervision of a teacher in charge in small groups of a maximum of 5 - 6 students and engage in professional activities concerning diagnostics, participate in therapeutic treatment as part of the clinic's outpatient care as well as hospitalization and the related activities. In addition to the basic clinical examination, they also engage in other specialised professional activities of the species-based clinics, such as diagnostic imaging, reproduction, surgery, orthopaedics, anaesthesiology, patient monitoring, internal medicine, intensive medicine, cardiology, neurology, ophtalmology, and others. These activities are managed by a guarantor in charge of the clinical practices according to a practice schedule. The students can participate in clinical training as part of outpatient care within both the office hours during the day and the emergency services throughout the whole year. According to the study plan, the students must complete a total of 420 hours of clinical practices at the clinics, with the extent varying according to the clinics' allocations defined in the study plan. To ensure the record-keeping of the tasks and activities which must be performed by a veterinary graduate, the university introduced a system of written records of clinical practices at the university clinics. It has the form of the *Clinical Practice Record Book*, which lists all the tasks and activities required at the different clinics with the prescribed allocations of hours. It contains records of practices completed by each student including a confirmation of their completion by a respective guarantor from each clinic. A total of 80 hours of summer training with private veterinarians members of the CVS is also recorded in the book. The training (at a veterinary outpatient practice, a clinic, an infirmary, or an animal holding) is attended by the students after completing the  $5^{th}$  year of study. Having previously completed a significant number of clinical subjects at the university, the students perform, under supervision of a respective veterinary surgeon, professional activities and services relating to veterinary care, i.e. those of preventive, prophylactic, diagnostic and therapeutic character. The students keep records of their activities in the record book, which is certified by the respective veterinary surgeon. The verification is done by an authorised UVMP teacher, a veterinary surgeon who organises and conducts the professional training, and a representative of the CVS.

Practical clinical training in Diseases of Small Animals at the Clinic of Small Animals is allocated 120 hours (out of which the allocation by specialties is as follows: surgery and orthopaedics: 40 hours, internal diseases: 40 hours, infectious diseases and parasitology: 20 hours, reproduction in dogs and cats: 20 hours). The training takes place in the 5<sup>th</sup> and the 6<sup>th</sup> year of study. Each specialty has prescribed diagnostic and organisational procedures that the students learn once they have completed Surgery, General Anaesthesiology, Radiology and Diagnostic Imaging. The practical clinical training under each specialty (surgery, internal diseases, reproduction, infectious and parasitic diseases) consists of compulsory surgeries, during which the students assist and are afterwards given recommendations on the surgical procedures. The practical clinical training is carried out under supervision of a teacher who performs clinical activities (diagnostics and therapy) with the students. The students can choose the time of participation in the clinical training at the beginning of a semester or adjust it according to the number of patients and prescribed diagnostic and therapeutic procedures. The clinical training at the Section of Surgery, Orthopaedics, Radiology and Reproduction lasts a minimum of 4 hours a day in one undivided block. The students come into contact with the owners, participate in the basic clinical examinations, and write clinical protocols. They consult the teachers, who perform clinical activities. Afterwards, a suitable therapeutic treatment is proposed, with the students being actively involved in it. The group sizes are limited to a maximum of 4 students per patient. The clinical exercises before rotations include general surgery and anaesthesiology, and radiology and diagnostic imaging. The students receive clinical training from 8 a.m. to 6 p.m. The students are allowed to observe while treatment is provided to acute and emergency cases. As a result, they may engage in examination and treatment of acute patients. At weekends, from 9 a.m. to 12 a.m. the students may perform teacher-assisted medical interventions in the patients. Clinical training at the Section of Internal Diseases is provided within the office hours of the

outpatient care unit of the Section of Internal Diseases, i.e. 9 hours on weekdays and 3 hours at weekends and public holidays. In the case of hospitalised animals the students' visits of the clinic are prolonged as necessary. The clinical training is compulsory for all students in the extent prescribed by the study plan and is structurally included into instruction. A total number of days used for the clinical training is 365, i.e. the whole calendar year. The clinical training at the Section of Internal Diseases takes place in the 5<sup>th</sup> year of the GVM study programme. The specialty areas are fully covered according to the requirements defined in the Clinical Practice Record Book. The time to be dedicated to each of the areas is not fixed and it depends, on a case-by-case basis, on the type of the patients who are present. The rotations are carried out in the form of the prescribed, at least 3-hour sessions of practical training during the day, or during emergency services (if a given case so requires). The groups comprise a maximum of four students. The scope of activities within the clinical training includes the overall management of an admitted patient, preparing the patient's protocol and its submission, establishing a diagnostic plan, differential diagnostic procedure, proposal for therapy, and learning elements of simple therapeutic treatment: administration of a substance via various routes (p.o., s.c., i.v., i.m.), intravenous cannulation, collection of blood and other biological material, rinsing out of anal sacs, enema administration. It also includes diagnostic and therapeutic activities at the clinic's specialized units: dermatological, cardiorespiratory, endocrinological, nephro-urological, gastroenterological, USG, neurological. Among other activities are also collection and processing of samples for haematological and biochemical examination, assessment and evaluation of the results of laboratory analyses from the point of view of clinical haematology and biochemistry. Students can embark on clinical training at the Section of Internal Diseases after they have completed the first semester in Internal Diseases of Small Animals, and gained basic knowledge in the subject and the practical skills necessary for the clinical training.

Practical clinical training in *Diseases of Poultry* (60 hours in the 5<sup>th</sup> year of study) takes place in the form of demonstrations, clinical and post-mortem examinations in the teaching rooms of the *Clinic of* Birds, Exotic and Free-Living Animals. Both, the hospitalized patients and the clinic's own animals intended for practical training are used (poultry of various ages and species, pigeons, exotic birds, rabbits, guinea pigs and reptiles). The clinic provides housing for wild-living animals within a rehabilitation station for handicapped animals, which the students also work with during the practical clinical training. The students directly participate in the diagnostic examinations and the therapy while being supervised by a teacher on duty and the nursing staff. The animals kept by the interest clubs (aquatic, terrarium animals, raptors, small mammals, exotic birds) are also made use of in the training as the clinic provides treatment for the diseased animals from these clubs. Practical training in fixation, animal handling and collection of biological material takes place in the clubs' premises. Clinical training is also done in the form of field trips to poultry farms under supervision of an external teacher - specialist. The students participating in the clinical training work on their own to examine and dissect animals, and draw up clinical protocols. The responsibility for the practical clinical training lies with the veterinary surgeon on duty. The training is done in groups of 4-8 students. The students write clinical autopsy protocols concerning the animals that have died and hand them in.

Practical clinical training at the *Clinic of Horses* is provided within the subject *Diseases of Horses* in the 5th and the 6<sup>th</sup> year of study and lasts a total of 90 hours. The student rotations by individual study groups are part of week-long training/rotation at the clinic for all students in the 5<sup>th</sup> and the 6<sup>th</sup> year of study, and include weekends. One week in a semester including the weekend is set aside for each study group. The study groups are looked after by a veterinary surgeon in charge. For the rest of the semester, it is possible to compensate for the practical clinical training by practical training with a veterinarian on duty, including fieldwork. The student rotations in groups are week-long and each student is obliged to participate in a morning ward round (6.30 a.m. - 8.30 p.m.) and an evening ward round (6.00 p.m. - 8.00 p.m.). The students participate in diagnostic activities and provide therapy to patients. They attend and may assist during acute and planned surgeries. The students are expected to actively participate in regular ward rounds. They are assigned patients by the veterinary surgeon on duty as needed. Records are kept in a daily patient record. During the scheduled week at the clinic, the students work in liaison with the veterinarian on duty to jointly deal with all the cases and the treatments that occur at the clinic during the given week, including fieldtrips and treatment provided outside the university (monitoring of patients within differential diagnostics, therapy and diseases prognosis). Each student must be confronted with the cases of colic, neutering, i.v. therapy, even if no such cases occur during his/her scheduled week. In addition to the clinic's premises at the university, the practical clinical training also takes place with

private horse breeders, where students perform the necessary diagnostics and other activities under supervision of a teacher.

A total of 90 hours of practical clinical training is prescribed within the subject Diseases of Ruminants at the Clinic of Ruminants in the 5<sup>th</sup> and the 6<sup>th</sup> year of study. The clinical training starts in the 5<sup>th</sup> year and the 10<sup>th</sup> semester with training in laboratory diagnostics at the clinic's clinical laboratories. This training lasts one week within a predefined period and is done in small groups (5 - 6 students). In the  $6^{th}$  year of study (the  $10^{th}$  and the  $12^{th}$  semester), the clinical training takes place on the clinic's premises which are used for clinical activities and animal housing. The students engage in diagnostics and therapy of the hospitalized animals under supervision of a veterinary surgeon on duty. They perform all necessary tasks and activities relating to diagnostics and therapy, which are derived from the list of activities included in the Clinical Practice Record Book. In addition to the clinical training at the clinic, the students also do field practice on the UF or other farms around Košice as required by the breeders. They are supervised by a designated teacher from the clinic. This practical training follows the same pattern as in the 5<sup>th</sup> year, with small groups of a maximum of 5 - 6 students and the exact time and date of the training. The training lasts 1 week (7 days) during semester and sometimes also during exam periods. Emphasis is placed on the acquisition of additional skills and experience in the area of production diseases of dairy cows, the ability to solve reproduction problems, orthopaedic diseases, diseases of young animals, and taking preventive measures to decrease morbidity and losses in production.

Practical clinical training at the *Clinic of Swine* is done in the 6<sup>th</sup> year of study and lasts 60 hours in total. Its thematic focus follows the content of the individual subject components and takes place on the clinic's premises. Clinical training in the Internal Diseases of Swine involves individual work with the patient (diagnostics, therapy). The students cooperate with the veterinarian on duty to monitor the patient's state during the entire clinical training, including weekends, and they must draw up a protocol and demonstrate that they have the required practical skills and theoretical knowledge (graded credit). As part of the training in special surgery and orthopaedics of swine, the students gain manual dexterity in operating diagnostic devices and performing surgical therapy in diseased piglets, gilts, sows and boars. Clinical training in reproduction and andrology of swine equips the students with manual skill in operating diagnostic devices and using organisational, therapeutic, biotechnical and biotechnological methods and procedures in controlled reproduction in swine. Since performing the individual elements of the training activities is rather time-consuming, the training is provided in the form of blocks during the day and in the case of assisted birth-giving of sows also at night. The clinical training takes place on the clinic's premises and in the field conditions at pig holdings (on the UF and a commercial pig farm). The clinical training is done in groups of 5 - 10 students. The students work on their own, with the teacher acting as a professional advisor (i.e. he/she ensures that the individual tasks are performed in a professional manner) and he/she oversees the students' safety while they perform the tasks.

A mobile clinic offers an opportunity for practical training and activities outside the university clinics, especially as regards the Clinic of Horses, and the Clinic of Ruminants. The Clinic of Horses performs theses activities at the horse breeders' establishments according to their requirements and needs either in the form of trips to the patients or by providing certain arranged diagnostic and preventive treatments. The Clinic of Ruminants uses mainly the UF and some cooperating farms around Košice to this end. The mobile clinic plays a vital role in covering part of the established extent of clinical training provided by the two clinics. The students participate in the activities of the mobile clinic usually in small groups of 3-6 students. They are accompanied by a teacher or teachers. There are cars with a capacity of 3-7 persons made available for the purpose of the training on the farms. If there are more extensive field training activities planned covering a greater number of animals, e.g. those relating to preventive diagnostics of metabolic disorders (metabolic profile tests), reproduction-related examinations (pregnancy examinations, puerperal health problems, infertility), or when taking preventive measures in animal holdings (vaccinations, collection of blood samples or other biological specimens for diagnostic purposes), participation of larger student groups is also possible. In such cases, there is a minibus available. The mobile clinic is made use of by the Clinic of Ruminants also for orthopaedic interventions in cows at the dairy cow holdings, which include the treatment of hoof disorders or regular preventive hoof care.

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The obligatory requirements of the curriculum are specified in the program study plan and are in accordance with the national legislation (http://www.uin.no/en/studies/manage-your-studies/rules

regulations/Documents/Regulations%20concerning%20studies%20and%20examinations%20at%20Unive rsity%20of%20Nordland%201st%20August%202014.pdf).

In general, if absent from the obligatory training, the student should deliver a doctor's certificate or other confirmation of absence. Absences are replaced in many ways, usually after consultation with the course coordinators, and when this is done the students are allowed to take the final exams, otherwise the final examination is withheld until the obligatory requirements are met. Students are required to pass all courses at FBA in order to continue at UVPM in Košice.

In general, all lectures are voluntary, but all practical training is obligatory (a certain percentage of attendance is required according to the courses).

There is a variety of assessment methods in all courses and usually the final assessment includes a portfolio and the final exams.

Prior to any laboratory work, all students are obliged to attend the Laboratory Safety course. No unsupervised laboratory work is conducted at FBA by bachelor students.

# 4.1.4 OBLIGATORY EXTRAMURAL WORK

These are training periods that are an integral part of the curriculum, but which are taken outside the Faculty. Please make a distinction in respect to the nature of the work, for instance work on farms, training in a veterinary practice or in Food Hygiene/Public Health with a commercial or government organisation. Please indicate the guidelines pertaining to this activity, and the manner by which it is assessed.

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*Field practice at the university facilities.* The field practice is intended to show the students the different employment possibilities of a veterinary surgeon, build a positive attitude to work while making them acquainted with the different techniques and technology of animal production (UF), the work at the Equestrian Centre, and the Special Facility for Breeding and Diseases of Wild-Living Animals, Fish and Bees in Rozhanovce. The students also engage in the activities of the university clinics, where they help perform simple acts of veterinary care.

**Practical training at the State Veterinary and Food Institutes (SVFI).** The students become acquainted with the operation, organisation and work at the different departments of the SVFIs. They apply the methods used in laboratory diagnostics and evaluate the results that they have obtained. They work mainly at the departments of microbiology, nutrition and dietetics, toxicology, pathological anatomy, clinical biochemistry, virology, serology and parasitology. They participate in activities of reference units established at the respective SVFIs. They learn how to manage their professional activities and acquaint themselves with administrative tasks. The control is performed by a university teacher nominated by the Rector (the guarantor of the training) and a veterinary surgeon from the SVFI in charge of the organisation and professional management of the practical training.

**Practical training at the District Veterinary and Food Administration (DVFA).** Students acquaint themselves with activities performed by official veterinarians - the state administration employees in the veterinary field - during the incidences of infectious diseases, zoonoses or mass animal disease outbreaks, controls of livestock holdings, facilities for production and processing of raw materials and food of animal origin, during animal welfare controls, and supervision of professional veterinary activities and services provided by private veterinary practitioners. They also participate in examination of animals in slaughterhouses and controls in other food businesses.

The students acquaint themselves with the work of DVFAs regarding veterinary controls at borders aimed mainly at the inspection of imported, transported and exported commercial goods which are subject to veterinary control. The control is performed by a nominated university teacher and a veterinary inspector in charge of the organisation and professional management of the practical training.

**Practical training at food businesses** (milk and dairy production establishments, slaughterhouses, poultry processing plants, game collection centres, egg collection and packing centres, fish factories). The purpose of the training at food businesses is to learn about the organisation, system of management and operation of a food business, and with the food surveillance procedures. Practical training at a milk and dairy production plant focuses on the system of milk collection, qualitative and quantitative incoming inspection of raw materials, and inspection of packaging, ingredients, and processing aids. The students acquaint themselves with the production technology of various dairy products and the principles of good

manufacturing practice, the HACCP system, technological equipment, the function, basic parameters, operational hygiene and the production management methods at the plant. They learn about the system of quality management and quality control at the milk and dairy production plants and the activities of their laboratories, the control between the different production stages, the collection and processing of stage milk samples and dairy products. They learn about the manipulation, recovery and hygiene of secondary raw materials and waste, sanitary regime at the plant and the control of its effectiveness, disinfection, disinfestation and rodent control. At meat production plants (slaughterhouses, poultry processing plants, game collection centres, egg collection and packing centres, fish factories), the students acquire practical work habits and skills in food inspection. The practical training involves the inspection of slaughterhouse animals, diagnostics, and the assessment of technological defects and pathological and anatomical changes in meat and organs, and making decisions about their usability. The students acquaint themselves with food surveillance during poultry processing and storage, manufacturing of poultry products, during the collection and processing of game, the production and processing of eggs and egg products, and during fish processing.

Practical training with private veterinary surgeons, members of CVS. Private veterinary surgeons perform their duties in accordance with Act No. 442/2004 Coll. on Private Veterinary Surgeons and on the Chamber of Veterinary Surgeons of the Slovak Republic and with Act No. 39/2007 Coll. on Veterinary Care. In compliance with the duties laid down by this legislation, they keep records of their professional veterinary activities, preventive care and treatment, and of the medicines used. They fulfil duties in terms of their responsibility for general veterinary prevention, protection and measures to be taken to overcome animal disease incidences or disease outbreaks. They provide first aid to animals and report occurrence of hereditary and birth defects. The practical training is aimed at becoming acquainted with the organisation and work of a private veterinary surgeon in terms of the above-mentioned duties. Under supervision of a veterinary surgeon, the students perform professional veterinary activities and services pertaining to veterinary care, i.e. the preventive, prophylactic, diagnostic and therapeutic activities. They keep records of their professional veterinary activities, the preventive measures taken and the therapeutic treatments. The control is performed by a designated university teacher, and a veterinary surgeon in charge of the organisation and professional management of the practical training, and a representative of the CVS. The students choose the place of the training and the veterinary surgeon from a list compiled by the CVS, which contains the names of the private veterinary surgeons who meet all the necessary criteria for providing practical training to UVMP students.

The student keeps records of the practical training in a Clinical Practice Record Book, which is certified by the private veterinarian on the basis of predefined criteria. Thereafter, the student hands the certified book in to the guarantor of the practical training to document the completion of the practical training.

		Minimum period		ım period	<sup>1)</sup> Year in which
Nature of work	hours	% of total study time	hours	% of total study time	work is carried out
Production practice at the university	20	0.46	20	0.46	0*
facilities					
Practical training – SVFI	80	1.83	80	1.83	3 <sup>rd</sup>
Practical training – DVFA	80	1.83	80	1.83	$4^{\text{th}}$
Practical training – Food processing	40	0.91	40	0.91	$4^{\text{th}}$
plants and slaughterhouses					
Practical training – private surgeons	80	1.83	80	1.83	5 <sup>th</sup>
Total	300	6.86	300	6.86	

Table 4.	5 Obligatory	extramural	work that	students must	undertake as	part of their	course
						1	

\* after registering in the first year of study (prior to the beginning of studies)

SVFA – State Veterinary and Food Administrations

DVFA - District Veterinary and Food Administrations

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No obligatory extramural work is required of the students.

# 4.1.5 SPECIFIC INFORMATION ON THE PRACTICAL TRAINING IN FOOD HYGIENE/PUBLIC HEALTH

Describe arrangements for teaching in a slaughterhouse and/or in premises for the production, processing, distribution/sale or consumption of food of animal origin.
Indicate the distance to slaughterhouses where students undergo training, and the species covered. Outline the structure and the frequency of these visits (group size, number of trainers, duration, etc.).

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Training in the inspection of slaughter animals under the subjects of Food Hygiene and Technology II and III, which cover teaching of food hygiene/public health, is structured as follows: the students take a tour of the poultry slaughterhouse Hydina Slovakia s.r.o. (SK 301) in Košice. They learn about the complex technology of slaughtering poultry at the facility. The students are offered practical training covering: the system of the poultry admission for slaughter, control of documents (information about the food chain), delivery identification, animal welfare assessment in terms of transport, unloading and hanging the poultry on a technological line. A significant attention is paid to the welfare of the poultry during electrical stunning. Once the students have become acquainted with the technology of poultry processing, they are informed about the documents relating to HACCP in the production process, with particular attention being paid to the danger analysis and the critical control points that are applied at the visited facility. The students take part in a post mortem veterinary inspection of the slaughtered poultry with an official veterinarian or an assistant at a designated place within the processing line. The students also get the chance to scrutinise samples, which have been removed from the line during visual examination (adspection). The students also become acquainted with the processing of slaughterhouse by-products during the training.

Practical training in animal inspection – inspections of cattle, swine, sheep, goats and domestic solipeds also takes place at certified slaughterhouses. The examination techniques and technological processing of swine slaughter are demonstrated at the UF (SK 8114L). The advantage of this form of training is the option to slaughter the swine either in the presence of the students (to enable them to perform ante-mortem medical examinations and observe how the animals are handled and killed) or before their arrival (to allow more time for post-slaughter medical examination and the decision-making about the meat). The procedures of medical examination of cattle are taught at the slaughterhouse in Gelnica -Ing. Stanislav Marcinek (SK 8052). Inspection of sheep (lamb) is practised at the facility Agrokombinát a.s. in Sabinov (SK 45). Routine veterinary inspection of slaughtered animals (cattle and swine) is performed by the students within the training at the facility Dalton s.r.o. Košice (SK 8052), based on an Agreement on Cooperation and Provision of Practical Training No. 1058/2011/UVLF concluded between the university and the facility. Practical exercises are also done at the slaughterhouse BRUTUS s.r.o in Trebišov (SK 8111). Owing to their sufficient slaughter capacity, the last two facilities have enough animals available, enabling the students to gain access to animal inspections and make decisions about the meat. Cutting up of meat is also done at these facilities. The Dalton facility also makes meat products, which gives the students an opportunity to learn about the technologies in production of a variety of meat products and the food safety system used. Demonstrations of handling of slaughterhouse by-products are given at each of the facilities. Inspection and control of foodstuffs of animal origin is taught in the 5<sup>th</sup> year of study. The subject conveys general and specific knowledge about the official control procedures concerning living animals and products of animal origin on the national and European levels so that the students can apply the knowledge and the procedures in practice throughout the entire food chain "from stable to table".

A total of 39 hours are allocated to practical training in hygiene and technology of poultry, eggs, game and fish, including one 6-hour practical exercise on the poultry inspection for a group of approx. 12 students with one teacher. Another practical exercise lasting 6 hours covers hygiene and technology of fish and takes place at Ryba s.r.o. Košice facility (SK 9-90). Another 3-hour practical exercise is focused on

egg processing at the facility Eggproduct a.s. Prešov (SK 289) located approximately 30 km from the university. One practical exercise lasting 3 hours takes place at Komes Plus (SK 2) in Rozhanovce – a poultry meat-processing facility located 10 km from UVMP in Košice. The visit involves getting acquainted with the process of cutting up and calibration of chilled poultry meat and a unique IQF technology of freezing final products. The rest of the practical training covers laboratory examination of poultry, eggs, fish and game, with the student groups of 12 - 16 students working under the supervision of one teacher. Meat hygiene and technology is taught in two semesters in the 5<sup>th</sup> year of study. Slaughterhouse animal inspection is covered in the first semester with 26 hours of teaching. The practical exercises last approx. 6 hours, and the groups comprise 16 - 20 students and two teachers. The groups take turns visiting the slaughterhouses 5 times per semester. One 4-hour demonstrational practical exercise covering swine slaughter takes place at the slaughterhouse of the UF (35 km from Košice). Another 4hour demonstrational training takes place at the slaughterhouse in Gelnica (39 km from Košice) and covers cattle. The remaining practical trainings last 6 hours and are conducted mainly at the slaughterhouse Dalton s.r.o. in Košice. The practical training is performed at the slaughterhouse BRUTUS in Trebišov (39 km from Košice). The students are divided into two subgroups: in one subgroup with one teacher the topic of practical training is explored in theory, while the other subgroup with a teacher and a supervising official veterinarian does the practical part of the training, and then the groups change places. A semester can be concluded providing that the students' knowledge of the respective topics has been tested both practically and theoretically.

In the second semester, due to a seasonal nature of sheep and lamb slaughtering, the students participate in another 3-hour practical exercise at a sheep and lamb slaughterhouse Agrokombinát a.s. Sabinov (SK 45), located 55 km from Košice. In this semester, the main emphasis is placed on laboratory examination of meat, meat products, tinned meat and fat, with the training lasting 36 hours in total. One group comprises 8 - 12 students with one teacher and the exercises last 3 or 6 hours depending on the analytical methods used. The students work in pairs to examine the samples that were assigned to them, draw up protocols on laboratory examination, and present their results for public discussion.

The extent of the subject Inspection and control of foodstuffs of animal origin is 26 hours of exercises. The theoretical preparation covers teaching the system of official controls that are used by the competent authorities, and the specific techniques (inspection, verification, monitoring, control, audit, collection of samples and their testing) designed for this purpose. The students have an opportunity to familiarize themselves with the details of the veterinary control procedures (documentary, identification, physical) used by a competent authority (a veterinary inspector) for the imported goods from third countries which are subject to veterinary control, including collection of fees imposed for import and transit of consignments. Owing to a unique geographical location of the Slovak Republic in the EU, the students have the opportunity to visit an approved border inspection post (BIP) in Vyšné Nemecké (a border crossing point), which is situated at the EU's external border within the border zone between Slovakia and Ukraine. The students visit the post in study groups and are accompanied by one or two teachers depending on the sizes and the number of groups in a given study year. One group consists of 8-13 students on average. As the distance of the BIP in Vyšné Nemecké is 91 km from the university, the visit at BIP comprises two practical exercises lasting 4 hours.

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In the  $2^{nd}$  semester, the students are given the option to participate in an Internship Scheme. They spend at least 4 days in two local private clinics, they are involved in the field visits of a local veterinarian who works with large terrestrial animals and they are involved in the activities of the local office of the Norwegian Food Safety Authority (NFSA). In year 2015, due to heavy workload, the students were involved only in the first three activities. There is also a visit in a slaughterhouse, which usually takes place in the  $2^{nd}$  semester.

# **4.1.6 RATIOS**

These must be delineated from Table 4.1, 4.2 and 4.3. For explanation about ratios, see the section 'Main Indicators' of Annex I. The indicator derived from the ratios established is the denominator when the numerator is set 1.

# 4.1.6.1 GENERAL INDICATORS TYPES OF TRAINING

As indicated in tables 4.1, 4.2 and 4.3, the figures for the numerators and denominators are defined as follows:

Study I	Programme in General Veterinary Medicine	?				
R6:	Theoretical training (A+B+C) Supervised practical training (D+E+F)	=	2220 2618	- =	<u>1</u> 1.179	Denominator <b>1.179</b>
R7:	Clinical work (F) Laboratory work and desk-based work + non-clinical animal work (D +E)	=	807 1421	- =	<u>1</u> 1.176	1.176
R8:	Self-directed study (C) Teaching load (A+B+C+D+E+F+G)	=	92 4810	- =	1 52.282	52.282
Joint E	Bachelor Programme in Animal Science					
R6:	Theoretical training (A+B+C) Supervised practical training (D+E+F)	=	1496 529	- =	1 0.923	0.923
R7:	Clinical work (F) Laboratory work and desk-based work + non-clinical animal work (D +E)	_	56 473	- =	<u>1</u> 8.527	8.527
R8:	Self-directed study (C) Teaching load (A+B+C+D+E+F+G)	=	390 2062	- =	1 28.499	28.449

# 4.1.6.2 SPECIAL INDICATORS OF TRAINING IN FOOD HYGIENE/PUBLIC HEALTH

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	Total no. of our involum hours in Food					Denominator
<b>D</b> 0.	hygiene/Public health		325		1	13 /83
KJ.	Total no. of curriculum hours in veterinary curriculum	_	4382		13.483	13.405
D10.	Total no. of curriculum hours in Food hygiene/Public health		325	_	1	0 123
<b>K</b> 10:	Hours of obligatory extramural work in veterinary inspection		40		0.123	0.125

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Denominator

D0.	hygiene/Public health	_	52	_	1 ,	10 75
К9:	Total no. of curriculum hours in veterinary curriculum	_	1469	—	28.25	20.23
<b>D</b> 40	Total no. of curriculum hours in Food hygiene/Public health		52	_	1	0 115
KIU:	Hours of obligatory extramural work in veterinary inspection		6	_	0.115	0.115

#### 4.2 COMMENTS

Please comment on:

**T** ( 1

- the way in which the veterinary curriculum prepares the graduate for the various parts of the veterinary profession, especially under the specific conditions prevailing in your country/region.
- the way the curriculum is structured and reviewed.
- the major developments in the curriculum, now and in the near future.
- the local conditions or circumstances that might influence the ratios in 4.1.6.

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Owing to the specific conditions prevailing in our country's region, the educational process at UVMP in Košice is continuously assessed, and in liaison with the study subject guarantors, the study programmes are internally audited after the completion of each cycle, taking into consideration the suggestions of the teachers, students, and professional and expert organisations.

In the 2013/2014 academic year, an adopted study plan was used in teaching the *GVM* study programme, which creates suitable conditions for gaining 'day one skills' (*OIE recommendations on the Competencies of graduating veterinarians ("Day 1 graduates") to assure high-quality of National Veterinary Services); Revision EU Professional Qualifications Directive (PQD) – FVE). It adheres to the basic principles of the credit system of study, and is compatible with the curricula of other veterinary universities in terms of providing opportunities for student mobility and mutual recognition of subjects. It follows a species-based, medical approach in teaching clinical disciplines and avoids duplications in teaching and examinations by awarding credits for the completed subjects only once (i.e. a subject can be assessed only once – by means of either a preliminary or a state examination with a credit value allocation).* 

In addition, an efficient system of clinical practices within the GVM study programme has been developed in cooperation with the heads of the UVMP clinics, with record-keeping of the student activities in clinical practice record books and supervision by designated teachers.

The study plan must ensure a veterinary graduate's versatility in terms of his/her employability (clinical skills, veterinary and hygiene control, state inspection, and protection of public health).

The study plan must create conditions for gaining day one skills (*OIE recommendations on the Competencies of graduating veterinarians ("Day 1 graduates") to assure high-quality of National Veterinary Services*). The study plan must comply with the international requirements for education of the veterinary surgeon as a regulated profession (*EU Directive 2005/36 EC; the Revised EU Professional Qualifications Directive (PQD) – FVE*). The study plan must respect the basic principles of the credit system of study. Earning of credits must be evenly distributed, with 60 credits earned for each year of study, i.e. 360 credits in total. The study plan must be compatible with the curricula of other veterinary universities in terms of providing opportunities for student mobility and mutual recognition of subjects.

The study plan must follow a species-based, medical approach in teaching clinical disciplines. It must not duplicate the content of teaching. Changes to the study plan must lead to a decrease in the teacher and student workload and improve the quality of teaching.

Recently, some changes have been introduced to the study plan. The names and the content of the subjects have been adapted to comply with EU Directive 2005/36/EC; the Revised EU Professional Qualifications Directive (PQD) – FVE) and new subjects have been introduced in accordance with the

same EU Directive. The numbers of credits in the different years of study have been adapted to enable the students to earn the standard 60 credits in one year of study. Credits are also awarded for practical training and internships, as well as state examinations. A state examination in Food Hygiene, Safety and Quality has been included into the study plan in the 5<sup>th</sup> year of study, along with a state examination in Contagious Diseases of Animals, Environmental Protection and Veterinary Legislation, ensuring that the graduates are prepared to work in veterinary hygiene services and the state veterinary medicine sector. Obligatory elective and optional subjects have been included in the 6<sup>th</sup> year of study and can be enrolled in after completing the obligatory clinical subjects.

With regard to the development of study programmes and for the purpose of streamlining the study plans, we are planning to intensify the cooperation with the guarantors of study programmes, harmonize the study plans to eliminate duplications in teaching, create more efficient links between the subjects and ensure they are mutually complementary, while taking into account the current needs of practice. Bringing the syllabi of all subjects up to date is also planned.

Another task in the future is to improve employability of the UVMP graduates, take the needs of practice into account, and cooperate with professional organisations in development of study plans. Our plan is also to optimize the credit system of study to simplify international student mobility. Further implementation of additional academic information system applications (creating schedules, study groups, student accommodation, electronic student registration, etc.) is also planned.

In addition, we would like to make a better use of modern student-oriented communication and teaching tools such as interactive whiteboards, video recordings, e-learning, etc., so that the availability of teaching material is improved.

We plan to actively promote the opportunities for study at UVMP in Košice both in Slovakia and abroad, and participate in higher education fairs with the aim of attracting new high-quality students.

As a result of a decrease in the numbers of food-producing animals and closures of some slaughterhouses and businesses producing foodstuffs of animal origin, practical training in certain activities relating to food hygiene has become more difficult, which might adversely affect the fulfilment of the indicators in 4.1.6.

#### Joint Bachelor Programme in Animal Science

In some courses, there are students from other bachelor programmes, as well as exchange students. This increases the workload for the teaching staff and requires the formation of more groups for the practical exercise. For the same reason and due to the lack of additional technical staff, in the Ecology and Biodiversity course there are no practical exercises for the students of the JBPAS.

## **4.3 SUGGESTIONS**

If the denominators in 4.1.6 for your Faculty are not meeting the range as indicated in Annex I, Supplement A, what can be done to improve the ratios?

## Study Programme in General Veterinary Medicine

All indicators in the GVM study programme meet the denominators established by ECOVE.

#### Joint Bachelor Programme in Animal Science

All indicators in the *JBPAS* with the exception of the R7 indicator meet the denominators established by ECOVE. The value of the R7 indicator is logical considering that there is very little clinical training in animal work in the JBPAS.

# **Chapter 5. TEACHING AND LEARNING: QUALITY AND EVALUATION**

# **5.1 FACTUAL INFORMATION**

## **5.1.1 THE TEACHING PROGRAMME**

Describe the measures taken to ensure co-ordination of teaching between different departments, sections, institutes and services.

Describe the pedagogical approach of the institution. In particular, describe the use of newer

approaches, such as problem-based learning, interactive computer-assisted learning, etc.

Indicate the extent to which course notes are used to supplement or substitute for the use of standard veterinary textbooks.

Describe (if applicable) any established or contractual arrangements that support undergraduate teaching between the Faculty and outside bodies, e.g. farms, breeding centres, practitioners, state veterinary services, factories/processing plants, outside laboratories, etc. Briefly describe how these arrangements work out in practice in terms of the contact this provides for all students or for selected students. Describe the general learning objectives underlying the veterinary curriculum and how this is

ensured. Describe how the Faculty collects the data required to ensure

Describe how the Faculty collects the data required to ensure students are equipped with these Day-one skills (evidence of learning)

# THE TEACHING PROGRAMME – UVMP IN KOŠICE

The teaching programme is based on the study plan of the respective study programme. Instruction is provided by the university departments, clinics, institutes and other units of the university.

Instruction is co-ordinated at the level of the Vice-Rector for Education and Study Affairs and the Pedagogical Committee of the university, which meets as necessary.

The teaching process and its co-ordination are regularly on the agenda of the university Management, the Rector's Collegium and the Scientific Board of the university.

The teaching is carried out according to the study programmes. At the beginning of a semester, study schedules are prepared for the entire university, both for the theoretical and the practical teaching in each study programme, each year of study and each study group. Requirements made by the individual departments, clinics, institutes and units are taken into account in preparation of the study schedules, mainly as regards block teaching. It should be noted that this system does not require additional, reinforced co-ordination of instruction among the different units of the university during a semester.

The different forms of teaching include lectures, practical training (practical lessons, learning under supervision, clinical training), seminars, consultations, production and specialised practice, short-term training at clinics, or other forms of teaching. Heads of departments, clinics, institutes and other units are obliged to ensure that teaching is delivered to students to the extent determined by the study programme and within its content. It is within the competence of a head of subject to annually innovate its content by selecting lectures or practical lessons that reflect the most recent scientific knowledge or requirements of practice, after first discussing it at the meeting of his/her department or clinic.

Direct responsibility for the organisation and quality of teaching lies with heads of subject. Heads of departments or clinics are responsible for drawing up the teaching programmes for the study subjects whose heads are the teaching staff at their departments or clinics. They are obliged to publish them at least one week before the beginning of the semester concerned.

Students mostly work with biological material – cells, tissues, organs and whole animal bodies, with live animals or carcasses during practical training. Some cases, mainly the inaccessible ones, are demonstrated by means of video recordings or multimedia study materials (media). Many subjects (basic and clinical) are taught off-site in the form of block teaching, with practical training undertaken in the field. Live animals are used in the teaching process, with students working independently following instructions of the teacher. In some subjects focused on food hygiene, the students work independently under professional guidance while they inspect meat and organs at meat-processing and dairy plants, and other agri-food enterprises.

In many subjects there are multimedia texts available (CDs) either in the form of manuals for practical lessons or specialised lectures which can be used by the students.

Scientific monographs, university textbooks, course books and other study materials are used in the teaching process. Textbooks and course books are used in most subjects. Students receive a list of

recommended and supplementary literature at the beginning of a course. The recommended literature is in Slovak and English. The supplementary literature is in Slovak/English, which is available at the University Library, or in the subsidiary libraries at the university departments or clinics. The students can borrow study materials from the Library or use the Library study room, where a service is provided also after working hours and at weekends.

Some subjects, particularly the clinical ones, are taught off-site. The UF owned by the university is of great benefit to students, providing space for clinical training, teaching the subjects covered by the Institute of Animal Breeding, teaching the selected chapters on nutrition and dietetics, as well as some subjects in food hygiene.

UFBD offers space for teaching Infectious and Parasitic Diseases and Animal Breeding and Hunting. The teaching process provided at this special facility greatly enriches the students' practical knowledge. Clinical training is also done at the university Equestrian Centre (EC) where Infectious and Parasitic Diseases, Internal Diseases of Horses, Breading of Horses and an elective subject Training and Rehabilitation of Horses are mostly taught.

The offices of the SVFA (DVFA, SVFI) enable students to receive practical training and work on their diploma theses. The employees of the SVFA are also involved in the teaching process, e.g. by delivering special lectures and/or are appointed as members of state examination committees.

Cooperation with the CVS involves providing practical training with private veterinary surgeons and short-term training at private clinics and veterinary practices.

The educational activities of UVMP in Košice are carried out in liaison with research organisations such as the Institute of Parasitology of the Slovak Academy of Sciences (SAS), the Institute of Neuroimmunology SAS and the Institute of Animal Physiology SAS, mainly in preparation of diploma theses, by delivering specialised lectures to students and through their participation in state examination committees.

There is also cooperation in teaching activities with some private organisations, particularly food production plants, private laboratories, specialized farms etc., which enable the university to conduct practical training in the selected areas of study.

The study plan defines the content and scope of education in a study programme and it is designed in such a way that on its fulfilment students meet the conditions for successful completion of study in its standard length. The main objective of the veterinary curriculum is to gain theoretical knowledge and practical skills necessary for a successful career in veterinary medicine. In order to achieve these objectives, the student must acquire day-one skills including diagnosis, sampling of biological material and the ability to interpret laboratory test results. The curriculum complies with Directive 2005/36EC of the European Parliament and the Council on the recognition of professional qualifications.

Within the theoretical and pre-clinical disciplines in the first years of study, the students become acquainted with the biological laws and their relation to veterinary medicine, study of living matter in broader context in relation to ecosystem and their mutual interactions. The study is aimed at becoming acquainted with biochemical processes, physiology of organs, micro- and macro-organism systems in relation to the differences among various animal species.

The students apply the basic knowledge in the subjects related to animal health and the problems of hygiene in animal breeding. The knowledge acquired in the field of anatomy, histology, nutrition and dietetics, physiology, pathological physiology and pharmacology, toxicology, laboratory and clinical diagnostics is used in medical practice.

The study priority is theoretical and practical education in specific clinical subjects according to the different animal species, e.g. companion animals (dogs, cats), horses and food producing animals (cattle, sheep, goats, swine, poultry, and other species) from the point of view of internal, infectious, invasive diseases and toxic and metabolic disorders, radiation-induced damages, etc. The study includes subjects in food hygiene, enabling the graduates to perform official controls on hygiene and food safety.

The students in the GVM study programme have their practical training at the UVMP clinics and selected practices of private veterinary surgeons. Practices and short-term training at selected practices of private veterinary surgeons are provided based on agreement between UVMP in Košice and the CVS, which was signed for an indefinite period. Practical training can also be conducted at the Košice ZOO, based on a cooperation agreement on development of education. In addition, the students enrolled in the aforementioned study programmes receive practical training at units of the SVFA, particularly at the District Veterinary and Food Administrations and the SVFIs.

In cooperation with the heads of study programmes and the training providers we are currently trying to create an efficient system of practical training with precisely defined activities to be carried out within the training, and the control system of its content. The content and the control system of skills acquired by the students have already been revised.

According to the principles of veterinary education evaluation in Europe, the so-called 'day-one skills' are precisely defined as the competences required of a veterinary medicine graduate immediately after his/her graduation. As regards the practical competences, emphasis is, inter alia, placed on the acquisition of clinical procedures for examination, diagnostics and therapy using species-based approach, with students actually performing clinical activities (hands-on teaching) rather than being non-participating observers. A unified system using clinical and specialised practice record books for veterinary medicine students has been introduced at the university to record the activities required by the aforementioned principles (Annex 5.1). It contains a schedule of clinical and specialised practices according to the individual clinics and the established number of hours in the respective study years and semesters, starting in the 3<sup>rd</sup> and ending in the 6<sup>th</sup> year of study. It contains a list of tasks and specialised activities has been nominated at each clinic and guarantees that the practices are carried out in a requested way, and confirms that the students have completed them (Annex 5.1). According to the study plan, the students are obliged to complete a total of 460 hours of clinical practice during the last three years of study.

The purpose of the field practice is to show the different possibilities for employment of a veterinary surgeon, build a positive attitude of students to work while they become acquainted with the different techniques and technology of animal production (UF), during practices on EC, and at UFBD. Students also participate in performing simple veterinary tasks at the clinics.

Specialised practice at the SVFI. The students become acquainted with the operation, organisation and work at the different departments of the SVFI. They apply the methods used in laboratory diagnostics and evaluate results that they obtain. They work mainly at the departments of microbiology, nutrition and dietetics, toxicology, pathological anatomy, clinical biochemistry, virology, serology and parasitology. They participate in activities of reference units established at the respective SVFI. They learn how to manage their professional activities and acquaint themselves with administrative tasks. The control is performed by a university teacher nominated by the Rector and a veterinary surgeon from the SVFI responsible for the organisation and professional guidance of the specialised practice.

Specialised practice at the DVFA. Students acquaint themselves with activities performed by official veterinarians - the state administration employees in the veterinary field - during the incidences of infectious diseases, zoonoses or mass animal disease outbreaks, controls of livestock holdings, facilities for production and processing of raw foodstuffs and food of animal origin, during animal welfare controls, and surveillance of professional veterinary activities and services provided by private veterinary practitioners. They also participate in examination of animals in slaughterhouses and controls in other food businesses. The control is performed by a nominated university teacher and a veterinary surgeon in charge of organising the specialised practice and providing professional guidance.

Specialised practice with private veterinary surgeons, the members of CVS. Private veterinary surgeons perform their duties in accordance with Act No. 442/2004 Coll. on Private Veterinary Surgeons and on the CVS and the amending and supplementing Act No. 488/2002 Coll. on Veterinary Care and amending and supplementing some acts. Complying with the duties laid down by this legislation, they keep records of their professional veterinary activities, preventive care and treatment, and of the medicines used (Annex 5.1). They fulfil duties in terms of their responsibility for general veterinary prevention, protection and measures to be taken to overcome animal disease incidences or disease outbreaks. They provide first aid to animals and report occurrence of hereditary and birth defects. The specialised practice is aimed at becoming acquainted with the organisation and work of a private veterinary surgeon in terms of the abovementioned duties laid down by the Act on Private Veterinary Surgeons and on the CVS and by the Act on Veterinary Care (Act No. 39/2007).

Under supervision of a veterinary surgeon, the students perform professional veterinary activities and services pertaining to veterinary care – the preventive, profylactic, diagnostic and therapeutic activities, they keep records of the professional veterinary activities, and of preventive measures and treatment. The control is performed by a university teacher in charge, a veterinary surgeon, who organises the specialised practice and provides professional guidance, and a representative of CVS. The students choose the place of the practice and the veterinary surgeon from a list of private veterinary surgeons.

## THE TEACHING PROGRAMME – FBA UIN IN BODØ

#### The coordinating bodies at UiN

The University Board is the supreme body in UiN that has the overall responsibility for the academic quality and the quality assurance system. The Committee for Quality Assurance of Study and Educational Board of the FBA are the essential elements for the management of quality assurance system.

The Education Board of FBA is an advisory body to the Dean and it has the main responsibility for the management of all the Bachelor and Master's programmes. The course coordinators also play an important role in the quality assurance system of UiN, as they are responsible for the planning and implementation of the learning processes of the particular courses. They are also responsible for the organisation of the mid-semester course evaluations and to adequately inform the students about the final evaluations. The students also participate in the management of the course as they are expected to provide their feedback. In addition, students have representatives both in the education quality committee, in the research committee as well as in the Faculty Board.

Every year, in the autumn semester, all course coordinators suggest changes in their courses and these are discussed and approved in the Educational Board meetings. At the end of each academic year, the program coordinators prepare reports on their courses and these are submitted to the Faculty's Education Board. These are included in the faculty quality report, which is treated by the Committee for Quality Assurance of Study Programmes. The report is available to the public. The Committee for Quality Assurance of Study Programmes is an executive committee for the University Board, which advises upon and implements strategies associated with studies and education at University of Nordland.

A key tool in the quality assurance system is what is referred to as Quality Handbook (Kvalitetshåndbok). Quality Handbook is a digital collection of descriptions of how critical processes are addressed in the institution. The purpose is to ensure consistent and complete implementation of these processes. The Quality Handbook is available on-line on the University's webpage:

(http://www.uin.no/no/om-uin/universitetet/kvalitetsystem/kvalitetshandboka/Sider/default.aspx).

The quality assurance in Norway is described in Annex 5.2.

# **5.1.2 THE TEACHING ENVIRONMENT**

Describe the available staff development facilities, particularly in relation to teaching skills. Describe the available systems for reward of teaching excellence (e.g., accelerated promotion, prizes, etc). Describe other measures taken to improve the quality of teaching and of learning opportunities.

## THE TEACHING ENVIRONMENT – UVMP IN KOŠICE

Each academic university staff member has been working to develop his/her pedagogical and research competences. The UVMP graduates who have been accepted to the university after completion of their studies, or newly employed teachers and researchers may enrol on PhD study lasting usually 4 years. After successful defence of their dissertation theses, they are awarded a PhD degree. After obtaining the degree, the staff can develop their teaching and research competences and on fulfilling the recommended and approved criteria they may also obtain a title of Associate Professor. In the case of excellent experts, who fulfilled the demanding criteria established on the university level, a procedure for obtaining the title of Professor may start. General rules on award of the title of Associate Professor and Professor are laid down by the Higher Education Act and universities establish framework criteria to be met before the habilitation or inauguration process can start.

In addition to these possibilities for professional growth provided by the Higher Education Act, there are also other activities that improve teaching and research capabilities of the academic staff. The staff can participate in specialised courses (work with laboratory animals, work with radioisotopes, X-rays, certain chemicals, toxic substances or certain microorganisms, etc.).

Other optional courses are aimed at improving foreign language skills, IT skills, presentation skills, time management, etc.

The teachers and researchers are regularly (annually) evaluated. The university has established and approved criteria for evaluation of educational, scientific and research activities expressed by the number of scientific publications. Rankings of top university departments, clinics, institutes and individuals are published

in the university journal. The award winners are announced at the academic year opening ceremonies in the University Hall. An annual award for the best scientific publication of a young researcher under 35 years is also presented. Other activities and achievements beyond the usual obligations are also evaluated (e.g. organisation of seminars and conferences, involvement in clinical operation and the like).

Evaluation of teaching and individual teachers is also done by the students once per semester. Suggestions from the students are discussed at the department, clinic and the Rector's levels, followed by taking necessary measures at each of the levels.

Educational activities are regularly evaluated at meetings of the university Management, Rector's Collegium, Scientific Board, Academic Senate, and at gatherings of the university teachers and researchers, where measures are taken to eliminate the shortcomings found.

Education quality (and teaching, indirectly) is interpreted as a graduate's competence, which means that the graduate is sufficiently qualified to perform tasks resulting from the degree awarded to him/her by an academic faculty. Directive 2005/36 EC of the European Parliament and of the Council on recognition of professional qualifications sets out the requirements for knowledge and skills (competences), which enable veterinary surgeons to perform all their duties. The basic competences are divided into three main areas:

- 1. General professional abilities and characteristics.
- 2. Basic knowledge and understanding.
- 3. Practical competences (Annex 5.3)

# THE TEACHING ENVIRONMENT – FBA UIN IN BODØ

The evaluation of candidates in teaching positions is regulated through the Act relating to universities and university colleges, § 6-3 (Lov om universiteter og høgskoler).

All appointments to teaching and research at UiN are done based on expert evaluation. The expert committee is appointed by the Dean.

The normal proceeding is as follows:

- 1. Applications are registered.
- 2. The Dean appoints an expert committee.
- 3. The Committee conducts a technical assessment of the applications and ranks the applicants qualified for the position.
- 4. Assessment of applicants' suitability, rated applicants are invited for an interview, trial lecture, reference check.
- 5. The appointments committee receives the recommendation.
- 6. Appointments Committee evaluates and approves employment.
- 7. The offer of employment is sent out to the preferred candidate.
- 8. All applicants are informed that the process is terminated.

Newly hired teachers are required to take 10 ECTS in university pedagogy within three years.

Both the Student Union of UiN and the Student Association of the FBA students, (Nugla), gives every year a reward for the best lecturer. The reward is a positive way to focus on excellent teaching. In 2014, one of the lecturers for Animal Science won this prize.

The regulations for sabbatical leave have recently been discussed in the management team at FBA. The updated regulations are based on previous regulations from 2008. Employees in permanent scientific positions can apply for sabbatical leave every 6th year. The applicant has to have strong scientific reason for applying and the goal is to strengthen the competence of the faculty. Teaching, research and administrative tasks should be solved internally at FBA, to avoid additional costs.

## 5.1.3 THE EXAMINATION SYSTEM

# THE EXAMINATION SYSTEM – UVMP IN KOŠICE

Describe the examination system of the Faculty, in particular: • Is there a central examination policy for the Faculty as a whole? If 'yes', by whom is it decided? • Are there special periods (without teaching) during the year for examinations?

• What form(s) of examination are used (written papers, multiple-choice questions, oral, practical, clinical examination, continuous assessment, etc.)?

• Is use made of external examiners?

• How many retakes of an examination are allowed?

• Do students have to pass the examination within a certain time?

• Do students have to pass an examination before they can start other courses?

The principles of the examination policy for the Faculty are included in the Examination Rules of UVMP in Košice, comply with the Higher Education Act and were approved by the AS on August 15, 2013.

The organisation of university study at UVMP in Košice is based on the credit system regulated by Decree No. 155 of the MESRS of April 21, 2013.

Credits are numerical values allocated to subjects, expressing the amount of work necessary for acquisition of prescribed learning outcomes. The standard student workload is expressed by 60 credits for a full academic year and 30 credits for a semester. The credits are given to the student after successful completion of a subject. Credits for a particular subject may be given only once during study. 360 credits are necessary for successful completion of university study in the GVM study programme. The student must register for an exam electronically via an information system (AIS) (Annex 5.4).

## THE EXAMINATION SYSTEM – FBA UIN IN BODØ

Enrolled students at UiN are assessed regularly; following applied and published criteria, regulations and procedures. Examination and assessment methods are strictly controlled through national legislation in "Act relation to Universities and University Colleges" (amended 1.april 2005). This act is regulated by national Ministry of Education. UiN also follows the local regulations at UiN through "Regulations concerning studies and examinations at University of Nordland" (amended by UiN July 15 2014 and in force from August 1 2014). This is granted by the University Board, and is in accordance with Act relation to University Colleges.

All regulations, assessment methods and different examination for each course are publicly available on web the semester before the teaching of the course starts. Students may see study description and course description on the UiN website to get updated information.

The *Act related to Universities and University Colleges* regulates all the examination procedures given at UiN. Ordinary courses have one internal sensor. In master thesis, oral examinations and in complaints procedures UiN is obligated to use external sensors as well. The achieved grade from the examinations is to be available on the student's internet account (Studentweb) 3 weeks after the examination. The law requires a regulated complaints procedure. UiN has regulations and procedures to follow when students fail an examination. Regulations also require that all the grades are entered in the Student administrative system and aggregated student results are reported and published on the website of the Database of Higher Education. In the annual Study Quality Report, the grade distribution and failure rates are described each year. UiN's quality policy is to have transparency with the examinations and student results. UiN is required by law to have quality control procedures for checking the correctness of student data. All electronic hand-ins are checked in Ephorus, which is an electronic device to detect copying. Students' examination papers are stored centrally according to the Archives Act (1992).

A regular exam is usually arranged once during the semester, and is common for all students. New exam can be arranged in cases of failed ordinary exam, sick leave, or other approved absence at the time of the last ordinary exam, as well as for students registered as withdrawn from the ordinary exam. Exam candidates wishing to improve their grade will be referred to the next ordinary exam. In the case of a new exam being arranged, the same curriculum usually applies as in the previous or present regular exam.

Normally it is not allowed to sit for an exam in the same subject more than three times. Students who have used up three exam attempts in one unit, and have still not passed, are on their application for a fourth attempt to be called in to guidance at their faculty about their study progression. The student must document that such guidance has taken place if she/he after this guidance maintains his/her application to make a fourth attempt. The application is normally to be granted.

A person who has accepted an offer of a study place at the university and has achieved student status has the right to study until the end of the nominal study period for the course to which this person

has been admitted. This includes the right to participation in all organized teaching, supervision, practice sessions, assignment- solving, fieldwork, laboratory courses, practical placements and exams related to the study.

All students must register and pay their semester fees within the valid deadline every semester in order to keep their right to study. The right to study expires when the course has been completed. Students admitted to study programmes consisting of more than 60 credit points (ECTS) or more usually keep their right to study until two years more than nominal study time has elapsed if he/she is delayed in his/her studies.

The following progression conditions apply for students on full-time courses consisting of more than 60 credit points (ECTS).

- Passed 30 credit points (ECTS) after 1 year on a one or several year study programme
- Passed 60 credit points (ECTS) after 2 years on a one or several year study programme
- Passed 90 credit points (ECTS) after 3 years on a several year study programme
- Passed 120 credit points (ECTS) after 4 years on a several year study programme
- Passed 150 credit points (ECTS) after 5 years on a several year study programme
- Passed 180 credit points (ECTS) after 6 years on a several year study programme

JBPAS has 90 ECTS credits, and students are expected to be finished within 3 years. If not able to do so, students will lose their student rights at UiN. Students may apply for extensions due to sickness, maternity leave etc.

In the current curriculum, the teaching is organized into continuously teaching through the semester. Some parts of courses are divided into blocks, so that lecturers from UVMP in Kosice may visit and teach their part. In the year of 2015, the spring semester starts 5<sup>th</sup> of January, and all examinations are finished by 29<sup>th</sup> of June. In autumn semester lectures start 17<sup>th</sup> of August and all examinations are finished by 21<sup>st</sup> of December. Exam periods at UiN are set to May and June in spring semester, and November and December in autumn semester. The exam period starts after the curriculum has finished.

UiN uses mostly written and to a lesser extent oral examinations at the end of a block. Often the written examinations are a mixture of short answer assignments, multiple choice questionnaires, photo assignments and essays. Several courses also have written examinations in the middle of a block that contribute to the final grade. The final examination may then be a major written examination or an oral.

Detailed descriptions of examinations and the requirements to pass the examinations are available in the description on web for each course, and described in the *Regulations for studies and exams at UiN*. Students have access to previous written examinations. The students also have the right to see their assignment, any examiner manuals and complaints after a written examination (Annex 5.5).

# 5.1.4 EVALUATION OF TEACHING AND LEARNING

## **EVALUATION OF TEACHING AND LEARNING – UVMP IN KOŠICE**

Describe the method(s) used to assess the quality of teaching and learning in the Faculty. Indicate whether the evaluation is a Faculty procedure, or one set up by individual departments, by students or by individuals. Indicate the use of external evaluators.

Describe the role of students in the evaluation of teaching and teachers.

Describe the follow-up given to the evaluation.

At UVMP in Košice, the quality of teaching and the professional and pedagogical competence of the teachers are evaluated electronically by means of an anonymous questionnaire. This application is functional within the academic information system (AIS). Anonymity of the evaluators is ensured and the decision to make use of this possibility lies with the students.

Due to an increase in teaching loads, the individual departments or teachers may add anonymous questionnaires to this evaluation, assessing the specific features of one particular department and its teachers.

Professors, associate professors, assistant professors, researchers and experts from practice including those from abroad participate in teaching. External staff also participate in teaching in most of the subjects in the 5<sup>th</sup> and the 6<sup>th</sup> year of study, and in some basic subjects. They are mainly top

researchers, experts from state administration, veterinary practice and food industry. In addition, external teachers from the Institutes of SAS and from other allied universities and specialised workplaces may also be advisors – diploma thesis specialists.

In compliance with the Higher Education Act, students have the right to express their views on the quality of teaching and teachers. At UVMP in Košice, this evaluation is done by means of an anonymous questionnaire, which assesses the professional and pedagogical competence of a teacher and the quality of teaching within a subject. The students complete the questionnaire at least once in an academic year, preferably after an exam in the respective subject. Within the overall evaluation of the organisation of teaching process, the students assess the curriculum and syllabus of the subject, the organisation of classes, quality and accessibility of study materials, quality of technical equipment and the practical training, and the objectivity of the evaluation criteria. Within the overall evaluation of a teacher's personality the students assess the clarity of explanation, his/her responses to the students' questions, professionalism in the teacher's approach to students, his/her willingness to give consultations, the ability to create the students' interest in the subject, his/her organisational skills, practical competences and professional experience, confidence and credibility in teaching. The evaluation is based on a one-to-five scale from "well above average" to "well below average". In the academic year 2013/2014, the assessment was made through AIS. There were 24 questionnaires completed in the winter semester and 26 in the summer semester, which assessed a subject, and there were 12 questionnaires in the winter semester and 19 in the summer semester, in which teachers were assessed. 78 teachers and 189 subjects were evaluated in total. There has been a slight increase in the evaluation of teachers and teaching process since the last year. The assessment is made in an electronic form only.

The evaluation results are discussed at the levels of the university Management, the Rector's Collegium, the Scientific Board, and at the meetings of the UVMP teachers and researchers, where conclusions from the evaluation results are made. The Student Chamber of the AS informs the students about the overall evaluation and the conclusions adopted. The assessment results are then incorporated in the teaching process.

## **EVALUATION OF TEACHING AND LEARNING – FBA UIN IN BODØ**

## Role of student in evaluation of teaching

The quality assurance system for the educational activities at UiN was established in 2004. The system was formally approved by NOKUT's board in 2005.

The quality assurance system was again evaluated by NOKUT in autumn 2011 with subsequent approval in June 2012. Quality assurance systems at the educational institutions are evaluated at least every 6 years and UiN expects another visit by NOKUT in 2017/2018.

There is an overriding goal that UiN should have one of the foremost academic environments, and that the institution further develops the quality and strengthens academic and administrative sustainability within the four scientific priority areas and the subject profile which forms the basis for university status. The University will be among the premier educational institutions in Norway when it comes to learning, study and the relationship between UiN and its students. The quality assurance system shall support the processes that will improve the institution - it will help to highlight and bring forth the good professional work. Quality assurance system at UiN in Bodø is described in the Annex 5.6.

## 5.1.5 STUDENT WELFARE

# **STUDENT WELFARE – UVMP IN KOŠICE**

Describe any measures taken to protect students from zoonoses (e.g. rabies) and physical hazards. Describe the facilities (not related to the teaching programme) which the establishment provides for students.

Describe the guidance offered by the Faculty (or its parent institution) for students with problems (social problems, study problems) as well as for future career development or job selection.

The system of measures taken to protect students and university staff from zoonoses is laid down by Act No. 355/2007 Coll. on Protection, Support and Development of Public Health and on Amendments

and Supplements to Certain Acts. This act defines a contagious disease as a disease caused by biological factors which are able to cause individual or mass infection, disease or poisoning in people.

Operational rules are defined as a set of measures for the protection of health of an employee (a student). Students are made familiar with the rules for safety at work and the operational rules in a laboratory and a clinic during their first practical training. Teachers are obliged to instruct the students participating in a practical training in using the equipment and draw their attention to potential risks to human health. The students are also made familiar with the preventive measures and the way threats to health and life should be avoided during the practical training. First aid is also taught to be used in case of injuries. There is a cabinet in a practice room containing a first aid kit with medicines – e.g. eye washes and showers, wound disinfection, dressings and bandages, etc. Each injury must be immediately reported to the teacher and the staff, who are present in the practice room or at the clinic.

The university does not organise vaccination campaigns against zoonoses. It may organise vaccination (e.g. against rabies) if so desired by the students. The students learn the techniques for handling and fixation of animals during their practical training at the clinics or on farms. They use rubber gloves for protection, aprons and special protective clothing and footwear, and are taught the basic principles of safety at work.

Special clothing must be worn by the students during farm practice. The students use special footwear and other equipment for special examination – special gloves for rectal examination. Special garments, aprons, footwear and gloves must be worn by the students engaged in dissection within a practical training in pathological anatomy and stowed in lockable cabinets.

Furthermore, the students are obliged to keep some additional rules during the whole practical training such as hand washing, and also hand disinfection after the practical training if so instructed by the teacher, and always before leaving the practice room/clinic.

While working in food and meat processing plants, the students wear coveralls or protective gowns, and special head and shoe covers.

Accommodation for the UVMP students is available in the Student Dormitory comprising two buildings. There are rooms with one or two single beds. Due to an increase in the numbers of the university students, accommodation cannot be provided to all of them. The order of applicants for accommodation is based on new criteria taking into account, inter alia, their study results and the social situation. The new criteria to determine the eligibility for accommodation in the Student Dormitory were approved based on a proposal from the Student Chamber of the AS. Following these criteria, the order of applicants was established and accommodation was allocated.

The accommodation at the Student Dormitory provides students with lounges, kitchenettes, laundry rooms, a gym, and a utility room for bicycles. Dormitories also provide space for the Aqua Terra Club, the Flora Club, the Cynological Club, the Association of Pharmacy Students in Košice (Annex 5.7). There is also an office of the members of the AS, the editorial office of the ARDO journal and the dormitory student community of St. Francis of Assisi. Internet access is available for students on the dormitory premises (study rooms, rooms, clubs). Representatives of students regularly meet with the Vice-Rector for Education and Study Affairs and the Director of the Dormitory to solve all problems related to the student accommodation and catering. Services of a general practitioner and a psychologist are also made available to the students.

The catering services are provided in a student canteen, which is located in the Dormitory and at the university, and caters for the university staff as well.

The university organizes meetings, lectures, seminars and information events, where potential employers – representatives of agribusinesses, meat-processing businesses, slaughterhouses, rendering plants, pharmaceutical companies and the CVS inform the students about career opportunities. Vacancies for university graduates are advertised on the university website.

## STUDENT WELFARE – FBA UIN IN BODØ

StudentiNord provides student welfare services. This service includes housing, health, counselling, kindergarten, cafeteria, sport and training activities. It also provides recreational equipment for loan/hire including a cabin in the breath-taking natural surroundings of the Salten Fjord, bicycles, scooters, tents, hiking boots, fishing equipment and skis. The housing service is characterized by student-oriented solutions and uniform high standards, including cable television and wireless internet.

Norway has a comprehensive public health system. Both Norwegian and foreign citizens have access to medical facilities and health care of a high standard. Members of the National Insurance Scheme, citizens of EEA states and passport holders from countries that have reciprocal health care agreements with Norway are entitled to the same level of health care as Norwegian citizens. Others are encouraged to organize private health insurance prior to their stay in Norway.

As a member of the Student Health Fund, students are entitled to help in covering your medical treatment. The student welfare organization provides application form and an agreement. Students must have min. NOK 1500 in medical expenses in order to receive financial help from the Student Health Fund. If your medical treatment costs over NOK 1500, you are entitled to receive 50% of the medical treatment expenses from the Student Health Fund.

The International Office arranges for Bodø Health Station to come to campus in the autumn and in the spring for students to be tested for tuberculosis. Students coming from outside Europe should bring a valid international certificate of vaccination with them when going to the health station. Unless you come from a Nordic country (Norway, Sweden, Finland, Denmark and Iceland) or are a student from Western Europe, North America, Australia and Japan and are staying for more than 3 months, you are required to take a tuberculosis test and have a chest x-ray. This is a government health regulation and is a compulsory requirement of the visa rules.

Nugla is a student-driven association for students at FBA. The association assists with studyrelated problems, or social issues. The office is open twice a week for anyone who fancies a cup of coffee or a chat. In addition to office hours, Nugla is also available by email and active on Facebook where we share information about activities for Nugla students.

Nugla organizes several events a year, amongst them, the career focused Havets Døgn with gala dinner, shrimp evening and new-year excursion.

ForVei is an individual preparatory guidance meeting for students, initially for first-year undergraduate students at the FBA. ForVei is useful for all students, whether leading a happy student life or experiencing difficulties and spend all day in the library. Regardless of academic achievements, social networks or commitments, we offer our guidance services. The key goal of ForVei is for students to enjoy and master their student life.

The students will receive an individual coaching-like meeting with a skilled advisor. The topic of the conversation is life as a student at the FBA / UiN. Together we set aside one hour to help to experience increased motivation, sense of achievement, ability to follow-through on your studies and enjoyment. If needed, we can also arrange follow-up sessions.

The Career Centre at University of Nordland aims to assist future graduates in becoming successful job seekers. The centre organizes job application seminar in cooperation with the International Student Union (ISU), coordinates the UiN careers fair where companies and public sector organizations present themselves as potential future employers. The career centre also gives individual career guidance upon request.

## **5.2 COMMENTS**

## Please give general comments about the quality of the teaching programme under the above headings.

## **COMMENTS – UVMP IN KOŠICE**

The teaching system makes use of several standard teaching methods traditionally used in the medical fields of study. At the commencement of studies, the teaching of so-called basic subjects takes the form of lectures, seminars and practical lessons aimed at learning laboratory techniques and working with laboratory material. In subsequent years of study lectures and seminars are used to introduce a topic, and a greater part of teaching is moved towards its practical part. Practical training starts with non-clinical work with healthy animals, followed by working with animals directly in the clinical environment both at the university and non-university clinics as part of compulsory clinical practices.

The teaching process covers all the subjects necessary to ensure that the graduates have competence in all areas of veterinary practice. A strong focus is placed on the clinical veterinary medicine allowing the students to gain day-one skills required of a new veterinary graduate.
A problem-solving method is used mainly in the clinical disciplines, in which students have the opportunity to work with a patient covering admission, medical history taking, diagnosis, decision-making related to a possible intervention, releasing the patient to home care, or subsequent check-ups.

A wider use of the problem-solving method during both the pre-clinical and the clinical stages of study can also be achieved by introducing a reward system for the academic staff based on the student assessment of teaching.

The university considers student welfare to be one of its priorities and therefore makes effort to ensure it on a very high level. Further improving the student welfare will undoubtedly depend on the availability of financial resources.

## **COMMENTS – FBA UIN IN BODØ**

The students of the JBPAS have the unique opportunity to experience the education system both in Norway and Slovakia. Although this is a great advantage, it also requires of them to adjust to these two environments. Acknowledging this factor, the two institutions involved organize an optional trip to Slovakia in the 2<sup>nd</sup> semester. In this trip, the students have the opportunity to see the facilities, including the student dormitories in Slovakia, meet the teaching staff there and see the city. They also meet with the senior students of the JBPAS and thus get a good picture of what to expect.

An issue that is common in all study programs in UiN and in most Norwegian Universities is the relatively low participation of the students in the development of the courses. Particularly the responses in the final course assessments are few.

## **5.3 SUGGESTIONS**

## **SUGGESTIONS – UVMP IN KOŠICE**

In order to improve the quality of the teaching process and introduction of new forms of teaching, the teachers will have to be evaluated not only in terms of their scientific and research activities and publications, but also on the grounds of the quality of their teaching. Introducing the "Teacher of the Year" competition might make the students more interested to participate in the existing anonymous assessment of teachers, using additional criteria such as willingness to give consultations, creating interest in the topic (subject), the teacher's creativity and innovativeness along with his/her ability to engage the students in learning. In addition to a moral reward, appropriate financial reimbursement should also be part of such evaluation.

#### SUGGESTIONS - FBA UIN IN BODØ

The FBA is continuing working on the development of the teaching experience of the staff. In addition, it tries to motivate students to participate more actively in the development and evaluation of the courses.

#### **Chapter 6. FACILITIES AND EQUIPMENT**

## **6.1 FACTUAL INFORMATION**

## **6.1.1 PREMISES IN GENERAL**

Please give a general description of the site(s) and buildings occupied by the Faculty and include a map.

## PREMISES IN GENRAL – UVMP IN KOŠICE

UVMP in Košice is located in the northern part of the city of Košice, on Komensky street. The physical environment gives it a "campus in a park" character, with internally grouped complex of individual pavilions formed by adaptation of buildings of the former Komensky Institute in Košice in 1949 – 1955, in order to suit the needs of modern institution providing education in the field of veterinary medicine. Besides the facilities located directly on the university premises there are 2 Student Dormitory buildings of the UVMP in Košice, close to the campus site, on street Podhradová 11 and 13. The university has at its disposal also some specialised establishments, namely UF, located 35 km from Košice, a specialised establishment – UFBD in Rozhanovce, 20 km away from Košice, and the EC of UVMP in Košice on the outskirts of Košice.

All university units (departments, institutes and clinics) providing education to students of veterinary medicine are located at the university campus (Annex 6.1).

UF serves as a specific workplace of the university. The university contributes a sum from its budget to cover the practical training of veterinary students. UF has a high potential as an education and research establishment and provides a suitable environment for integrated teaching that covers all aspects of animal production. This involves many units of UVMP in Košice dealing with health, husbandry, management and production factors of food producing animals. UF has several individual farm units: Zemplínska Teplica, Veľké Ozorovce and Čalovka. These farm units keep cattle, pigs, sheep and goats. UF is a place where an essential part of practical training in animal husbandry and related health issues takes place. Students are involved in dealing with diseases of individual animals and herds, and take individual diagnostic, preventative and therapeutic actions. To be able to fulfil these intentions, reconstruction and adaptation of the existing facilities is carried out regularly. Adequate administrative and teaching background has been build up at UF including classroom, administrative and sanitary facilities and a laboratory where basic diagnostic examinations can be carried out directly during on farm practical training. On the premises of the main farm unit, within the building housing the milking parlour, there are also social facilities for teachers and students. Besides providing good conditions for practical training of veterinary pre-graduate students and scientific research with respect to technical equipment and necessary materials, the UF also covers the needs of pre-clinical and clinical units of UVMP in Košice regarding live animals and feed. A slaughterhouse operates on the premises of Experimental Research Centre in Zemplínska Teplica, next to the UF, which serves the needs of UF and is used also for education purposes. Practical training of students takes place in this slaughterhouse within the scope of food hygiene, particularly within the subjects meat hygiene and technology, inspection of animal carcasses and meat, veterinary-hygiene control, etc.

EC of UVMP in Košice, as one of the university specialised establishments, provides space for education and sport activities of students and university staff, and for children, young and adults in general, by organizing sport, social and cultural events and providing guidance and counselling to breeders. The riding facility is located strategically, approximately 10 min drive from the Košice city centre, and is bordered by fields, meadows and forest. It has housing capacity for 60 horses. Currently there are 57 horses in the establishment, of which 7 horses are owned by the police force of SR, 39 by private persons and 11 horses by the UVMP in Košice. Of these 11 horses 4 are Lipicans, 5 warm-blooded horses and 2 Hutsuls. These horses are used mostly for teaching the "horse riding" subjects in all study programmes, for clinical subjects, basics of farriery, animal husbandry, infectious diseases, animal hygiene, rehabilitation, training of horses, riding and also for teaching purposes, they are used by children and young for sports (equestrian vaulting) and the 4 Lipicans and 2 Hutsuls have been trained for pulling carts. Currently no breeding mares, stallions, foals or horses below 3 years of age are housed in the EC of UVMP in Košice as this is not a breeding facility. As far as the horses owned by private persons are

concerned, some of them are owned by Slovak and foreign students of UVMP in Košice. The education and other activities take place in 3 training sand covered areas, two of them roofed. Show-jumping competitions are organised in a grass-covered arena of dimensions 100 x 80 m, with capacity for 2000 sitting spectators. Grass runs (1 run per one or two horses) are available to all horses housed in this establishment. Six to seven sport and social events are organised annually at the EC of UVMP in Košice, the Rector's prize show-jumping contest, Slovak equestrian vaulting cup and Saint-Hubertus ride being the favourites.

Specialised establishment - UFBD in Rozhanovce is used mostly for practical teaching of veterinary students. It focuses on keeping of farmed common pheasant (*Phasianus colchicus*) and its subspecies. On the premises of this establishment there is also a bee house and a honey house where we plan to obtain also pollen and bee propolis. Included is also quarantine facility for hoofed game, protected animal species, and confiscated illegally held protected birds. A revitalised pond is located in the area of this specialised establishment.

## PREMISES IN GENERAL – FBA UIN IN BODØ

The infrastructure of the campus of University of Nordland (UiN) is modern and well equipped. It has modern facilities for students and researchers in the main university buildings at Bodø campus. The Faculty of Biosciences and Aquaculture (FBA) has unhindered access to common facilities such as library, office space, lecture halls, meeting rooms, video-conference facilities and specially designed space like laboratories, and other areas needed for experimental work (Annex 6.2).



This including advanced equipment for the study of genomics, one of today's cutting-edge fields of bio scientific research. These facilities are augmented by a large, well-equipped research station on the water's edge, a 15-minute walk from the main campus. In total, the Faculty has access to 995  $m^2$  of standard laboratories (dry labs) at the main campus, and 1500  $m^2$  of laboratories with access to seawater (wet labs) at Mørkvedbukta research station.

All physical (buildings) infrastructure owned by "The Directorate of Public Construction and Property (Statsbygg)". None of the infrastructure needed for a professional execution of the program, is owned by any third party.

## 6.1.2 PREMISES USED FOR CLINICS AND HOSPITALISATION

## PREMISES USED FOR CLINICS AND HOSPITALISATION – UVMP IN KOŠICE

The information to be entered in Table 6.1 is the number of animals that can be accommodated, not the number of animals used. Certain premises may be used to accommodate different species of animal. If so, the same premises should be entered only once.

The university has 5 independent organisation units – clinics – pursuing clinical activities: Small Animal Clinic, Clinic of Horses, Clinic of Ruminants, Clinic of Swine and Clinic of Birds, Exotic and Free-Living Animals. These units have the necessary administrative facilities and ambulances, carry out relevant clinical activities and have also sufficient space for housing and hospitalisation of animal patients. The Small Animal Clinic is located in building No. 26 and pavilion No. 17, Clinic of Horses occupies

some space in pavilion No. 17 and in Housing facilities for clinics No. 18. The Clinic of Ruminants is located in pavilion No. 17 and occupies some places in Housing facilities for clinics in pavilions No. 18 and 19. The Clinic of Swine is located in pavilion No. 17 and occupies some temporary places in Housing facilities for clinics in pavilions No. 18 and 19. The Clinic of Birds, Exotic and Free-Living Animals is located in building No. 26. Number of places available for hospitalisation of patients according to animal species is presented in Table 6.1

	Species	Number of places
	Cattle	12
	Small ruminants	42
Regular hospitalisation	Horses	18
	Pigs	22
	Dogs	10
	Cats	2
	Birds	11
	Free living animals	5
	Small rodents, reptiles	13
	Farm animals and horses	6
Isolation facilities	Small animals	4
	Birds	10
	Rodents	10

#### 6.1.3 PREMISES FOR ANIMALS

## PREMISES FOR ANIMALS - UVMP IN KOŠICE

Give a description of the facilities for rearing and maintaining normal animals for teaching purposes. If the Faculty has no farm of its own, please explain in the SER the practical arrangements made for teaching such subjects as animal husbandry, herd health, and the techniques of handling production animals.

There is a space in various buildings on university premises serving for rearing and maintaining animals that are used for teaching purposes requiring healthy animals, but the majority of animals are housed at specialised facilities of UVMP in Košice (Annex 6.3).

## PREMISES FOR ANIMALS - FBA UIN IN BODØ

#### Mørkvedbukta Research Station

The research station is a large, modern and comprehensively equipped facility on the harbour-side. In three buildings it provides several laboratories and it has multiple indoor and outdoor tanks for experiments. Tanks for fish are housed in six halls holding 10 to 30 tanks, depending on size, and there are larger outdoor tanks. Sizes range from 80 litres up to 80 m<sup>3</sup> tanks. Other species kept continuously at the field station include Atlantic cod and Atlantic salmon and Lumpsuckers; a fish used for biological control of sea lice. The research station has aquaculture licenses for 20 species of fish. Most are brought in as eggs or juveniles; others are collected from the wild. Water is drawn from depths of 50 and 250 meters. The quality is manipulated with control over parameters such as temperature, oxygen levels and salinity for consistent conditions. Modern, purpose-designed laboratories cater for many research activities, including histology, physiology and microbiology. There are specialist rooms for cell culture, climate control rooms, cool room and room for freezing specimens to -40 °C. The laboratories are regularly updated in line with current science and technology and feature extensive analytical capabilities. In addition, a lecture room is available for teaching.



Mørkvedbukta Research Station

## 6.1.4 PREMISES USED FOR THEORETICAL, PRACTICAL AND SUPERVISED TEACHING

The same room should not be entered under two or more headings, even if it is used, for example, for both practical and supervised work.

# PREMISES USED FOR THEORETICAL, PRACTICAL AND SUPERVISED TEACHING – UVMP IN KOŠICE

Rooms for practical clinical training in clinical subjects, such as ambulances, examination rooms and operating rooms are located in individual buildings assigned to clinics. Practical clinical training concerning diseases of cattle is conducted also on UF where there are 3 facilities allocated for clinical work in the field of reproduction, internal diseases and orthopaedics where the animals are examined and treated (Table 6.2).

<b>Table 6.2:</b>	Premises	for clinic	al work an	d student training

Animal species	Number of examination	Number of surgery				
	rooms/ambulances	rooms/theatres				
Small animals	10	5				
Horses	1	1				
Food producing animals	3 + 3*	2+1*				
Birds, small and exotic	1	1				
animals						

\* on UF in Zemplínska Teplica

The university has at its disposal 17 lecture rooms with a capacity from 20 to 200 students. One lecture hall serving to 72 students is available on UF in Zemplínska Teplica. The total capacity of all lecture rooms is 1259 places. Individual lecture rooms are located in buildings No. 1 (1room), 2 (1), 6 (1), 9 (1), 10 (2), 13 (2), 17 (2), 26 (2), 32 (2), 34 (1), 35 (1), 39 (1), (Table 6.3)

Number of places per lecture hall										
Hall	No.1	No. 2	No. 3	No. 4	No. 5	No. 6	<b>No. 7</b>	No. 8		
Places	42	20	90	20	20	88	200	193		
Hall	No. 9	No.10	No. 11	No. 12	No. 13	No. 14	No. 15	No. 16		
Places	150	30	25	40	30	80	96	63		
Hall	No.17*									
Places	72									
Total number of places in lecture halls		1259								

## Table 6.3: Premises for lecturing

\* lecture hall on UF in Zemplínska Teplica

The classrooms in individual units of the UVMP in Košice and its specialised establishments are used for supervised group work. There are 93 rooms available with a total capacity of 1887 seats (Table 6.4)

<b>Fable 6.4: Premises for group work</b>	number of rooms that can be used	l for supervised group work)
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Unit				Rooms/	Places		
Institute of languages	Room	No.1	No.2	No.3	No.4		
	Places	15	42	15	24		
Institute of biology, zoology and radiobiology	Room	No.1	No.2				
	Places	20	15				
Institute of genetics	Room	No.1					
	Places	20					
Department of chemistry, biochemistry and biophysics	Room	No.1	No.2				
	Places	30	30				
Institute of pharmacology	Room	No.1					
	Places	18					
Institute of toxicology	Room	No.1					
	Places	25					
Institute of anatomy	Room	No.1	No.2	No.3			
	Places	24	24	24			
Institute of histology and embryology	Room	No.1	No.2				
	Places	24	24				
Institute of physiology	Room	No.1	No.2				
	Places	40	15				
Institute of nutrition, dietetics and feed production	Room	No.1	No.2	No.3	No.4		
·	Places	20	15	15	28		
Institute of animal breeding	Room	No.1	No.2	No.3			

	Places	15	20	8					
Institute of breeding and diseases of wild living animals and fish	Room	No.1	No.2	No.3					
	Places	30	15	10					
Institute of microbiology and gnotobiology	Room	No.1	No.2						
	Places	24	30						
Laboratory of gnotobiology	Room	No.1							
	Places	10							
Institute of immunology	Room	No.1							
	Places	40							
Institute of pathological anatomy	Room	No.1	No.2	No.3					
	Places	30	18	18					
Institute of pathological physiology	Room	No.1							
	Places	25							
Institute of animal hygiene and the environmental protection	Room	No.1	No.2	No.3	No.4	No. 5	No. 6	No. 7	
	Places	30	14	12	22	22	10	20	
Institute of forensic and public veterinary medicine and economics	Room	No.1	No.2						
	Places	24	24						
Institute of epizootiology and preventive veterinary medicine	Room	No.1	No.2	No.3	No.4				
	Places	16	15	30	28				
Institute of parasitology	Room	No.1	No.2	No.3					
	Places	18	18	25					
Institute of meat hygiene and technology	Room	No.1	No.2	No.3	No.4	No. 5	No. 6		
	Places	16	20	16	12	16	16		
Institute of milk hygiene and technology	Room	No.1	No.2	No.3	No.4				
	Places	16	16	20	10				
Section of surgery, orthopaedics, roentgenology and reproduction of SAC*	Room	No.1	No.2	No.3	No.4	No. 5	No. 6		
	Places	20	20	20	30	20	20		
Section of internal diseases of SAC*	Room	No.1	No.2	No.3	No.4	No. 5	No. 6	No. 7	
	Places	20	15	10	10	15	30	30	
Clinic of birds, exotic and free living animals	Room	No.1							
	Places	15							
Clinic of horses	Room	No.1	No.2	No.3	No.4	No. 5			
	Places	20	30	25	20	14			

Clinic of ruminants	Room	No.1	No.2	No.3	No.4	No. 5		
	Places	12	16	16	14	12		
Clinic of swine	Room	No.1	No.2	No.3				
	Places	20	8	20				
UFBD in Rozhanovce	Room	No.1						
	Places	31						
UF, n.o., Zemplínska Teplica	Room	No.1	No.2	No.3				
	Number of places	20	36	12				
Total number of places				188	37			

\*SAC – Small animal clinic

In individual units of UVMP in Košice as well as at specialised establishments there are classrooms used for practical teaching, such as laboratory work (laboratories, rooms with microscopes, dissection rooms). One classroom for subjects taught by the Department of food hygiene and technology, namely Laboratory for sensory analysis of food, is located on the premises of the Institute for education of veterinary surgeons, close to the university campus. The total number of classrooms used for practical work by students is 73, providing places for 736 students (Table 6.5).

## Table 6.5: Premises for practical work (number of laboratories for practical work by students)

Unit			Labo	oratory/	Places			
Institute of genetics	Laboratory	No.1	No.2					
	Places	5	5					
Institute of pharmaceutical chemistry	Laboratory	No.1	No.2	No.3	No.4	No.5	No.6	
	Places	15	5	18	18	15	3	
Institute of medical chemistry	Laboratory	No.1	No.2	No.3	No.4			
	Places	15	3	15	3			
Institute of biochemistry	Laboratory	No.1	No.2	No.3	No.4			
	Places	15	15	5	3			
Institute of biophysics	Laboratory	No.1	No.2					
	Places	15	3					
Institute of pharmacology	Laboratory	No.1						
	Places	16						
Institute of toxicology	Laboratory	No.1	No.2					
	Places	25	25					
Institute of anatomy	Laboratory	No.1	No.2	No.3	No.4			
	Places	10	10	10	10			
Institute of histology and embryology	Laboratory	No.1	No.2					
	Places	8	8					

Institute of physiology	Laboratory	No.1	No.2	No.3				
^ · · · · ·	Places	3	5	2				
Institute of nutrition, dietetics and feed production	Laboratory	No.1	No.2					
	Places	15	15					
Institute of animal breeding	Laboratory	No.1	No.2	No.3				
	Places	3	7	5				
Institute of breeding and diseases of wild living animals and fish	Laboratory	No.1	No.2	No.3				
	Places	8	8	5				
Institute of microbiology and gnotobiology	Laboratory	No.1	No.2					
	Places	4	4					
Laboratory of gnotobiology	Laboratory	No.1	No.2	No.3	No.4	No.5		
	Places	6	6	6	8	10		
Institute of pathological anatomy	Laboratory	No.1	No.2	No.3	No.4			
	Places	40	16	16	4			
Institute of animal hygiene and the environment protection	Laboratory	No.1	No.2	No.3				
	Places	6	10	4				
Institute of epizootiology and preventive veterinary medicine	Laboratory	No.1	No.2	No.3	No.4			
	Places	4	4	4	4			
Institute of meat hygiene and technology	Laboratory	No.1	No.2	No.3	No.4	No.5		
	Places	6	6	12	12	16		
Section of surgery, orthopaedics, roentgenology and reproduction of SAC*	Laboratory	No.1						
	Places	20						
Section of in internal diseases of SAC*	Laboratory	No.1	No.2					
	Places	6	6					
Clinic of birds, exotic and free living animals	Laboratory	No.1						
	Places	15						
Clinic of horses	Laboratory	No.1						
	Places	5						
Clinic of ruminants	Laboratory	No.1	No.2	No.3			 	
	Places	12	4	12				
Clinic of swine	Laboratory	No.1	No.2	No.3				

	Places	30	20	8				
UF, n.o., Zemplínska Teplica	Laboratory	No.1						
	Places	16						
<b>Total Places</b>	736							
*CAC Currell and in all all in a								

\*SAC – Small animal clinic

## Please give a brief description of health and safety measures in place in the premises for practical work and in the laboratories to which undergraduate students have access.

In order to comply with the basic requirements for protection of health and safety of students and teachers, all classrooms, laboratories and animal housings used for practical teaching are equipped with sufficient number of wash-basins, soap, cloth or paper towels, and with disinfectants. In addition, according to the character of work, students are obliged to use other protective means to protect their health. This involves the use of protective coats, safe footwear, gloves, aprons and protective glasses. They are obliged to use the specified protective means during practical work, according to the character of their activities, to protect their own safety and health and to prevent potential spreading of infectious diseases. Supervising teachers check the use of these means. It is the duty of teachers to inform the students about necessity and means of protection of their safety and health during practical teaching, focusing also on specifics of individual study subjects (laboratory work, work with cadavers, live animals, operation of instruments and machines, use of X-rays, work with infected biological material, toxic substances, work in risky environment, etc.). In addition, the students are given instructions for safe use of electric power, flame, water and gas. They may enter individual laboratories only under supervision of teachers. They need health certificate to gain the entry permission to slaughterhouses and food processing plants.

Before students start working with live animals, they are instructed on principles of safety at work with animals, including approach to animals, their fixation and manipulation with them (diagnostic and therapeutic procedures). Activities involving work with live animals are carried out under supervision of teachers. During practical work the students are not allowed to eat, drink or smoke and must carry out all relevant activities in a way that raises no health or safety risk to them, their schoolmates, teachers and other university staff participating in teaching or operation of the respective unit.

In agreement with the relevant Health and Safety Regulations, individual workplaces are adequately equipped to provide first aid. Students are instructed on providing first aid in case of danger to health and life.

The UVMP in Košice established its own safety office responsible for the entire system of organisation and control of health and safety at work at individual units and for regular inspection of observation of safety rules and elimination of potential shortcomings.

# PREMISES USED FOR THEORETICAL, PRACTICAL AND SUPERVISED TEACHING – FBA UIN IN BODØ

## **Premises for lecturing**

Table 6.1a: Premises for lecturing; auditoriums, seminar rooms and group rooms\*.

Type of area	Area, m <sup>2</sup>	Places
15 Auditoriums	1781 m <sup>2</sup>	1688
34 Seminar rooms	$2006 \text{ m}^2$	1102
42 Group rooms	518 m <sup>2</sup>	278

\*The overview includes two IT- labs used in the teaching for the Animal Science- program.

## Premises for laboratory work

General equipment in the laboratory areas includes RO water, autoclave, dry sterilization cupboard, centrifuges (evaporating, high speed etc.), scales, heating ovens, pH-meter, ultrasound bath and

homogenizer, N2- evaporator, rotary evaporators, water baths, liquid nitrogen storage tanks, -80 °C freezers etc. They also have fixed projectors, connected to a computer and screens.

All laboratories at the faculty have special room for cleaning, various rooms for chemicals, special room for scales, small rooms for cold and deep freeze, and various rooms for storage (Annex 6.4). All accidents (or near accidents) are specifically reported to FBA's HMS officer.

 Table 6.2a: Premises for supervised laboratory work

Type of area	Places
1471 – Chemistry laboratory	24
1470 – Microbiology laboratory	
1467 – Histology laboratory	20-24

Total area of teaching labs is 309 m<sup>2</sup>.

## **Safety Training**

Adequate training to work in areas that possess particular risk (like special rooms/ areas in laboratories, fieldwork and the research station) is mandatory. Students are given such adequate training before access is given to specific areas, through a mandatory safety course at the beginning of the first semester.

The course *KJ001F Laboratory safety* provides new students with necessary information and training in how the student must work in the laboratory to avoid accidents and personal injuries. The course lasts three hours of teaching, and is an introduction to various types of safety equipment and how the equipment is used. Upon completion of the course, the student shall have knowledge about what kind of dangers can occur in a laboratory, work routines that must be followed, safety equipment that exists and when it is to be used, safety data sheets and the information to be found on the sheets, and procedures of fire and accidents.

## Safety equipment

All rooms have access to first aid equipment and necessary. Personal protective equipment is available in laboratory areas. The laboratories have eye rinse equipment, emergency showers and fire suppression systems. The ventilation system in the laboratory areas is equipped for the type of work specified for each laboratory.

The internal HSE control system at the faculty satisfies legal requirements, and undergoes systematic revision. It includes training, access control, safety inspections, risk assessment of hazardous work registration -, handling, disposal - and storage of chemicals and other substances that require identification. HSE is a highly prioritized area in the organization, often highlighted on the agenda for internal meetings. Fire drills and disaster drills are held regularly at UiN.



Safe laboratory work at FBA

#### 6.1.5 DIAGNOSTIC LABORATORIES AND CLINICAL SUPPORT SERVICES

## DIAGNOSTIC LABORATORIES AND CLINICAL SUPPORT SERVICES – UVMP IN KOŠICE

**Diagnostic laboratories** Briefly describe the facilities available for clinical diagnostic work. **Central clinical support services** Indicate the nature of these services and how they are organised (e.g. diagnostic imaging, anaesthesia, etc.)

Diagnostic laboratory activities are carried out by several units and have not been centralised to a central diagnostic laboratory. These activities cover a broader spectrum of analysed parameters and biological materials collected from clinical patients at clinical units of UVMP in Košice. Additional specialised diagnostic laboratory activities are carried out at a number of UVMP institutes.

Laboratory diagnosis for clinical workplaces is concentrated at 2 clinics. Laboratory diagnosis related to laboratory examination of small animals (Small Animal Clinic), birds, exotic and free living animals is carried out by the Laboratory of clinical biochemistry located at the Small Animal Clinic. This laboratory focuses on haematological, biochemical and cytological examination of biological material (particularly blood, serum, plasma, faeces, urine, punctate). Analysis of biological material obtained from large animals (particularly ruminants, pigs, horses) for the purpose of laboratory diagnosis is carried out by the Clinical laboratory of the Clinic of Ruminants. This laboratory has at its disposal modern diagnostic equipment for analysis of a broad spectrum of biological material with focus on haematological and biochemical examination, but can carry out also more specific analyses using methods such as ELISA, HPLC, blood gas measurements, acid-base balance, electrophoresis and atomic absorption spectrophotometry. A smaller range of basic laboratory diagnostic analyses for the purposes of clinical practice and teaching is conducted at the Clinic of Swine, Clinic of Horses and Clinic of Birds, Exotic and Free-Living Animals. The clinical laboratories mentioned above are teaching laboratories, aiding in the teaching of laboratory diagnosis to veterinary students, but provide also diagnostic services for practice and external applicants. Laboratory diagnosis in the field of application for practical clinical diagnosis is included in the curricula of subjects dealing with diseases of individual animal species as well as of several compulsory elective and optional subjects oriented on laboratory diagnosis (e.g. diagnosis of disturbances of the internal environment of animals, pathological biochemistry, clinical biochemistry, basics of veterinary haematology, clinical microbiology and immunology, reproductive endocrinology, dermatology, nephrology and urology of small animals, laboratory diagnosis).

Other than clinical and some specialised laboratory diagnosis activities are carried out also by many other institutes and clinics of UVMP in Košice. This involves mostly laboratories focusing on more specific fields of laboratory diagnosis related to the orientation of individual university units. There are laboratories focusing on toxicological, pathological (macro and histopathology), parasitological, microbiological, immunological, nutritional, animal hygiene related, reproductive examinations, etc. Specific examinations are carried out in the area of exotic animal species, and also in the field of food hygiene. Many of these diagnostic activities are a part of the teaching of laboratory diagnostics, scientific research and/or are part of a service provided to out patient clients.

An overview of workplaces which carry out laboratory diagnostic activities according to their orientation, type of examined samples, examination methods and major diagnostic equipment is provided in the table (Annex 6.5).

Clinical support services provided by UVMP in Košice cover many areas of diagnostic actions within individual clinical workplaces which have at its disposal the relevant diagnostic equipment. The university currently does not have a central imaging diagnostic workplace. Should a specific examination of patients be required at a clinic which does not own some diagnostic equipment, these examinations are carried out at a clinic equipped for this purpose. All clinical units are equipped with an adequate technique allowing them to carry out *utrasonographic* examination of animals of individual species. Endoscopic examination can be carried out at the Small Animal Clinic, Clinic of Horses, Clinic of Ruminants and Clinic of Birds and Exotic and Free-Living animals. *Radiological* examination is conducted at the Small Animal Clinic and Clinic of Birds and Exotic and Free-Living Animals, and Clinic of Horses has at its disposal a digital portable X-ray apparatus. *Electricardiographic* examinations are carried out at the Small Animal Clinic and the Clinic of Swine. Equipment needed for anaesthesiology or monitoring of life functions for small animals are available the Small Animal Clinic and Clinic of Birds and Exotic and Free-

Living Animals, and for large animals at the Clinic of Horses. In addition, the Small Animal Clinic has equipment for specialised professional clinical activities in the field of ophthalmology, stomatology, neurology, orthopaedics, reproduction and oncology. All the equipment available at clinical units organised according to individual animal species is used for practical teaching of students within the respective study subjects and according to orientation of individual clinical disciplines (diseases of individual animal species, radiographic anatomy, general surgery and anaesthesia, animal surgery and orthopaedics, radiology and imaging diagnosis, etc.). Clinical units are equipped with camera systems which enable recording and transmission of practical clinical work and surgery and their presentation to bigger groups of students in selected classrooms. Currently the university does not have at its disposal CT and MRI equipment.

## 6.1.6 SLAUGHTERHOUSE FACILITIES

Describe briefly the slaughterhouse facility to which the Faculty has access, including distances from the Faculty and level of activity.

## SLAUGHTERHOUSE FACILITIES – UVMP IN KOŠICE

The practical training of students of UVMP in Košice in the field of food hygiene takes place in its own slaughterhouse located in Zemplínska Teplica, about 35 km from the university. The slaughterhouse was build in Zemplínska Teplica, next to the UF, and in 2004 was reconstructed to comply with the requirements on slaughterhouses of industrial capacity. Its daily slaughtering capacity is 200 pigs and 20 cattle. Twelve pigs per week are slaughtered there for teaching purposes. The slaughterhouse is used first of all for demonstration of animal slaughtering and for the teaching that involves veterinary inspection of animal carcasses and meat. There is a standard slaughter line for slaughtering of pigs and cattle and the facilities for chilling of dressed carcasses of slaughtered animals.

Additional teaching takes place in a slaughterhouse of a Dalton s.r.o. company in Košice, on the basis of a signed Agreement on Cooperation and Provision of Practical Training No. 1058/2011/UVLF. The annual slaughtering capacity of this slaughterhouse is 980 cattle and 16 280 pigs. The slaughterhouse is located on a self-containing fully fenced lot accessed through one closable gate. It has separate unloading ramps for cattle and pigs and separate lairages for these two species, as well as separate slaughter lines for cattle and pigs and separate chilling facilities for quarter beef carcasses and half pork carcasses, dressing, chilling of portioned meat, shipping section comprising also temporary cold room, and social facilities (hygiene sluice, cloak room and daily room). Practical training takes place also in a slaughterhouse Brutus s.r.o. in Trebišov (40 km away from university) with annual slaughtering capacity 157 cattle and 697 pigs and on a small scale, focusing on inspection of cattle, training takes place also in a slaughterhouse Gelnický bitúnok in Gelnica (40 km from Košice). Inspection of small ruminants (sheep and lambs) is conducted in a specialised slaughterhouse Agrokombinát Sabinov s.r.o. in Sabinov, particularly before Easter, when more than 20 000 Easter lambs are slaughtered. The distance of this slaughterhouse from Košice is 70 km.

Practical teaching of the UVMP students is carried out also in a poultry slaughterhouse – Hydina SK, a.s. Košice, with daily slaughtering capacity of  $40\ 000$  –  $50\ 000$  broiler chicks (6000 per hour), and the slaughter line comprising also portioning of chicken carcasses.

Teaching takes place also in a poultry dressing plant of the Komes plus, s.r.o. company, in the vicinity of Košice (Rozhanovce, 15 km from the university).

## **6.1.7 FOODSTUFF PROCESSING UNIT**

## Describe briefly any access that the Faculty has to foodstuff processing units.

### **FOODSTUFF PROCESSING UNIT – UVMP IN KOŠICE**

A specialised classroom has been set up at UVMP in Košice for practical teaching in the field of food hygiene, namely for foodstuffs processing. This classroom is equipped with basic technology for production of thermally processed meat products which includes refrigerators, a chopper, cutter, heating vat, stuffers for filling into casings, injector of salt solution, kneading machine, ice maker and fully automatic smoking machine. Practical training takes place also in plants involved in dressing of meat and production of meat products (Dalton, s.r.o. Košice, Hydina SK, s.r.o., Košice, Mecom Humenné, Tauris Rimavská Sobota and Spišská Nová Ves) and manufacturing of packaging materials (Prifol s.r.o. Rozhanovce).

The mentioned facilities and equipment have sufficient potential for supporting adequate training of students in full range and depth corresponding to veterinary curriculum.

#### 6.1.8 WASTE MANAGEMENT

Briefly describe the systems and equipment used for disposing of waste material cadavers, carcasses, biological waste of different types, excreta, etc.

## WASTE MANAGEMENT – UVMP IN KOŠICE

Individual clinics, institutes and self-sustaining workplaces of the UVMP in Košice carry out scientific, research, education, expertise and therapeutic activities. These activities and operation of individual units are associated with production of wastes which, according to their character and the relevant Act on waste are classified into the categories Other waste and "Hazardous waste". According to law, university is a waste producer. Waste management at UVMP in Košice complies with the requirements of the Act of the National Council of SR No. 223/2001 Coll. on waste and amendments to subsequent legislation as amended, and Decree of the Slovak Ministry of Environment No. 310/2013 Coll. on implementing certain provisions of the Act on waste. By the decision of the District office in Košice, Care of the environment section, UVMP in Košice obtained authorization for manipulation with hazardous waste. The purpose of manipulation with hazardous waste is separation and collection of this waste, including care of its collection in the reserved place up to the time of its collection by an authorised subject for its recovery or disposal, based on a contract concluded with this subject. The UVMP activities relating to animal by-products processing and handling are regulated by Regulation (EC) no. 1069/2009 of the European Parliament and of the Council.

UVMP in Košice prepared a package of interrelated measures required by the Act on waste which includes the following: "Operation regulations for manipulation with waste", "Emergency measures (OPPH) for manipulation with hazardous waste" and "Identification lists of hazardous waste". Authorization for manipulation with hazardous waste issued by the District office covers clinics, institutes and self-sustaining workplaces on Komensky street No. 73 in Košice, workplace Pri Hati Košice, specialised EC in Košice and Student dormitory in Košice. A separate authorisation for manipulation with hazardous waste was issued by the District office Košice-vicinity for UFBD in Rozhanovce, together with a set of measures related to manipulation with waste.

In order to comply with obligations related to disposal of generated wastes the UVMP in Košice concluded contracts with the following authorised subjects: KOSIT a.s. Košice; FECUPRAL s.r.o. Veľký Šariš; ELWASTE s.r.o. Prešov; Green Company s.r.o. Bratislava; ASANÁCIA s.r.o. (VAS s.r.o.) Žilina; Tedos Bánovce nad Bebravou s.r.o. Dežerice; AUREX s.r.o. Prešov; ODOS s.r.o. Košice; ASA SLOVENSKO s.r.o. o.z. Košice; FÚRA s.r.o. Košice.

The total generated hazardous waste (5.0 tonnes annually) does not include waste of category 18 02 02 – dead animal bodies (cadavers), which are subject to the regimen set by the Act of the National Council of SR No. 39/2007 Coll. on veterinary care as amended, and implemented at the UVMP in Košice according to Regulations of the Rector of UVMP in Košice No. 1/2010. Manipulation with this waste and its temporary collection complies with the Operation regulations for manipulation with waste. ASANÁCIA s.r.o. Žilina is the contractual subject authorised for disposal of material of animal origin.

#### WASTE MANAGEMENT – FBA UIN IN BODØ

University of Nordland was Eco Certified spring 2008. This means that the university is committed to sort waste in the best way possible. The faculty has a specific procedure concerning disposal of waste material. The procedure aims to ensure that waste produced by FBA will be handled in such a way that it does not create pollution or harm to humans, animals or the environment, or the risk of this. It should also contribute to an appropriate and safe system for the handling of waste, especially considering the hazardous waste.

HSE Coordinator is responsible for the "Procedure for disposal by FBA" and its annexes (waste plan, sorting supervisor) are established and communicated throughout the organization. Team leaders are responsible for ensuring that all employees in the respective team receive information and training on waste management in accordance with the "Procedure for disposal by FBA".

Waste produced in the laboratories will be thrown into different waste containers depending on the type of waste.

#### 6.1.9 FUTURE CHANGES

Outline any proposed changes in the premises that will have a substantial effect on the Faculty, and indicate the stage which these have reached.

## **FUTURE CHANGES – UVMP IN KOŠICE**

The University of Veterinary Medicine and Pharmacy adheres to its Long-Term Strategic Plan which was developed in agreement with the Higher Education Act. In the field of material-technical conditions necessary for education and scientific-research activities of the university this plan stresses that it is necessary to continue with building-up a modern basis for teaching and scientific research on university premises and at its specialised establishments, as one of the preconditions for increasing quality of veterinary studies, teaching and research. According to intentions of this plan, the following changes must be implemented in the future:

- 1. To complete building-up and reconstruction of clinical workplaces and laboratories in order to ensure high quality of education, research and clinical activities. This implies the following:
  - a) Small Animal Clinic to build an extension to pavilion No. 40 new pavilion for surgery, orthopaedics, reproduction and infectious diseases with the aim to create a complex of university veterinary hospital for small animals (Annex 6.6),
  - b) Clinic of Horses reconstruction of pavilion No. 17a,
  - c) Clinic of Ruminants reconstruction of pavilion No. 17b,
- 2. To complete reconstruction of existing clinical housing facilities for ruminants and pigs or build new clinical housing facilities for large ruminants and pigs pavilion No. 19 (Annex 6.7).
- 3. To build experimental animal quarters and potentially also additional pre-clinical and clinical experimental background for biomedical research.
- 4. To set up a central admission of patients in order to ensure higher quality of provided services and to complete infrastructure of clinics.
- 5. To seek additional financial resources for completion of clinical workplaces and obtaining top diagnostic equipment, such as CT and MRI, in order to extend the spectrum and increase the quality of practical diagnostic activities, ensure excellence of university clinical workplaces in the field of diagnostic activities and extend the spectrum of specialised veterinary care of the patients.
- 6. To produce material-technical and spatial conditions for operation of the slaughterhouse located on the premises of the former Experimental veterinary centre in Zemplínska Teplica for the purpose of practical training of students in the field of meat hygiene and technology.
- 7. To finish the complex adaptation of the accommodation-catering complex at UF n. o., in Zemplínska Teplica.
- 8. To adapt the administrative-education building, including the classroom and facility for dressing of game, located on the premises of UFBD in Rozhanovce to relevant EU standards using financial resources from EU structural funds.
- 9. To continue in creating a modern basis for teaching and scientific research on the premises of the EC of the UVMP in Košice by adaptation of existing buildings.
- 10. To increase the quality of accommodation and conditions for study and sport-social activities of students of the UVMP in Košice at Student dormitory, particularly by installing new electrical lines and lifts.

In addition to these basic goals planned for the subsequent period, other activities will be carried out continuously to improve technical conditions of classrooms and other university facilities by reconstructing the existing lecture halls, classrooms for practical work and laboratories in order to update and modernize them (planned reconstruction and adaptation of pavilion of morphological disciplines – P

34). We will also build rest zones for students and restore social facilities on university premises. In association with building-up new clinical housing facilities in pavilion P 19 we also plan to reconstruct and adapt buildings of the P 20 objects and establish new centre of car/bus transportation for the UVMP in Košice.

## **FUTURE CHANGES – FBA UIN IN BODØ**

The University Board gave in March 2014 commissioned to initiate planning of a new "blue building". The building will contribute to UiN's national position within "blue knowledge", welfare research and innovation and entrepreneurship. The building includes plans for student spaces, workplaces, educational and research facilities in both new and existing buildings. The faculty is at the time facing challenges as there are no expansion opportunities in the current buildings. Current laboratories are inappropriately organized and localized, and laboratories have insufficient capacity, including in relation to the efficient use of areas and the fulfilment of HSE requirements. The planned building will solve these challenges (Annex 6.8).

Source: http://old.uin.no/Pages/Campus-Bod%C3%B8-planlegger-%C2%ABbl%C3%A5ttbygg%C2%BB.aspx

#### 6.2 COMMENTS

- Comment on the adequacy of the buildings in general for undergraduate teaching.

- Comment on the adequacy of the equipment in general for undergraduate teaching.

- Comment on the maintenance of buildings and equipment.

## **COMMENTS – UVMP IN KOŠICE**

Further development and improvement of the material-technical support of individual pre-clinical and clinical units has been one of the long-term priorities of the University Management as a part of increasing the quality of education provided by UVMP in Košice in an effort to advance clinical training and performance of clinical activities.

- In 2005 we completed a full-scale reconstruction and rebuilding of pavilion No. 26, the former 1st internal clinic, providing separate spaces for two newly established clinics, Small Animal Clinic and Clinic of Birds, Exotic and Free-Living animals. Also the technical and diagnostic equipment of the clinics was improved considerably in the subsequent years, particularly that of the Small Animal Clinic, which was reflected in better quality of its diagnostic activities.
- One of the measures that contributed to further development, increased effectiveness and quality of education provided by the UVMP in Košice was approval of a new curriculum for the study programme GVM, developed in compliance with requirements on education of veterinary doctors. This was followed up by changes in organisation structure of university units implemented in 2007, involving re-organization of the original 4 clinics and establishment to 5 clinics according to animal species, taking into consideration the European standards of orientation of veterinary education and practice. In essence, the system, organization and spatial layout of the newly established clinics reflect the practical clinical activities of veterinarians in the major categories of animals, namely small or companion animals, horses and farm animals (particularly ruminants and pigs). It also takes into consideration smaller professional groups of veterinarians dealing with rearing and diseases of poultry, birds, exotic and free living animals or animals in ZOOs. Re-organisation of the existing clinics also produced better conditions for practical work of students, helped to integrate them better into clinical activities and enabled them to take better care of patients, including complex clinical observation of development of their health condition. An important part of organization changes in clinical units was the adjustment of their material-technical basis and spatial arrangement that allowed successful implementation of the relevant tasks. This required reconstruction and adaptation of original housing and teaching facilities and spaces. However, the knowledge of the real construction and technical state of the existing buildings made it obvious that such approach will not suffice to fulfil intentions and requirements that a modern higher education institution must satisfy. For this reason, we started to work intensively on preparation of projects for building up new facilities that would allow us to ensure

adequate level of teaching of clinical disciplines according to animal species. Tehese changes were performed on the basis of report accompanying proposal of the changed organizational structure of clinical units. The report stated that the hospitalisation and housing facilities of clinics were mostly inadequate, some of them even requiring immediate action and required improvement from the point of view of work safety of personnel and students, more effective use of the available space, technologies and staff tending to animals and welfare of housed or hospitalised animals.

- An important step was the establishment of the Clinic of Horses. It was the absence of this clinic or need to improve conditions for this animal species with regard to facilities, equipment, therapeutic interventions and provision of some professional actions, hospitalisation and care of equine patients, that were characterised as serious deficiency or *"category I deficiency"* by the group of experts during previous international evaluation. The existing facility was substantially reconstructed and adapted for the purpose of theoretical and practical teaching and housing and hospitalisation of patients (including post-narcotisation box and a separate isolation space). The clinic was equipped with new instruments that increased quality of its diagnostic activities (e.g. portable digital X-ray machine, endoscope, USG). Today the Clinic of Horses has at its disposal also the so-called "mobile clinic" which means a qualitatively new approach when providing services to owners of animals of this species.
- In 2010, construction of a new multifunctional facility No. 18 Clinical housing facility started and was completed in 2012. The majority of this facility belongs to the Clinic of Horses but there is also separate space used by the Clinic of Ruminants and space for teaching and for clinical and scientific activities involving small ruminants. Multifunctional character of this two-floored facility is indicated by - 19 boxes for housing of horses (5 of them include runs), storage area for tools and equipment necessary for horse grooming and care, washing box, examination room interconnected with storage room of medical material and a room for preparation of material for patients treatment, room for staff including a small kitchen, social facility for students and personnel, separate cloakroom for students and separate locomotory section serving for horses rehabilitation and testing their performance. On the second floor there is a large separate storage space for bulk feed and straw and an administrative part comprising social facilities, classroom with a didactic room for teachers, apartment for accommodation of guests, 4 rooms for veterinarian in service, PhD, students and students taking clinical practice. The part of this facility is occupied by the Clinic of Ruminants and has at its disposal 17 boxes for housing of sheep and goats with the possibility of separating experimental animals from hospitalised patients. There is also an examination room, storage of concentrate feed and work tools, social facilities, cloakroom for students, room for staff, laboratory, rooms for veterinarian in service and room for medicines, medical and sanitary material and equipment used for examination and therapeutic interventions. On the second floor there is also a storage space for bulk feed and separate administrative facilities that include social facilities, 2 seminar classrooms and a study/work room intended for students during clinical practice. The whole facility is heated and ventilated and equipped with automatic temperature regulation system. This multifunctional facility corresponds to current needs for teaching, clinical and scientific research activities. Space for housing, practical training and clinical activities concerning other animal species that are carried out by the Clinic of Ruminants and Clinic of Swine were after the commencement of building-up the new object No. 18 – Clinical housing facilities – provided in building No. 19. After moderate adjustment and adaptation to the respective animal species, both clinics used the allotted space jointly.
- In 2012 a new facility was given for use also to the newly established Clinic of Swine. In the building there is a separate complex administrative part with two laboratories, and another part intended for teaching with two entrances to 3 classrooms, so several practical lessons can be carried out simultaneously. In this part there are two separate cloak rooms and social facilities for students. The building underwent a complex interior and exterior reconstruction.
- Because essential part of practical education involving animal production subjects and health issues of productive animals is taught directly on animal farms, a significant reconstruction and adaptation was carried out on the UF in the previous period. In this way an adequate accommodation, administrative and education background was established on this farm, including a lecture hall, office and social facilities, and laboratories equipped for basic simple laboratory diagnostic activities during practical teaching directly on the farm. At the largest farm unit of the UF there is also sufficient social background for teachers and students. In order to ensure round-the-year diagnostic activities and surgical-orthopaedical interventions for cattle within the education process, but also for prevention of

hoof problems, a separate space was allocated for such specific activities in a housing for postparturient dairy cows with health problems. The above mentioned facilities and equipment can be used besides clinical disciplines also for other non-clinical study subjects taught at UF. In 2012, reconstruction and adaptation of the slaughterhouse on the premises of the former Experimental research centre in Zemplínska Teplica was completed following the aim to put it into operation and use it for practical teaching in the field of food hygiene. Operation of a slaughterhouse owned by university provides an important and unique opportunity to carry out practical training in this specialised area operated under university controlled conditions.

In addition to the mentioned adaptation and reconstruction work and building-up a new facility for clinical units, there were made several other significant positive changes in the material-technical field including spatial and constructional adjustments of non-clinical facilities. We finalized complete adaptation of Chemical pavilion and of Pharmaceutical pavilion, completely reconstructed facilities of the Section of information and communication technologies and the Institute of forensic and public veterinary medicine and economics, and reconstructed premises of institutes of the Department of epizootiology and parasitology and the Department of microbiology and immunology. Reconstruction and adaptation involved also both buildings of the Student dormitory (heat insulation, heating system, social facilities, furnishing of rooms), administrative building at the specialised establishment of UVMP in Rozhanovce. Rest zones were created on the university campus and experimental animal quarters were established at the Clinic of Birds, Exotic and Free-Living Animals.

In the evaluated period more than  $\in$  10 million were invested within the investment-oriented projects into reconstruction and adaptation of buildings and other facilities, and more than  $\in$  21 million were used to purchase laboratory and other equipment. Additionally, over  $\in$  1.1 million was invested to build the Clinical housing facility P 18.

The presented essential changes accomplished in the recent period allow us to state that conditions for teaching and study of veterinary medicine at the UVMP in Košice have improved considerably, regarding the buildings, available space and equipment as far as students, university staff and activities of clinical workplaces are concerned. This process has not been completed yet which is evident from the ongoing work involving building of new objects and reconstructing the old ones and the adjoining facilities. In comparison with the previous period a significant advancement can be seen in the field of material-technical and instrumental equipment available at individual university units. Our efforts continue also in this area, particularly in term of activities focused on obtaining financial sources outside the allotted state budget subsidies in order to furnish adequately the new premises and purchase top clinical and laboratory diagnostic equipment.

## **COMMENTS – FBA UIN IN BODØ**

Currently, the faculty is using common lecture rooms and laboratories with other faculties. In some cases this creates some problems with the scheduling of the lectures and the laboratory exercises. However, the number of students attending the theoretical and practical training is the main consideration for the choice of the appropriate rooms.

### **6.3 SUGGESTIONS**

If you are unhappy with any situation, please list any improvements you would make in order of preference.

## SUGGESTION – UVMP IN KOŠICE

The reaching of set goals by the Long-Term Strategic Plan of the university in both areas education and scientific research requires higher successfulness in obtaining various extra-budget financial means. The buildings we started to build must be completed, particularly the Clinical housing facilities P 19, University veterinary hospital – Small Animal Clinic P 40, and reconstruction in the Morphological pavilion. For building-up or reconstruction of the mentioned objects we have already obtained the financial means amounting to  $\notin$  2.09 million (object P 19),  $\notin$  2.6 million (object P 40) and  $\notin$  0.52 million (Morphological pavilion).

It is necessary to plan new construction and adaptation work on other buildings on the UVMP campus. On the campus there are mostly original buildings that were put to use 100 years ago. They were gradually adapted to the needs of teaching of veterinary medicine about 50 - 55 years ago. Presently they comply with the requirements of providing education in the field of veterinary medicine. However, with regard to their age their maintenance will require considerable financial investments in the future which was not adequately considered in subsidies allocated to the university from the state budget and raises problems with their maintenance and renovation of older buildings. However, despite inadequate funds from the state budget, the maintenance of buildings and equipment will be performed on the basis of annual plans according to requirements of individual units and urgency of repairs.

Our important priorities include completion of top workplaces of the university and equipping them with adequate diagnostic and laboratory technique comparable with advanced veterinary institutions in Europe, and obtaining sufficient financial resource for furnishing and equipment for newly built and reconstructed buildings and other facilities. For this purpose UVMP in Košice already secured  $\in 2.8$  million. A specific priority concerning clinical units is obtaining the currently lacking top diagnostic equipment for their activities – CT and MRI. However, modernization of equipment of the existing workplaces requires an effort on obtaining financial resources from sources outside state funding and increasing successfulness in grant projects supported by domestic and foreign grant agencies, structural funds and entrepreneurial and auxiliary economic activities.

#### SUGGESTION – FBA UIN IN BODØ

The construction of the new 'blue building' for FBA will significantly increase the autonomy and teaching and research capacity of the faculty.

## **Chapter 7. ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN**

## 7.1 FACTUAL INFORMATION

## FACTUAL INFORMATION – UVMP IN KOŠICE

## **7.1.1 ANATOMY**

## Indicate the materials that are used in practical anatomical training, and how these are obtained and stored.

The practical anatomical training is carried out on carcasses of sheep, goats, dogs, horses, pigs, cattle, laboratory animals and occasionally also exotic animals. In addition also bone and skull preparations, complete animal skeletons and other anatomical preparations and didactic aids are used. During dissecting lessons the students work with whole animals or their organs in anatomical dissection rooms. Besides regular teaching the students have free access to osteological classroom and anatomical museum, where they can use for study a plastic model of a horse, whole skeletons and skulls of various animal species, individual bones and prepared organs. The Institute of anatomy obtains animals for practical training from university clinics and from the UF in Zemplínska Teplica. Permanent preparations are also used for teaching. Students do not come into contact with conservation means that are used to achieve permanent conservation, and their chemical nature represents health risk.

	Dogs		Rum	inants	Ног	ses	Other*		
	2014	2013	2014	2013	2014	2013	2014	2013	
Live animals	0	0	40	40	0	0	50	50	
Cadavers	20	20	3	2	1	2	10	9	
Whole skeletons	2	2	8	8	4	4	15	15	
Organ preparations (models)	3	3	19	19	8	8	30	30	
Skulls/bones	10/600	10/550	8/800	8/780	5/700	5/650	15/600	15/600	
USG	0	0	0	0	0	0	0	0	
Computer aided teaching	1	1	0	0	1	1	1	1	

Table 7.1. Material used in Dractical anatomical trainin	Table	7.1:	Material	used in	practical	anatomical	training
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pigs, laboratory animals, birds, bear, human models

## 7.1.2 PATHOLOGY

Practical training in pathology is carried out on whole cadavers, particularly of companion/exotic animals, poultry and farm animals. Cadavers are stored in a prescribed way eliminating their undesirable contact with humans or animals and after necropsy they are collected and transported by approved vehicles to rendering plants where they are processed in a harmless way. Cadavers are provided by university clinics and additional sources including collecting services of the rendering plant, Sanitation services of Košice city, veterinary clinics, private breeders, Institute of physiology of farm animals in Košice. The training is carried out at the Institute of pathological anatomy on cadavers of dead animals or animals killed in order to make diagnostic dissection with subsequent writing of a protocol about dissection requested by the owner or breeder. The majority of necropsies is performed either in small or large dissection room of the Institute of pathological anatomy and some necropsies of poultry related to clinical teaching are performed at the Clinic of Birds, Exotic and Free-Living Animals. In some cases,

dissections are performed also during practical teaching in blocks and clinical training on UF, in the facility serving for storage of cadavers from where they are transported on the basis of relevant contract by the collecting sanitation services.

Samples of organs and tissues collected from cadavers are used for the teaching of histopathological diagnosis. Additional samples for these purposes are obtained also from animals which died at clinics or on animal farms. Examined are also biopsy samples obtained from live animals on clinics, when histopathological diagnosis is requested and has to be accompanied with relevant documentation about examination results.

The practical training is organised in such a way that dissection of one cadaver is carried out by a small group of students. Permanent macroscopical and histopathological preparations are also used for teaching.

A	Num	Avonaga			
Animai	2014	2013	2012	Average	
Food producing	Cattle	9	16	14	
animals	Small ruminants	14	36	21	95
	Pigs	53	34	88	70
Equine		0	8	4	4
Poultry		205	168	138	
Rabbits		8	5	2	175
	Dogs	253	257	330	
Companion/exotic	Cats	65	32	12	427
	Other*	11	29	291	/

#### Table 7.2: Number of necropsies over the past 3 years

**\*2014** common ferret 1, predators 10

\*2013 badger 3, predators 25, tortoise 1

\*2012 squirrel 1, guinea pig 1, parrot 1, predators 288

Indicate the nature and extent of any additional sources of material for the teaching of necropsies and pathological anatomy, including slaughterhouse material.

Number of samples of organs and tissues examined during pathology teaching is in Annex 7.1.

## 7.1.3 ANIMAL PRODUCTION

Indicate the availability of food-producing animals for the practical teaching of students a) on the site of the institution; b) on other sites to which the institution has access.

Part of the teaching involving the entire spectrum of animal production takes place at the university but mostly on UF located 35 km away from Košice. The study subjects dealing with animal production include technology of rearing, animal hygiene, welfare, nutrition and diseases of farm (food producing) animals. Animals that are used for teaching animal production and diseases of food producing animals are transported mostly from the UF and are housed in housing facilities of the Clinic of Ruminants (cattle, goats, and sheep) and Clinic of Swine (pigs). Smaller number of animals originates from surrounding farms and are housed in the facilities allocated for farm animals. There are three facilities for housing of ruminants on university premises. In building P-18, there are 38 places for housing of small ruminants and calves, in building P-19 there are 7 places for dairy cows, and 2 bulls can be housed in building No. 29. Live pigs needed for teaching are housed in buildings P-18 and P-19 where

there are places for 4 - 6 sows, 6-10 fattening pigs and up to 30 suckling piglets. Animal production subjects are taught also on some farms for cattle and pigs in the vicinity of Košice where the teaching takes place on the basis of long-term mutual collaboration.

The mean monthly number of animals kept on UF is 1073 cattle, 402 pigs, 456 small ruminants (71 goats). In the 3 units of UF there are facilities for housing all categories of cattle (calves up to 3 months of age, young cattle, fattening bulls, breeding and pregnant heifers, dairy cows in all stages of production and reproduction). Pigs used for teaching are housed in 2 of these units where all categories of pigs are kept (gilts, pregnant sows, sows after farrowing, suckling piglets, pre-fattening and fattening pigs and breeding boars). Small ruminants are housed in 1 unit where they have access to pasture.

Teaching on UF is carried out in two forms, as one-day trips of students and teachers or severalday block training. In the second case, the students are accommodated in the reconstructed quarters (dormitory on the farm located in its administrative section close to the main farm unit) (Annex 7.2).

Besides providing conditions for practical training of veterinary students and for scientific research covering all relevant technical and material aspects, UF also provides live animals and feed for pre-clinical and clinical units of UVMP in Košice. Also, before starting with the 1<sup>st</sup> year of study, students come to this farm to practice animal production and for some of them this is their first contact with food producing animals. In 2014, 163 students participated in this practice under the supervision of 14 teachers (652 student hours), in 2013 there were 115 students supervised by 7 teachers (1 994 student hours), and in 2012 there were 72 students supervised by 7 teachers (2016 student hours).

Besides subjects dealing with animal production in general (animal husbandry, animal hygiene, nutrition, welfare), teaching is oriented also on coping with diseases of food producing animals, taught by the Clinic of Ruminants and the Clinic of Swine within study subjects Diseases of ruminants and Diseases of pigs. With regard to the cattle and pigs the students learn during practical teaching the principles of proper feeding of individual categories of cattle and providing good welfare conditions for cattle, including relevant animal hygiene parameters that apply to these farm animals. Students also become acquainted with the process of primary milk production, including the principles of correct technology of milking with stress on prevention of mastitis. The practical teaching is organised in such a way so the students become involved in treatment of hoofs, dehorning of cattle, carrying preventive measures, collecting samples of biological material (blood, urine, faeces, rumen content, and milk) for diagnostic purposes, and practical therapeutic interventions. They participate in a broad spectrum of specialised diagnostic and therapeutic activities in the field of gynaecology, obstetrics, internal diseases, surgery and orthopaedics, and productive and organ diseases. Their practical studies are oriented particularly on diagnosis of oestrus, ovulation, pregnancy, physiological and pathological parturition and observation of anatomic and hormonal aspects during puerperium. Considerable attention is paid to inflammatory conditions during the puerperal period, their occurrence, aetiology, diagnosis, therapy and prevention. Within the study subject Andrology and artificial insemination considerable attention is paid to procedures applied during basic and special andrological examination of individual farm animal species and procedure of semen collection and its microbiological examination. An important training field involves orthopaedic interventions, diagnosis of lameness in cattle and treatment of hoofs of dairy cows and sheep (Annex 7.3).

For teaching animal production in the field of horse keeping there are available horses housed in the clinical housing facilities where there are 19 places for these animals. Additional horses used for teaching are housed in EC of UVMP in Košice with the capacity for 60 horses. In this establishment there are 57 horses, 11 of them owned by UVMP in Košice. They are mostly used for practical training of university students.

The Clinic of Birds, Exotic and Free-Living Animals has at its disposal housing and hospitalisation facilities for poultry, where the clinic keeps the birds needed for teaching. However, the teaching is carried out on poultry farms outside the university as well.

#### 7.1.4 FOOD HYGIENE/PUBLIC HEALTH

## Indicate the availability of farm animals and products of animal origin for the practical teaching of students in veterinary public health, food hygiene, inspection and technology.

The study of veterinary medicine includes the following study subjects related to food hygiene: Milk hygiene and technology, Meat hygiene and technology and Hygiene and technology of poultry meat, fish and eggs. There is relevant space and technology for teaching these subjects at the university premises. In addition, practical teaching takes place also in food processing facilities and slaughterhouses during scheduled trips. However, situation in this respect became considerably more complicated due to reduction in the number of slaughtered animals within the past ten years, and subsequent termination of relevant operations involved in slaughtering of food producing animals and processing of raw materials of animal origin.

Inspection of meat and internal organs of slaughter animals is taught in the slaughterhouse of UF and at the slaughterhouse belonging to Dalton company s.r.o. in Košice, based on the Agreement on Cooperation and Provision of Practical Training No. 1058/2011/UVLF, concluded between Dalton s.r.o company and UVMP in Košice. Practical training of students takes place also in the slaughterhouses of following companies: Gelnický bitúnok in Gelnica, Brutus s.r.o. in Trebišov, and Hydina SK a.s. in Košice. The aim of this practical training is to teach students how to perform health inspection of slaughter animals. This includes *ante mortem* inspection, evaluation of animal protection and checking the accompanying documents, health inspection *post mortem*, slaughterhouse environmental hygiene evaluation and observation of relevant legislative regulations. The number of animals inspected in the period 2012 - 2014 is presented in Annex 7.4. Teaching is oriented on pre-mortem evaluation of slaughter animals, their welfare during transportation and unloading in the slaughterhouse, stunning and welfare of animals at slaughter, dressing of animal carcasses, veterinary inspection of carcasses and organs, grading of carcasses and compliance with hygiene requirements of Good manufacturing practice and HACCP. Evidence is kept on number of animals in the slaughterhouse supervise the student's activities.

Practical teaching takes place in classrooms of the Institute of meat hygiene and technology at specialized classroom for meat and meat products processing. On the basis of collaboration, students visit the following plants involved in meat processing and meat production, poultry game and fish products: Dalton s.r.o. in Košice, Hydina SK s.r.o. in Košice, Tauris a.s. in Rimavská Sobota and Spišská Nová Ves, Ryba Košice s.r.o. in Košice, SVAMAN s.r.o. Myjava, Tatrakon s.r.o. Poprad, MECOM a.s. Humenné, HSH s.r.o. Veľké Zálužie – poultry processing, JAV-AKC s.r.o. Vlčany – processing animal fats, etc. Food samples used for teaching are purchased either directly from producers or retail shops or are prepared in the special meat products producing room at the university. The numbers and total weight of samples used in teaching is presented in Annex 7.5.

#### 7.1.5 CONSULTATIONS AND PATIENT FLOW SERVICES

#### 7.1.5.1 CONSULTATION

- State the number of weeks, in the course of the year, during which the clinics are open.
- State the number of consultation days each week.
- State the consultation hours.

Clinical services of the university staff include primary contact with patients within the scope of ambulatory consultation and therapeutic activities. Five clinics are involved in providing these services, namely Small Animal Clinic (Section of Internal Diseases and Section of Surgery, Orthopaedics, Roentgenology and Reproduction), Clinic of Horses, Clinic of Ruminants, Clinic of Swine and Clinic of Birds, Exotic and Free-Living animals. Each of these clinics provides services to patients according to its own system and organisation, considering specifics related to individual animal species.

#### **Small Animal Clinic - Section of Internal Diseases**

Small Animal Clinic - Section of Internal Diseases is located in building No. 26 with patient's waiting room, examination rooms and specialised sections for USG, ECG, neurological examination and biochemical laboratory. It is open 52 weeks per year, 7 days per week, 24 hours per day based on the following schedule: daily ambulatory services including consultations, diagnosis and therapeutic activities are available 8:00 a.m. – 6:00 p.m. From 6:00 p.m. till 8:00 a.m. an emergency service with veterinarian on phone is provided. During weekends and state holidays ambulance provides emergency service from 9:00 a.m. till 12:00 noon, and on-call emergency service between 12:00 noon and 9:00 a.m. Ambulatory services are provided by an attending veterinarian, technical staff. Students also participate in these activities according to the relevant clinical training schedule.

#### Small Animal Clinic - Section of Surgery, Orthopaedics, Roentgenology and Reproduction

This section has at its disposal five ambulances, three surgery rooms, space for post-surgery patients and hospitalisation area. The section is open throughout the year, 7 days a week and during workdays an attending veterinarian is present between 8:00 a.m. and 6:00 p.m., and during the weekends between 9:00 a.m. – 12:00 noon. Outside consultation hours on-call emergency service is provided by a veterinarian. Most of the clinical activities are conducted between 8:00 a.m. and 3:30 p.m. and planned surgical interventions are carried out every day up to 1:00 p.m. Emergency surgeries are carried out in morning and afternoon hours. Students participate in preparation of patients for surgeries, in surgeries themselves and in peri- and post-operative patients care. Students in the 5<sup>th</sup> and 6th year of studies are involved in clinical activities within the scheduled clinical practice. Between 3:30 p.m. and 6:00 p.m. an attending veterinarian provides services at the ambulance of the section and there is also animal care staff on duty who serves also as technical staff for the Section of internal diseases. This person is responsible only for disinfection and cleaning up. Emergency therapy of acute cases is at the responsibility of the attending veterinarian and auxiliary personnel – attending animal care person on duty. If needed, another scheduled veterinarian can be called in. Between 6:00 p.m. and 8:00 a.m. only animal care staff on duty is present at the clinic. His/her responsibility is also to call the attending veterinarian to provide services to walk-in patients. In summer, in the period of summer holidays (July 15 - August 15) only basic veterinary diagnostic services and therapy are provided during workdays between 8:00 a.m. and 3:00 p-m.

#### **Clinic of Ruminants**

Clinic of Ruminants provides consultations and services to patients throughout the year. It covers all disciplines related to Diseases of Ruminants (internal medicine, surgery, orthopaedics and reproductions). It occupies some space in the pavilions 17, 18 and 19. In pavilion No. 17 there are offices, laboratories, andrological room for collection and examination of semen, and lecture halls. In the facilities serving as clinical housing space in pavilion No. 18 there is space for examination of small ruminants and subsequent ambulatory treatment or hospitalisation of patients. Examination room for large ruminants and space for their subsequent therapy is in building No. 19. The attending veterinarian is responsible for admission and evidence of patients from 7:15 a.m. till 3:15 p.m. during workdays and between 8:00 a.m. and 12:00 noon on weekends. Students scheduled for clinical practice participate in this process. Emergency service is provided by an attending veterinarian who can be reached by phone between 3:15 p.m. and 7:15 a.m. on workdays and between 12:00 noon and 8:00 a.m. on weekends.

#### **Clinic of Swine**

Clinic of Swine is located in pavilion No. 17, where there is space allocated for administrative services and for teaching, and, temporarily, it occupies some space in the facility serving as clinical housing space in building P 18, intended for small ruminants, and in building P 19 where there is a room for examination and ambulatory activities and a separate housing space. Admission and evidence of patients is ensured throughout the year, 7 days per week. Standard operation is ensured between 8:00 a.m. and 3:30 p.m. when routine ambulatory and therapeutic activities are carried out and part of the teaching takes place. Emergency clinical services are provided between 3:30 p.m. and 7:00 a.m. on workdays and during weekends and holidays when an attending veterinarian is on-call and can attend to emergency cases if needed. Students participate in clinical ambulatory activities according to clinical practice schedule.

#### **Clinic of Horses**

Clinic of Horses is located in pavilion No. 18, where there is a clinical examination room with the necessary background and hospitalisation facility with 19 boxes for horses, including 1 post-anaesthesia box, 2 boxes for patients with colic, and a room for 24-hour animal care staff. In building No. 17 there is a surgery room for clinical ambulatory activities of the Clinic of Horses, and also an experimental surgery hall, small clinical laboratory and admission of patients with conventional and electronic record keeping (Provet). During working hours and workdays there is also a technical staff in pavilion No. 17, responsible for surgery rooms and hospitalisation section and fulfilling potential requirements of attending and teaching veterinarians. The clinic operates throughout the year, 7 days per week. The attending veterinarian is present between 07:00 a.m. - 3:00 p.m. during workdays and can be reached by phone between 3:00 p.m. and 07:00 a.m. During weekends and holidays a 24-hour emergency service is available with attending veterinarian on phone. During workdays the routine ambulatory and therapeutic activities are carried out, surgery interventions are performed and most of the teaching takes place. Patients are provided treatment 24-hours per day, if necessary, with the presence of attending veterinarian and students scheduled for obligatory clinical practice.

## **Clinic of Birds, Exotic and Free-Living Animals**

Clinic of Birds, Exotic and Free-Living Animals provides veterinary services to birds (poultry and exotic birds), small ruminants, reptiles and free living animals (predators, bats and other), and consultations to bee keepers. The clinic occupies facilities in pavilion No. 26, where there is ambulance for admission of patients, their examination and therapy. Besides admission ambulance, there is also a surgery and diagnostic room for specialised diagnostic actions (e.g. USG, endoscopy). Veterinary services are provided throughout the year, i.e. for 52 weeks, with consultation hours 8:00 a.m. - 3:30 p.m. During these hours there are veterinarians - specialists in the field of avian medicine, reptiles, small mammals, predators, free living animals and bees present, as well as other specialised personnel and students scheduled for clinical practice. During workdays, between 3:30 p.m. and 6:00 p.m. veterinary services are provided in collaboration with small animal clinic. On weekends and holidays between 9:00 a.m. and 12:00 noon an attending veterinarian is present in the ambulance of the Small animal clinic, Section of internal diseases. During remaining hours emergency veterinary service is provided by an attending veterinarian on phone who can be called in, if necessary. The attending veterinarian is responsible for health care of hospitalised patients and the animal care staff on duty for their maintenance needs. Students take care of free living animals in the rehabilitation centre and of hospitalised animals during scheduled clinical short-term training under supervision of the attending veterinarian.

## 7.1.5.2 PATIENT FLOW

The number of animals to be stated are for all disciplines combined (medicine, surgery, reproduction, etc.). In Table 7.3 only animals coming into the Faculty should be included. Animals studied in practical teaching outside the Faculty should be entered in the section entitled "Ambulatory Clinic" (Table 7.4). The term "consultation" refers to those patients which come in and go out during daily consultation hours. "Hospitalisation" refers to those patients which are retained in the clinic as "in patients" following presentation.

Clinical work at the university include besides the primary contact with patients within ambulatory consultation and therapeutic activities at all 5 clinics also hospitalisation of patients which require intensive veterinary care and continuous monitoring of their health status. Each clinic provides these services to patients according to its own system and organisation, taking into consideration specific possibilities of their housing within respective clinics.

## **Small Animal Clinic - Section of Internal Diseases**

The clinic ensures hospitalisation of patients on the level corresponding to the housing facilities and character of the provided veterinary services. The section has at its disposal a set of five cages for housing (three for small and medium breeds and 2 for large breeds). During consultation hours, veterinarians with assistance of students take care of the hospitalised patients. During emergency hours the attending veterinarian with the help of animal care personnel fulfils this role. The majority of patients is hospitalised during consultation hours between 8:00 a.m. and 6:00 p.m. If longer hospitalisation is

required, the attending veterinarian is informed by phone by the animal care staff on duty about the state of patients and potential need to take an action. If it is necessary to administer medications to patients at night, the veterinarian prepares the medication together with the schedule for their administration, and they are administered to patients by skilled personnel.

#### Small Animal Clinic - Section of Surgery, Orthopaedics, Roentgenology and Reproduction

Hospitalised are patients that require long-term veterinary care, intravenous nutrition, administration of drugs in short time intervals or patients in condition that prevents administration of medicines or adequate care by owners. A separate (divided) space with stabile and portable cages for dogs and cats is allocated for hospitalisation. The care of the hospitalised patients is ensured by attending veterinarians between 8:00 a.m. and 6:00 p.m. From 6:00 p.m. till 8:00 a.m. the patients are under control of the technical staff on duty. If necessary, the attending veterinarian providing emergency services will arrive to administer required medicines or perform necessary interventions. Students participate in the care of hospitalised patients within scheduled clinical practice.

#### **Clinic of Horses**

Clinic of Horses provides hospitalisation and rehabilitation of patients after traumas and surgeries, with active participation of students within scheduled clinical practice. Patients can be admitted for hospitalisation throughout the year, 7 days per week, during standard consultation hours from 8:00 a.m. till 3:00 p.m. on workdays and in the remaining hours there are veterinarians on-call which, if needed, will admit patients for hospitalisation. Students participate in admission of patients for hospitalisation, perform basic laboratory examinations as well as specialised examinations using imaging and endoscopic techniques. They also prepare patients for surgery by introducing permanent cannulas, participate in preparation of anaesthesia protocols, monitoring and measurements of values of life functions of patients. Students participate also in technical preparation for surgery, assist with surgery and help with intensive post-operation care. During days following the surgery students participate in therapeutic activities, monitor clinical status, wound healing, observe dynamics of therapeutic effects, and are involved in patient's rehabilitation. They participate in designing diet for hospitalised patients, discharge of patients and inform the owners about management of convalescence and analyse potential risks arising after discharge of patients from the hospital.

#### **Clinic of Ruminants**

Admission of patients in the Clinic of Ruminants is performed by the attending veterinarian who is responsible for admission and evidence of patients, their examination and therapy between 7:15 a.m. and 3:15 p.m. on workdays and between 8:00 a.m. and 12:00 noon during weekends. Care of the hospitalised patients is ensured by the respective attending veterinarian and animal care staff on duty with participation of students performing clinical practice. Hospitalised patients are used to the reasonable extent also for teaching purposes within practical lessons.

#### **Clinic of Swine**

Hospitalisation and the related care of patients at the Clinic of Swine is ensured on a high level. Hospitalised patients are used for teaching purposes. Students participate in admission of patients and their examination including advanced imaging techniques, preparation of patients for surgeries, surgeries themselves, intensive post-operation care and subsequent post-operation care at the clinic. Patients can be hospitalised throughout year, 7 days per week. Admission is possible during regular consultation hours between 8:00 a.m. and 3.30 p.m. on workdays and 8:00 a.m. – 12:00 noon on Saturdays and Sundays at the presence of a veterinarian and in remaining hours veterinarians are available on-call.

#### **Clinic of Birds, Exotic and Free-Living Animals**

The clinic has its own space for hospitalisation of patients, particularly for birds and poultry, reptiles, small mammals and birds of prey and for other free living animals. Animals can be admitted throughout the year, 7 days per week. Patients are mostly admitted during regular consultation hours from 8:00 a.m. till 3:30 p.m., when the veterinarians of the clinic are directly available. Students participate in therapy of admitted patients according to the schedule of clinical training. Under supervision of the attending veterinarian they carry out clinical examination, collect samples of biological material,

administer medicines, carry out laboratory examination, assist with operations and participate in post-operative care of patients.

		Number of cases								
Sp	201	14	20	13	20	12	Average			
		a	b	a	b	a	b			
Food producing	Cattle	0	71	0	55	0	45			
animals	Sheep, goats	7	51	2	28	4	29	204		
	Pigs	65	56	50	46	47	55			
Poultry	180	50	160	40	236	50	507			
Rabbits		220	20	180	10	350	25			
Equines		213	72	127	82	222	47	254		
	Canines	8978	674	8288	488	9698	489			
Companion/ Exotic animals	Felines	1526	135	2340	95	1704	180			
	Small mammals	144	30	114	26	123	23	12075		
	Birds	118	92	131	72	119	92			
	Reptiles	143	14	138	15	223	12			

Table 7.3	Number	of e	cases:	a)	received	for	consultation,	and	b)	hospitalised	in	UVMP	in	Košice
clinics, in	the past tl	hree	years							-				

## 7.1.6 VEHICLES FOR ANIMAL TRANSPORT

#### State the number and nature of the Faculty vehicles that can be used to bring sick animals to the clinics.

Transport of sick animals to the university differs according to animal species. Patients of Small animal clinic and Clinic of Birds, Exotic and Free-Living Animals are brought by their owners. Horses are brought to the Clinic of Horses by breeders or owners who use their own transportation means. Horses can be transported also by a horse trailer available at EC of UVMP in Košice, which is used to transport horses to the university and back, if needed. If the breeder has not at his disposal suitable transportation means for his farm animals, then cattle, small ruminants and pigs are transported by contractual haulier who owns transportation means approved for transport of respective animal patients according to the requirements of Clinic of Ruminants and Clinic of Swine.

## 7.1.7 ON-CALL EMERGENCY SERVICES

## Outline what emergency service is available (full-time, 24 h service, ON-CALL or 8-22 h duty) and discriminate for species.

Emergency services are part of clinical services provided to patients outside the regular consultation hours. Each of the university clinics provides emergency services to patients according to its own system and organisation schedule, taking into consideration specific requirements of individual animal species.

#### **Small Animal Clinic- Section of Internal Diseases**

During workdays, emergency service is available on-call between 6:00 p.m. and 8:00 a.m. After reporting the case by technical staff the attendant veterinarian comes to the clinic to take care of the patient. On weekends and during holidays the on-call emergency service is available from 12:00 noon till 8:00 a.m.

## Small Animal Clinic – Section of Surgery, Orthopaedics, Roentgenology and Reproduction

The clinic provides emergency service throughout the year. Outside of 8:00 a.m. - 3:30 p.m. consultation hours, a veterinarian and animal care staff on duty are available to provide emergency service

between 3:30 and 6:00 p.m., also for the Section of Internal Diseases of the Small Animal Clinic. Students participate in emergency service according to their clinical training schedule. Between 6:00 p.m. and 8:00 a.m. there is a veterinarian on-call and animal care staff member on duty who, according to information from the patient's owner, calls in the veterinarian. The veterinarians on-call are qualified to perform operations in indicated cases in order to save the animals if their life is threatened.

## **Clinic of Horses**

The Clinic ensures 24-hour emergency surgical service for horses with colic and other urgent cases with the possibility of hospitalisation. After regular consultation hours, there is a veterinarian on-call between 3:00 p.m. and 07:00 a.m. on workdays, and 24 hours per day on weekends and holidays.

### **Clinic of Ruminants**

The emergency service is provided by a scheduled veterinarian on-call between 3:15 p.m. - 7:15 a.m. on workdays and between 12:00 noon - 8:00 a.m. on weekends. The veterinarian is called in by the animal care staff who is on duty 24 hours. During weekends and holidays the attending veterinarian is present at the clinic between 9:00 a.m. and 12:00 noon.

### **Clinic of Swine**

Emergency service is available between 3:30 p.m. - 7:00 a.m. every workday and throughout Saturdays and Sundays. The attending veterinarian is on-call and provides necessary service, if needed.

### **Clinic of Birds, Exotic and Free-Living Animals**

On workdays, emergency service is available between 3:30 p.m. - 6:00 p.m., in collaboration with the Small Animal Clinic, and during weekends and state holidays an attending veterinarian is present between 9:00 a.m. - 12:00 noon at the ambulance of the Section of internal diseases of the Small Animal Clinic. Outside these hours an emergency service is provided by a veterinarian on-call who is called in, if needed, by animal care staff of the clinic.

## 7.1.8 ON FARM TEACHING AND OUTSIDE PATIENT CARE

## 7.1.8.1 AMBULATORY (MOBILE) CLINIC

The Ambulatory (Mobile) Clinic is defined as a unit which provides on-call outside services to farms and other institutions and is generally operated on a commercial basis.

- State the number of hours of operation per week. Is emergency service provided 24 h/day, 365

days per year? What is the degree of student participation (include duties)?

- State the number, the type and the seating capacity of the vehicles used to transport students working in the ambulatory (mobile) clinic.

- State the approximate number of sick animals (specify cattle, swine, equine, poultry or small ruminants, others) seen by the ambulatory clinic per year during the past three years (Table 7.4).

- State the average number of visits in a year made by the ambulatory clinic to farms and other

institutions.

Mobile clinic is a form of implementation of veterinary care outside university clinics by visits to patients. These activities are carried out on the basis of breeder's requests throughout the year. Most of these services are provided by the Clinic of Ruminants, Clinic of Horses and Clinic of Swine, and in sporadic cases by the Clinic of Birds, Exotic and Free-Living Animals.

## **Clinic of Ruminants**

When requested by farmers, the Clinic of Ruminants provides ambulatory (mobile) services partially on a commercial basis and partially for teaching purposes. These activities take place throughout the year and include visits outside the university. The services during these visits include problems related to internal diseases, orthopaedics, surgery and reproduction of ruminants on the visited farms. Students in the 5<sup>th</sup> and 6<sup>th</sup> year of studies participate in these ambulatory activities, most frequently there are 3 students and one veterinarian visiting the farm.

## Clinic of Swine

The ambulatory activities include visits outside the university to ensure veterinary care on farms and other institutions, requested by these farms or institutions, and are carried out 365 days per year according to the agreement with the breeders/farmers. The mobile ambulatory clinic focuses on problems related to internal diseases, gynaecology, obstetrics and reproduction. Students participate in these activities within their clinical training, in small groups (maximum 3-5 students per teacher).

## **Clinic of Horses**

Clinic of Horses provides external services to individual patients and herds also by means of an ambulatory (mobile) clinic carrying out clinical and consultation activities. This ambulatory clinic operates on a commercial basis visiting acute patients, but also on the basis of non-commercial consultations, diagnosis and therapy in order to involve students directly in clinical activities. As a result of this the students acquire practical experience in the field of equines-medicines, what is necessary for their "day one skills". This is advantageous to owners of horse/horses who are unable to transport their animals to the Clinic of Horses. Veterinary care through mobile services is thus ensured to horse breeders in a wider area around the university. The ambulatory clinic uses personal automobile Citroen Berlingo combi, which is available to the attendant veterinarian 24 h per day, throughout the year. Other clinics can use this vehicle upon the agreement of the attending veterinarian. The mobile clinic visits include also those that are carried out with participation of students scheduled for clinical training, usually 2-4 students per one veterinarian.

## **Clinic of Birds, Exotic and Free-Living Animals**

Mobile veterinary care is only sporadically used complement of clinical activities of this clinic, usually requested by a breeder after ambulatory treatment of a patient. The breeding unit is then visited for the purpose of evaluation of the health status of other animals, consultations, or preventive-therapeutic interventions.

The university has at its disposal the following vehicles – personal cars and minibuses – used for operation of mobile clinic and transport of students to patients on farms and other institutions:

- personal car Citroen Berlingo combi KE 246 FI seating capacity 4+1 persons
- personal car Ford Focus KE 602 EN seating capacity 4+1 persons
- personal car Škoda Octavia KE 022 CO seating capacity 4+1 persons
- minivan car Peugeot Tepee KE 001 FV seating capacity 7+1 persons
- minibus SB 122.00 ASIA KE 252 CE seating capacity 20+1 persons
- minibus SB 122.00 KE 319 BS seating capacity 20+1 persons

## Table 7.4a: Number of cases seen by the Ambulatory (mobile clinics) in the past three years

Species	Ν	Number of cases					
Species	2014	2013	2012	Average			
	Cattle	701/8	975/10	390/7			
Food producing animals	Small ruminants	122/3	185/3	305/3	1578/16		
	Pigs	846/3	677/6	534/4			
Poultry (number of flocks)		2	3	2	47		
Rabbits (number of production units)		1	3	3	4,/		
Equines		138	65	161	121		

## 7.1.8.2 OTHER ON FARM SERVICES AND OUTSIDE TEACHING

If there is no on duty Ambulatory (Mobile) clinic, a Faculty may have defined contracts with farms or other institutions to allow for outside teaching and patient care. Similarly, a Faculty may provide herd-health services.

Please indicate if and to what extent this applies to your Faculty. If applicable please provide no. Of patients seen on outside teaching

Besides the regular teaching and clinical training of students on university premises, the university is involved also in veterinary activities outside the institution. They take place not only on UF but also on other farms keeping food producing animals and horses. These activities are carried out mostly on a non-commercial basis with participation of students who are transported by university buses or external transport services. Such services are provided by the Clinic of Ruminants, Clinic of Swine and Clinic of Horses, and in some cases also by the Institute of epizootiology and preventive veterinary medicine (herds of food producing animals and poultry flocks, oriented mostly on preventive treatment, such as vaccination and deworming).

#### **Clinic of Ruminants**

Teaching the subject Diseases of ruminants takes place also on UF where students in the 5th and 6th year of studies attend practical lessons in blocks (3-day block lessons). On this farm there are suitable conditions for students to master actively the discipline Diseases of ruminants. They are accommodated in a dormitory and take meals on the farm. These activities are non-commercial and involve mostly the teaching. In addition, part of teaching takes place on cattle farms in the surrounding area, in Košicevicinity and Spišská Nová Ves districts. This teaching focuses on clinical diagnosis, therapy and prevention of diseases of ruminants in the fields of internal diseases, reproduction, orthopaedics and surgery. The teaching includes also antiparasitic treatment and preventive measures in small ruminant herds (sheep, goats). Students are involved in the analysis on the level of herd health, preventive diagnosis of productive diseases and related advisory and consultation activities.

#### **Clinic of Swine**

The university organizes also additional mobile veterinary activities within the teaching process, namely those on UF and other farms and institutes which are visited by students together with teachers for the purpose of practical teaching. During teaching on these farms and on UF the students focus on clinical diagnosis, preventive acts in the form of vaccination and on curative activities. They also participate in analysis of herd health management and on proposal of measures within the scope of consultation activities carried out by the teachers.

#### **Clinic of Horses**

External herds of horses are regularly used for clinical training and practice of veterinary students, namely EC of UVMP in Košice, Division of mounted police of SR, Slovak forests – horse rearing centres Dobšiná and Dlhá Lúka, Slovak Hutsul club, herd in Lom nad Rimavicou and National stud farm Topol'čianky, Activities of the clinic are focused on preventive care (horses belonging to Police forces of SR and sport horses owned by the EC of UVMP in Košice) and on analysis of herd health before the mating seasons. Prophylactic and metaphylactic measures (against pastern dermatitis) are taken concerning the herd of Norik Muránsky horses, and the clinic is involved in diagnosis of pregnancy of breeding mares. In addition, the clinic collaborates with the contractual veterinarian on castration of stallions. Diagnosis of metabolic diseases and markers of acute inflammation is carried out in the Hutsul herd with the aim to prevent metabolic diseases and laminitis. On the National Stud Farm in Topol'čianky the clinic collaborates with the contractual veterinarian on solving reproduction problems and obtains information that forms the basis for PhD. and dissertation thesis. Besides using personal cars for transport, bigger groups of students are transported for practical training also by university buses. Within these activities students are able to carry out practical tasks according to their clinical practice schedule. Also valuable information is collected that can be used in preparation for diploma thesis, PhD. and dissertation thesis, an in experimental activities and case reports.

The university has at its disposal transportation means – buses of varying capacity – for transport of students to places outside the university used for teaching and practical training:

- bus SB 134.01 KE 047 CL seating capacity 45+1 persons
- bus Man Temsa KE 348 JH seating capacity 25+1 persons
- bus SB 122.00 ASIA KE 252 CE seating capacity 20+1 persons
- bus SB 122.00 KE 319 BS seating capacity 20+1 persons.

In addition, if needed, students can by transported also by vehicles provided by external transport company.

Spacing		N			
Species		2014	2013	2012	Average
Ea o d'uno du oin o	Cattle	4538/15	5694/16	2762/14	
rood producing	Small ruminants	2085/5	3268/7	3465/7	8138/26
ammais	Pigs	880/4	563/3	1160/7	
Equines	Equines		64	64	81
Other - poultry		48075	161120	1255	70150
Dogs		86	80	389	185
Cats		50	42	0	31
Fur animals ZOO		0	0	32	11
Free living animals*		220	20	120	120

## Table 7.4b: Number of patients seen on outside teaching in the past three years

\* moufflon, red deer, fallow-deer

## 7.1.9 OTHER INFORMATION

Indicate any notable additional outside sources of material for clinical training purposes, such as animal charities, animals awaiting slaughter, etc. Indicate how the level of clinical service that is offered by the Faculty (in small companion animals, equines and production animals) compares with outside practices in terms of facilities, hours of service, equipment, expertise, responsiveness, etc. Provide an indication in percentage terms of the proportion of cases that are primary (i.e. first opinion), and referrals (provide a breakdown by species, if helpful). If the Faculty has a particular

aim or policy as regards this mix, describe it.

Indicate what areas of clinical specialisation are covered, and the extent of the coverage (for example, a veterinarian with a particular specialisation may see patients in the clinic for one day a week, 3 afternoons, etc.).

Indicate the relationship the Faculty has with outside practitioners (in small companion animals, equines and production animals) in terms of matters such as referral work, providing diagnostic or advisory services for private practitioners, practitioners participating in teaching, holiday or 'seeing practice' work for students, feedback on the level of clinical training. Describe (if applicable) any other relationships with outside organisations that are routinely used to provide students with training (in particular practical training) in other clinical subjects (e.g. pathology work, interaction with state

veterinary work).

Provide an outline of the administrative system(s) used for the patients, *e.g.* in terms of how case records are kept, how data are retrieved, whether systems are centralised, etc.

## Small Animal Clinic – Section of Internal Diseases

For the purpose of clinical training the clinic uses besides its own dogs and cats intended for teaching also animals that were placed in shelters or temporary care facilities. Also some students who are dog breeders provide voluntarily their animals for teaching purposes.

Clinical services provided by this Section are oriented besides the primary contact with patients also on specialised examination in various fields of internal medicine, such as dermatology and allergology, endocrinology, respiratory diseases, cardiology, gastroenterology, nephro- and urology, neurology, haematology, oncology and feline medicine. Patients from various parts of the Slovak Republic, but most frequently from Košice and Prešov districts, are referred for specialised examinations. Currently, approximately 70-75 % of animals are first contact patients and the remaining portion are referrals. As far as the planned specialised examinations are concerned, we have minimally 2 planned examinations per week and examination of acute cases is conducted as needed. The first contact patients are important for students, especially during the initial period of the scheduled short-term clinical training, as the students can acquire the necessary skills including communication with clients, obtaining medical anamnesis, management of the patient, filing medical records and performing the initial clinical examination. After the introductory hours, students use the clinical examination and the obtained data as a basis for preparing a list of differential diagnoses, additional potential diagnosis, and propose suitable therapy.

The Section collaborates with private veterinarians regarding referred specialised examinations, consultation services, organizes practical workshops, specialised seminars and lectures, particularly in collaboration with professional bodies, such as CVS and Slovak Small Animal Veterinary Association.

The Section is connected to the central university system, patients records are stored by means of a central electronic medical record system (ProVet) which includes records of examinations, treatments and course of therapy of individual patients. From this system one can retrieve information for clinical, teaching and research activities.

#### Small Animal Clinic - Section of Surgery, Orthopaedics, Roentgenology and Reproduction

This Section is a reference workplace for the Slovak Republic regarding the private veterinarians in Slovakia. Approximately 50 % of patients are referrals and the remaining 50 % are primary patients brought for examination and treatment. The section provides advisory, diagnostic and therapeutic services to private practitioners. It has at its disposal three operating rooms, X-ray equipment with indirect digitalisation, ultrasonography, endoscopy, arthroscopy, equipment for physical therapy and stomatological equipment.

Specialisations of veterinarians working in this section include orthopaedics and neurosurgery (3 vets), soft tissue surgery (1 vet), ophthalmology, stomatology, anaesthesia and intensive care (2 vets), oncology (1 vet), obstetrics and gynaecology (2 vets) and imaging methods (1 vet).

Records of clinical activities and patients are kept by means of a central electronic medical record system (ProVet) which includes records of examinations, treatments and course of therapy of individual patients. From this system one can retrieve information for clinical, teaching and research activities.

#### **Clinic of Horses**

In the recent period, there has been considerable improvement in the availability of modern diagnostic technique at this clinic. Currently there is available an endoscope with accessories for examination of the digestive tract and a bronchoscope. Both are connected to the database and image processing system. Other equipment includes bedside monitoring of life functions with the system of polyfunctional measurements, apparatus measuring performance of the respiratory tract of horses, ECG apparatus for distance telemetric measurements, USG apparatus with Doppler function, X-ray equipment for scanning of horses, surgical laparoscope and arthroscope with accessories, apparatus for controlled respiration of horses, surgical lamp equipped with a camcorder. Thanks to the availability of this equipment Clinic of Horses is an important referral place for patients which cannot be adequately examined and treated in field-practice. The referring veterinarians can participate in making diagnosis, operation and therapy of the referred patients. Specialisations of veterinarians in this clinic include internal medicine, surgery and orthopaedics, obstetrics and gynaecology. For each operation an operating team is formed from among available doctors. Veterinarians from the CVS participate in outside teaching of veterinary students and help them to obtain adequate practical training. The clinic facilities are available also for postgraduate education of veterinarians and farriers. There is an excellent farriery facility at the clinic managed by a veterinarian with long-term experience in this field, and the services is also mobile. Shoeing service is provided at parkour-dressage events within the region. The clinic actively collaborates with all laboratories of university clinics. Institute of pathological anatomy, Institute of histology and embryology, Institute of physiology and Institute of pharmacology. It concluded an agreement with equine slaughterhouse Parkur in Poland on providing animal products for diagnostic, education and research purposes (permit for these activities was granted by the SVFA). This ensures unconditional access to bodily parts and organ systems of slaughtered horses which are then used for teaching, particularly for branches farriery, reproduction, internal diseases of horses, orthopaedics and surgery. The clinic has at its disposal its own horses which are used for teaching and are housed in facilities directly at the university premises. Records of the patients are kept in a variant of the conventional system combined with an electronic form and in the system of central evidence of clinical activities ProVet.

#### **Clinic of Ruminants**

The Clinic of Ruminants provides considerably higher level of veterinary services in the field of internal diseases, reproduction, surgery and orthopaedics of ruminants compared to the private veterinarians in the area. Besides services to patients, the clinics provides care of clinically healthy ruminants which are used for teaching the subject Propaedeutics. Patients are brought to the clinic upon discussion with local veterinarians or farmers and on a basis of an appointment. After transport, each

patient is clinically examined by an attending veterinarian and his case record is created in writing. This record includes patient's anamnesis, condition and results of clinical and laboratory examination. Every day the patient's condition and administered medicines (batch, dose, protective period) are recorded. These records are available also to students under supervision of a veterinarian. In case of pathologicalanatomical examination of a dead animal, the records include also dissection findings. The patient is recorded in the clinical book of patients hospitalised at this clinic. After admission of patients, samples of biological materials are collected from them and sent to the biochemical laboratory of the clinic. On the basis of clinical and laboratory examination a suitable therapy is initiated. The successfulness of therapy is assessed every day during morning rounds conducted by attending veterinarian, head of the clinic and other teachers, PhD. students and potentially also pre-graduate students. Of other diagnostic methods the clinic uses ultrasound examination oriented on gynaecology and reproduction, particularly to detect pregnancy or diagnose disturbances of the reproductive cycle, but also involving the field of internal medicine and respiratory, gastrointestinal and urogenital apparatuses. Laparoscopy is used mainly for diagnosis and therapy of abomasums dislocation. After accurate diagnosis, recovery or treatment of the animals, and consultation with the local veterinarian or famer, the animals return to the farm. Should the animal die or be euthanised, the cadaver is transferred to the pathological anatomy unit for post mortem examination and determination of the cause of death. Because the admitted patients serve mostly for teaching of students or their clinical training at the Clinic of Ruminants, owners of animals do not have to cover hospitalisation costs. The length of hospitalisation is individual, according to the character and course of the disease and ranges from 1 week up to several months.

The Clinic of Ruminants focuses mostly on making correct diagnosis of diseases of ruminants (cattle and small ruminants) and application of suitable diagnostic procedures within the teaching process. It also provides consultation and advisory services at the request of breeders and carries out preventive diagnosis of productive diseases in cattle herds. The clinic collaborates with several veterinarians outside UVMP in Košice, who participate in the teaching process.

#### **Clinic of Swine**

Veterinary services provided to practice by the Clinic of Swine are greater than those provided by other clinics to relevant animals. This clinic has at its disposal specially equipped housing facilities where groups of pigs can be kept depending on their anamnesis and clinical status. Each admitted patient is examined clinically and observed every day for changes of its condition and effectiveness of therapy. According to need, samples of clinical material are collected from each patient for laboratory diagnosis, oriented on infectious and non-infectious diseases. Each patient is thus subject to complex examination and on the basis of clinical and laboratory diagnosis individual therapy is administered every day. Imaging diagnostic techniques (X-ray and sonography) are used, if needed. On the basis of complex examination of individual patients of certain age category, measures of preventive and curative character are proposed and observed by the animal care staff. In extraordinary cases, when the treatment is unsuccessful, the animal is killed and subjected to subsequent pathological-anatomical examination. Samples for laboratory examination are collected from carcasses of these animals. Clinical care of patients is on expert level with the aim to make precise diagnosis and set up the therapeutic protocol in a way that ensures high successfulness of treatment.

Clinical activities are implemented also in 4 boxes available for the clinic in housing facilities of building P 19. These boxes serve for short-term clinical training oriented on Andrology and obstetrics of pigs. The clinic focuses its activities on demonstration of clinical diagnostic procedures needed for teaching involving certain diseases. An important laboratory examination is conducted to prove hypothesis of the presence of ongoing disease. After a 2-week block, the patients are returned to the owner with no charge. The Clinic of Swine provides veterinary services to primary clients and to referrals. Most pigs brought to the university are selected by the breeder upon agreement of the veterinarian who takes care of the herd. In this way the patients brought to the clinic have not yet been examined or treated.

The Clinic of Swine provides also specialised veterinary services. This involves mostly internal diseases (infectious and non-infectious), productive diseases and reproductive disorders (gynaecology, obstetrics and andrology). In sporadic cases surgical specialisation is also requested. The clinic closely collaborates with veterinary practitioners. They approach the clinic with the requests to help with diagnosis of diseases of pigs. Another form of collaboration involves patients referred for examination at the clinic. Practical veterinarians also ask for consultations regarding equivocal diagnosis or prevention.

The clinic collaborates with tens of practitioners who also participate in clinical training of students in the  $6^{th}$  year of studies on pig farms in-field.

Records of clinical activities and of the patients are kept in writing and include records entered in an ambulatory book and records in the form of protocols. Results of laboratory examinations or potential pathological dissections are part of this evidence keeping. Hospitalised patients have their own records which include all interventions, results of performed examinations and evidence of administered medicines.

#### **Clinic of Birds, Exotic and Free-Living Animals**

The clinic provides veterinary services involving birds (poultry and exotic birds), small mammals, reptiles, free living animals (predators, bats and other), as well as consultations to bee keepers. It occupies individual facilities including admission room for patients, surgery and post-surgery rooms and hospitalisation facilities, separate for poultry and birds, reptiles, small mammals and predators and for other free living animals. Coprological and cytological examinations are carried out in a classroom intended for laboratory examination. The diagnostic room can also be used for post-mortem diagnostic examination of dead animals and those that had to be killed. Other specialised examinations, such as haematological and biochemical examination of blood, X-ray and ultrasonography, are carried out by veterinarians of the Clinic of Birds, Exotic and Free-Living Animals.

The clinic treats patients for the problems involving internal medicine, surgery, reproduction and orthopaedics. The clinic has at its disposal equipment for inhalation anaesthesia, controlled ventilation and endoscopic examination with direct transfer of images to a screen and parallel storage of the records of endoscopic examination. Most of the patients are brought to the clinic by their owners while free living animals are brought by persons who found them. Poultry is transported from poultry farms or is hatched directly at the clinic in a small-capacity hatchery available at the clinic.

Teaching takes place in the facilities of the clinic and also in field. For this purpose the clinic uses its own rooms: classroom for poultry and exotic birds and another one for laboratory examination with capacity of 15 places. The surgery room is equipped with audio and video technique which allows to observe the course of surgery also in the room for poultry and exotic birds. The material for teaching is obtained from the clinic itself and from poultry farms, individual owners and minor poultry keepers. If needed, animals for teaching are provided also by interest clubs of students - Aqua – Terra club, Club of Breeders of Small Mammals and Exotic Birds and the Falconry and Raptor Rehabilitation Club. Part of the teaching takes place on the premises of these clubs.

In collaboration with the Offices for environmental protection for Košice – city and Košice – vicinity the clinic provides services involving the treatment, temporary hospitalisation and rehabilitation of captured or found birds of prey and other free living animals. It also collaborates with district veterinarians from ZOO in Kavečany, Poultry farms for broiler chickens in Zemplínsky Branč and Ruskov, Parasitological Institute of SAS in Košice. In collaboration with the Chamber of veterinary doctors in the SR the veterinarians-specialists on the staff of the clinic organize workshops outside university and in the facilities of the clinic.

Clinic of Birds, Exotic and Free-Living Animals supports operation of the following facilities: Rehabilitation and breeding centre for free living animals under the auspices of the State Nature Conservancy of the Slovak Republic and administrative supervision of Offices for environmental protection for Košice – city and Košice – vicinity, and Experimental establishment for clinical experiments on poultry, rabbits and guinea pigs.

The professional staff of the clinic is involved in outside activities through participation in the research projects of the Faculty of forestry of the Technical University in Zvolen and the Ministry of the Environment of the Slovak Republic. The projects are aimed at veterinary-clinical securing of capture, immobilization, sampling and processing of biological materials involving free living animals – red deer, bear, lynx and wolf. Students participate in these projects within work on their diploma thesis. The involvement in a scientific project CEGA allowed the clinic to establish and operate diagnostic laboratory for diseases of bees. The aim was to improve the quality of teaching of the subject Diseases of bees and to provide consultation–diagnostic services to bee keepers, the members of the Slovak Bee Keepers Association.

Records of patients seen at the clinic are kept in an electronic form and in writing and the results of laboratory examinations and pathological dissections are recorded separately. Individual cards (daily

records) have been established for hospitalised patients and include all interventions and results of performed examinations as well as all administered medicines (name, dose, way of administration).

## 7.1.10 RATIOS

See the section 'Main Indicators' in Annex Ia for the figures needed for calculating ratios. Give the figures for numerators and denominators. The ratios should then be expressed by taking the numerator as 1.

Tab. 7.5: Animals available for clinical training (in the clinics of UVMP in Košice or seen through the Ambulatory clinic) as ratios to the number of students in last full year of clinical training

Denominator Number of graduates  $\frac{\text{per year}}{\text{per of food producing}} = \frac{90}{204} = \frac{1}{2.267}$  2.267 R 11: Number of food producing animals examined at UVMP in Košice Number of graduates  $\frac{\text{per year}}{\text{Number of individual consultations}} = \frac{90}{1578} = \frac{1}{17.533}$  **17.533** R 12: for food producing animals Number of graduates  $\frac{\text{per year}}{\text{Number of visit concerning}} = \frac{90}{42} = \frac{1}{0.466} \quad 0.466$ R 13: herd health Number of graduates  $\frac{\text{per year}}{\text{abar of equipe cases}} = \frac{90}{254} = \frac{1}{2.822}$  2.822 R 14: Number of equine cases Number of graduates per year  $---=\frac{90}{507}=\frac{1}{5633}$  5.633 Number of poultry/rabbit cases R 15: Number of graduates per year  $\frac{90}{12075} = \frac{1}{134.166} \quad 134.166$ R 16: Number of companion animals ecamined at the clinic Number of graduates  $\frac{\text{per year}}{\text{Number of flocks of poultry/rabbits} -} = \frac{90}{4.7} = \frac{1}{0.052} \quad 0.052$ R 17: production units

## Tab. 7.6: Animals available for necropsy

	Number of graduates			
D 18.	per year	 90	 1	0.052
K 18: —	Number of necropsies of food	 99	 1.100	0.032
	Production animals + equines			

Denominator



#### 7.1.11 OTHER SPECIES

#### Indicate how the Faculty deals with fish and other food producing species

Game and free living animals are reared at UFBD in Rozhanovce. The game and animals are kept free outside the buildings in 3 locations – hunting grounds, one of them fenced (game park). In the past year there were 215 fallow-deer, 50 moufflons, 144 roe deer, 50 red deer, 29 wild boars and 42 hares in this establishment.

Bees are kept on the premises of the university and at UFBD in Rozhanovce and are used for teaching the subjects related to keeping bees and bee diseases. Currently the university keeps 15 bee colonies, 11 in Rozhanovce and 4 on university premises in Košice. In the specialised establishment in Rozhanovce there is a bee house and a honey house where obtaining of pollen and bee propolis is planned. The Bee Keeping Club functioning at UVMP in Košice plays an important role in teaching the subject related to keeping and diseases of bees.

The teaching of subjects related to rearing and diseases of fish is based partially on purchase of live fish and their temporary keeping in an aquarium on university premises. In addition, various species of fish are obtained at harvesting as sponsor gifts. Another source of material for teaching is separate catching in various locations on the basis of exempted fishing permit. The clinic is also involved in rearing of aquarium fish and collaborates with Aqua-Terra interest club.

#### FACTUAL INFORMATION – FBA UIN IN BODØ

Use of animals or materials of animal origin are essential in any programme related to Animal Science. In the first three semesters, some of the courses do include the use of live animal. Fish, kept at the marine research station are used for blood sampling and blood analyses, and also for dissection (each student gets one fish to study). Mature sea urchins are induced for spawning, and the students are studying egg development with meiosis and mitosis.

In addition the students have the option to obtain a practical experience by participating in an internship scheme, which involves local private veterinary clinics, Mattilsynet (Norwegian Food Safety Authority) and local private veterinarians who work with large farm Animals. The scheme takes place in the 2<sup>nd</sup> semester. The clinics and the local veterinarians have signed an agreement of collaboration and accept students who are willing to participate. Each student can: a) observe the daily activities of two private veterinary clinics, b) the field visits of local veterinarians and c) the activities of the local Office of Mattilsynet. The purpose of this is to obtain a first-hand experience of the daily tasks of the veterinary practice, even from their first years of their education.

In the academic year 2014-2015, it was decided that the students in the Aquaculture course, which takes place in the first semester, should also visit a fish research station (that also produces fish commercially), as part of the course. This is important as Aquaculture is an important industry in Norway, and many veterinarians are involved in it.

In the third semester, in the Histology and Embryology course, the students have the opportunity to observe tissue sections of organs of human and animal origin.
#### 7.2 COMMENTS

Feel free to comment on all data provided in this Chapter. Comment on major developments in the clinical services, now and in the near future. Comment on local conditions or circumstances that might influence the ratios in tables 7.5 and 7.6.

### **COMMENTS – UVMP IN KOŠICE**

Individual units of the university are involved in obtaining the necessary number of animals, cadavers and other material of animal origin. In the previous years the university undertook widespread and intensive activities to improve its material-technical equipment and extend the available space as well as to obtain modern equipment and instruments in order to meet its mission of providing high quality education. These efforts involved facilities located on university premises and the specialised establishments. This caused some temporary changes in ensuring adequate material for teaching, particularly at university facilities. The most affected aspect was the possibility of admission of some animal species (particularly food producing animals and horses). The situation was improved considerably after completion of reconstruction of existing buildings and building up the new ones and the university continues with these improvements regarding the capacity for ambulatory activities, hospitalisation of patients and extending options for clinical activities in all clinics. Considerable changes made on UF in recent years allowed the university to relocate much of the teaching of animal production subjects close to the practice using the form of several days practical teaching blocks and contributed to better availability of animal material for teaching on UF units and on university premises.

Teaching of anatomy has an adequate spatial background and sufficient material for teaching as far as live material, cadavers, preparations, models, skeletons, skulls and bones are concerned. In addition to regular teaching hours, the self-study of students is supported by their good access to dissection rooms and spaces holding preparations, skeletons and models, which are amply used by them for this purpose. The main source of live material for anatomic dissections on UF.

Pathological anatomy is taught in modern facilities which comply with all requirements on pathological work. There is available a large dissecting room and another smaller one, so several necropsies can be done in parallel. The department conducts also pathological necropsies for the needs of practice and histopathological examination of collected and received biopsy materials. Besides necropsies conducted directly in the pathological facilities of the university, some dissections are conducted directly on UF during practical lessons and clinical training, particularly during several-day blocks of practical teaching. In order to increase the number of cadavers available for necropsies, mainly of food producing animals and dead animals from the specialised establishments of UVMP in Košice (particularly living animals), the university secured an adequate transport of cadavers and obtained a relevant permit from the District veterinary and food administration in Košice for collection and transport of cadavers intended for pathological necropsies.

In recent years also the teaching of animal production subjects at the university premises has been subjected to modernization and this process still goes on. Many facilities were reconstructed and building of new ones was initiated. This involves facilities for examination, treatment, housing, hospitalisation and providing complex clinical services particularly for horses, ruminants and pigs (buildings P 17, P 18, P 19). These activities changed qualitatively and quantitatively conditions for this type of work. The outside teaching and practice in the field of animal production takes place mostly on UF which, with regard to animals housed in its three units, provides the necessary background for practical teaching and a suitable source for clinical training related to food producing animals. By improving conditions for these farm, which was reflected in increased number of practical teaching hours and students participating in lessons in all three units of the farm. There are also other animal farms in the area which are used for practical teaching of veterinary students based on long-term collaboration with the university.

The teaching of food hygiene faced considerable complications and problems in the past decades due to general decrease in the number of slaughter animals and the subsequent termination of operation of many facilities involved in slaughtering of food producing animals or processing of products of animal origin. Despite that we are still able to provide education in the field of food hygiene covering a broad spectrum of food commodities. The teaching takes place in the reconstructed slaughterhouse in Zemplínska Teplica and in other collaborating slaughterhouses. We use also classrooms available at the Institute of meat hygiene and technology and a special classroom for processing of meat and production of meat products. On the basis of collaboration with meat processing and food producing plants, the students make field trips to observe and learn more about their operation.

Teaching of clinical disciplines on patients is implemented by 5 clinics according to animal species. After adjusting curricula to teaching according to animal species and administrative establishment of the corresponding clinics, some spatial changes were made to support their activities, material-technical basis of clinics was upgraded and the available equipment and instrumentation was improved. High number of patients is available for teaching at Small Animal Clinic and a considerable positive qualitative shift is expected after completion of the new University hospital for small animals (P 40) with new modern equipment and a potential for extending the spectrum of professional specialisations, particularly in the field of imaging diagnosis (X-ray, CT, MRI). In the recent years there was an increased interest in exotic animals and small mammals which, together with presence of specialists in this field, contributed to increased number of patients brought to the Clinic of Birds, Exotic and Free-Living Animals. Lower number of poultry patients seen at this clinic is related to reduced number of small poultry flocks, concentration of poultry on large capacity farms and corresponding shift of problems and diseases associated with poultry to poultry farms. Increased number of patients seen directly at the clinic is expected after completion of the clinical housing facilities equipped for complex ambulatory and hospitalisation services. The lack of housing facilities available to Clinic of Horses was compensated through mobile clinical services and external activities involving cooperating farms keeping herds of horses. Although the teaching in the field of diseases of ruminants and pigs and the related clinical activities dependent on the number of animals available at these clinics were affected in the previous period by reconstruction of existing facilities and building of new ones, we were able to acquire sufficient number of animals for teaching and clinical training through UF and other farms. Completion of the new housing facility P 19 which is currently still under construction will allow both involved clinics to provide complex services independently and to have at their disposal considerably higher capacity for housing of patients together with additional related services (ambulatory, hospitalisation, diagnostic, therapeutic, etc.), adequate space for students, veterinarians and other staff supporting the complex clinical activities on higher qualitative level.

Evaluation of individual main indicators shows that most ratios determined for clinical practice are well above the minimum threshold values, particularly with regard to companion animals and food producing animals. As far as the number of horses, flocks of poultry or rabbit production units available for teaching are concerned, the ratios are only slightly above the limit values. This is related to overall situation in the number of animals of these species reared in our territory. Despite that it appears that the changes made in spatial arrangement of clinics and their material-technical improvement, together with other ongoing changes, will contribute to the improvement of the respective ratios. The permit granted to the university to collect and transport cadavers by its own means is an important step towards higher number of cadavers available for necropsy to students in the pathological facilities of UVMP in Košice.

From the point of view of UVMP in Košice it is important that education provided to students of veterinary medicine by this higher education establishment and implementation of veterinary care through clinical activities is on the required level and due to considerable changes made in the previous period in university curricula, new organization arrangement, improvement of the material-technical basis, purchasing new equipment and instrumentation for university units, completion of some buildings under construction and continuing reconstruction of old facilities according to long-term strategic plan will continue to raise the teaching and clinical training to a higher qualitative level.

#### **COMMENTS – FBA UIN IN BODØ**

During the last 3 semesters in Košice, the students obtain enough experience in many animal species. The only issue that is worth noticing is that the students are trained in Animal Anatomy after the third semester. This creates a minor problem with Histology and Embryology, which is taught in the 3<sup>rd</sup> semester. However, a brief description of the macroscopic structure is included in all the relevant chapters, so that at least the students have a general idea about the morphology and topography of the organs and systems that are presented in the course.

#### 7.3 SUGGESTIONS

If the denominators in tables 7.5 and 7.6 for your Faculty are not meeting the range as indicated in Annex I, Supplement A, what can be done to improve these ratios?

#### SUGGESTIONS – UVMP IN KOŠICE

In the near future, after completion of facilities of University veterinary hospital, Small animal clinic and housing facilities for the Clinic of Ruminants and Clinic of Swine the internal arrangement and operation of these workplaces will be optimized under new conditions in such a way so as to ensure their modern and functional operations corresponding to all important aspects of education, research and clinical activities. Within the building occupied by Small animal clinic and the reconstructed building P 40, an integrated complex will be built up with all professional specialisations concentrating in this place where also central admission of patients and central evidence of complex clinical activities concerning small animals can be accommodated.

Despite considerable improvement in equipment of clinics with respect to modern diagnostic technique we have to continue with these activities by obtaining financial funds also from other sources (grants, projects) besides the state budget and by improving clinical activities on commercial basis in order to use portion of the income also for these purposes.

Although the unified evidence of clinical activities (patients, economy of management of medicines and medical material) has been introduced centrally in some clinics (ProVet), after completion of the Clinic of Ruminants and Clinic of Swine this system has yet to be established also in these units and result in its final completion.

Despite unfavourable agricultural tendencies, the university will make every effort to provide sustainable conditions for sufficient number of farm animals on its agricultural farm and on university premises. This is important for securing sufficient number of animals for teaching and obtaining more material for pathological necropsies. We plan to increase the use of this source of cadavers and thus also the number of necropsies of farm animals conducted by students.

It appears important to increase in future the number of personal cars available for teaching and clinical training and thus contribute to mobility of these activities and providing veterinary services outside of UVMP. We also plan to purchase another bus for transport of bigger groups of students.

#### SUGGESTIONS – FBA UIN IN BODØ

As mentioned before, Aquaculture industry is very important in Norway. Thus, there is emphasis on this to the students and particularly in terms of their professional possibilities. For this, it may be possible to include more practical training on fish, as the FBA owns research facilities near the campus, to which the students can have access.

#### **Chapter 8. LIBRARY AND LEARNING RESOURCES**

#### **8.1 FACTUAL INFORMATION**

#### FACTUAL INFORMATION UVMP IN KOŠICE

The library and information services at UVMP in Košice are provided centrally at the main library – the University Library (UL) and 33 subsidiary libraries at the university departments, clinics, institutes and other units, where state-of-the-art automated library systems and the available information and communication technologies (ICT) are used.

#### 8.1.1 LIBRARY AND OTHER INFORMATION TECHNOLOGY SERVICES

Give a general description of the library/libraries of the Faculty/university that are available to students. Indicate how the library/libraries are managed (e.g. library committee). For each major library of the Faculty, please provide the following information, either in narrative or tabular form.

#### Main library:

- is this specific to the veterinary training establishment?
- is this common to two or more establishments?
- Full time equivalents of part time employees
- Number of full-time employees
- Number of journals received each year as hard copies,
- Numbers of full access electronic journals
- Availabilities for online literature search
- Availability of textbooks
- Number of student reading places
- Library opening hours: weekdays weekends
  - during term-time .....
  - during vacations .....

- Indicate how the facilities are used by students

#### LIBRARY AND OTHER INFORMATION TECHNOLOGY SERVICES – UVMP IN KOŠICE

UL is a single specialised veterinary library in the Slovak Republic offering its services to researchers, teachers, university students and veterinary surgeons throughout the whole country, and supplementary information to biomedical centres and laboratories.

Its mission and roles are laid down in the Statute of the university in the first place and are also regulated by the organisation guidelines of the university departments and other units as well as the Library Regulations. The Editorial and Publishing Commission is a library advisory body.

UL provides library and information services, and conducts editorial and educational activities. The Erasmus Office is part of UL. The Library has a videoconference room, the Editorial Centre and a bookshop (ECB) with scholarly and professional literature.

The Library has financial resources for acquisition of journals, books and the library logistics. The funds are allocated from the university budget, grants, gifts, the income from the services provided and overdue fees (Annex 8.1).

UL has 7 employees working full-time: 1 director, 4 independent specialist librarians, 1 specialist librarian, 1 cleaning lady.

Organisational structure - Information Department and Department for Building and Enlargement of Library Stock.

There are nearly as many as 100 000 library items (l.i.) in the library stock. An annual increase is shown in Annex 8.2.

The number of received periodicals in the areas of veterinary medicine, food hygiene, pharmacy, animal sciences, and cynology is shown in Annex 8.3. Exchanges of *Folia Veterinaria*, the university scientific journal, for other journals play a vital role in journal acquisitions (Annex 8.4).

At UL, Electronic Information Resources (EIR) have been made available within the NISPEZ project (National Information System for Access to Electronic Information Resources) including the following databases: Web of Science, Current Contents Connect, Medline, Scopus, Science Direct, ProQuest, Knowel, SpringerLink, Wiley InterScience (Annex 8.5). There is also the EBSCO national licence available. The CAB abstracts – *full text select* database was also added to the library stocks by purchase. The subject coverage of the database is of particular importance to the UL target group – the highly specialised UL users. CAB abstracts provides access to professional information in the areas of agriculture, pharmacy, forestry, animal and plant production, animal husbandry, plant protection, genetics, forest engineering, veterinary medicine, human nutrition, etc.

European Pharmacopoeia Online 8.2, was also purchased as another licensed database. It is an important source of information for studying pharmacology, active substances and drug interactions. Literature search services within all available EIRs are provided to the library users on the request.

Borrowing services are available to all registered users, students, academic and research staff and other readers during opening hours, which meet the users' requirements and are beyond the normal working hours of the library personnel during semester. The opening hours are adapted to the study schedules, enabling the students to use the borrowing services during breaks. The ARL automated system was introduced to allow for better adherence to the loan and return period, which has been extended to 180 days. The readers can access an online catalogue http://arl4.library.sk/i2/i2.entry.cls?ictx=uvlk and their reader account, and use its functionalities remotely (book renewal, printing of records). The automated library system automatically generates and sends e-mail reminders. If an item has been overdue, each reader is equally alerted and notified that sanctions will be applied. Library loan statistics between 2012-2014 is in Annex 8.6 and number of textbook titles by study year and subject is in Annex 8.7.

UL has 70 student reading places in total, out of which 46 are in the study room, 18 in the computer room, and 6 in the lending room. The library has a total of 50 computers for student use: 26 in the study room, 18 in the computer room and 6 in the lending room. Library opening hours are in Annex 8.8.

#### Subsidiary libraries of UVMP in Košice

- Please describe the subsidiary (e.g. Departmental) libraries of the Faculty, and arrangements for student access.

- Indicate whether the main library holds a list of individual books of the subsidiary libraries.

- Describe any other information services and how are they are supported and how student access is regulated

A part of the UL stocks is placed in the subsidiary libraries (SLs) at the university departments, institutes and clinics. The documents placed in the SLs are put on an acquisition list of the UL and an acquisition list of the respective SL. The SL stocks are made accessible for both borrowing and reference to the staff working at the department, institute or clinic at which the subsidiary library is established. Other UL users and the university students may borrow the SL items in accordance with the established Library Regulations of UL, on presenting an ISIC card (Annex 8.9). Annual acquisitions in the subsidiary libraries between 2012 - 2014 are in Annex 8.10.

An inter-library loan service and an international inter-library loan service are offered to all users and students, improving the quality of their theses, dissertations and publications.

UL records publications of the UVMP research/academic staff members and PhD students and the number of citations of their works. UL exports the publication records into the Central Registry of Publication Activity of the MESRS (CREP). The publication activity also involves listing of citations (times cited) on a continuous basis.

The Editorial Centre and Bookshop (ECB) was established on January 1, 2011 by separation from UL, and became a self-sustaining special facility of UVMP in Košice. ECB's two basic services include printing professional and scientific literature and its selling.

The Editorial Centre offers comprehensive services not only to the university staff and students but also to general public.

ECB publishes study materials following the plans for editorial and publishing activities approved by the University Management for a given year, as deemed necessary. The statistics of the titles published between 2010-2014 is in Annex 8.11.

The Bookshop is open daily during the opening hours, which respect the study schedule (Annex 8.12).

A multipurpose CISCO TelePresence 1300 videoconference room is equipped with a screen with a three-camera cluster system. It delivers flexibility, data display and presentation options, enables real-time communication between two or more participants, and simultaneous transmission of picture and sound to all participants.

#### LIBRARY AND OTHER INFORMATION TECHNOLOGY SERVICES – FBA UIN IN BODØ

The University Library is UiN's major provider of information resources and services to assist all UiN- students in completing their studies in Norway. The book collection and the learning centre of UBiN is conveniently located inside the main building complex next to the faculty of Biosciences and Aquaculture. The library is a highly modern structure, and consists of a total space of approximately 3000 m2. UBiN operates from three locations: the main library in Bodø as well as branches in Stokmarknes and Mo i Rana. The new library at Bodø campus was officially opened in January 2005.



The UiN library is built on the learning centre concept with multiple rooms for multipurpose usage in addition to the ordinary library services, such as independent study, seminars, or group work. There are also areas for relaxing and social interaction. The library is exceptionally well equipped for easy electronic access to library resources, with numerous modern computers available in all major areas and study rooms.

Access to these resources is available on any of the library's computers, or via students own laptop through the free wireless internet at UiN. To access all of these resources at home, students can log on via the database list on our website.

The library collection includes more than 100,000 volumes of books and periodicals. The Library has access to more than 90,000 e-books and around 17,000 electronic periodicals, all available through a broad selection of databases. These are searchable through ORIA, an integrated catalogue of Norwegian research libraries. As a user of our library, you also have access to resources from around the country via ORIA. Students get access to a personal ORIA - account where they can check loans and due dates, renew loans and check the status of items requested or ordered from other libraries.

The Faculty of Bioscience and Aquaculture's book collection has been built up over a period of 30 years, and new additions are regularly procured in close cooperation with members of the scientific staff. The recent years there has been an emphasis on increasing and make the collection of books actual and to the point. More recently, there has been a strong emphasis on databases and electronic full text resources. This has increased access to periodicals and given opportunities for bibliographical searches.

The library is working continuously to expand its selection of full text resources, which can be downloaded and displayed on the individual researcher's PC screen. Most paper subscriptions can now also be found in full text version and available full text databases of special interest for students at the faculty of Biosciences and Aquaculture.



Relevant databases for the academic field of the three first semesters of animal science studies are: ASFA (Aquatic Sciences and Fisheries Abstract), Cinahl, Intrafish – global edition, JSTOR Health Sciences, Nature, Proquest Science and Technology, SAGE, Science Direct: Life Sciences, Scoups, Springer Link: Biomedical and Life Sciences, Springer Link: Medicine, Web of Science, Wiley Online Library.

Relevant journals for the academic field of the three first semesters of animal science studies are: Veterinary week, The Journal of small animal practice, Aquaculture international, Aquatic biology, Shellfish news, Marine Ecology

The University Library in Nordland can help students learn how to navigate in the physical library, use ORIA, and search in our databases. Library staff run orientation courses each semester. Students can also contact via our web profiles. Professionally educated librarians answer all telephone inquiries, and carried out all desk service-and tutoring in the library. The loans desk is attended during the opening hours (Annex 8.13). Full time equivalents of employees (all campuses): 15,4. Full time employees: 15,1, whereas 12,7 at campus Bodø.

The silent reading hall, PCs and group study rooms on the top floor are open 24/7. Students use valid student card for access. All students can reserve one of the 19 group rooms through an online booking service. The UBiN have in total 669 work places for students, 600 of them at Bodø campus.

Sources: http://www.uin.no/en/library/the-university-library/Pages/default.aspx;

http://www.uin.no/en/library/the-university-library/campus-bodo/

Map UBiN Library at Bodø campus is in Annex 8.14.

#### **8.2 COMMENTS**

- Please comment on the adequacy of the books and accessible journals, of the opening hours and of the provision of reading spaces and support personnel.

- Please comment on the Faculty's provision of IT -facilities and the approach to self-learning, and on the further developments in this area.

#### **COMMENTS – UVMP IN KOŠICE**

The Library has modern technical equipment at all its departments, provides study space, access to Slovak and foreign literature and particularly to the electronic information resources, databases and online literature. High level and quality of study is enabled by sufficient number of reading spaces in the study rooms, availability of computers with internet access, and a wide range of study materials for all years and levels of study.

The opening hours on working days and at weekends give all the users, particularly the students the opportunity to access the necessary information resources for self-learning.

The library personnel are prepared to provide other services requested by the users such as interlibrary loans, literature searches, and supplementary study materials. UL's priority is to make the library stocks available by means of the automated ARL (Advanced Rapid Library) system to its registered users not only within the university network but also remotely.

Much attention is paid to ECB by the University Management. ECB is a publishing centre of the university, meeting the requirements of the university students and staff in terms of schedule, quality and quantity of printing and selling of literature.

The videoconference room creates new opportunities for cooperation in education, particularly with partners from abroad. It helps reduce travel and phone call costs. It increases the efficiency of communication with experts participating in joint research projects and during employee training. It enables faster development of new technologies.

#### **COMMENTS – FBA UIN IN BODØ**

Students report that they are very satisfied with the modern library. The development in information technology has been that most students have bought their own computer, tablet or mobile phone. This development in the use of information services by students has placed increased demands on UiNs WIFI network. UiN is continuously working on keeping up to date with the technology.

#### **8.3 SUGGESTIONS**

#### **SUGGESTIONS – UVMP IN KOŠICE**

The Library seeks to achieve these objectives:

- creating a professional database for Evidence-Based Veterinary Medicine, promote science and research and facilitate a transfer from innovation into practice
- modernisation of the spaces for study and self-learning
- adding new study materials on a regular basis, provide access to electronic information resources and periodical and non-periodical literature
- maintaining access to CAB abstract full text select, European Pharmacopoea online
- providing access to other relevant information resources and databases for veterinary medicine, food hygiene and environmental protection
- acquisition of e-books using own funds, in cooperation with suppliers, and from grant resources
- ensuring regular maintenance and upgrades of ICT, along with enhanced use of ICT in teaching and learning
- purchase of a RFID system to protect and manage the inventory of the library stocks
- organising lectures, seminars, training sessions for users to promote education and enhance the quality of education at UVMP in Košice

ECB will strive to streamline the planning of editorial and publication activities according to the various study programmes and meet the needs of veterinary practice.

ECB plans to expand, time permitting, the publishing activity and the printing services of the Editorial Centre for organisations outside the university.

Our aim is to make use of the videoconference technology at all university workplaces to facilitate the introduction of new technologies, streamline the decision-making process, and improve the quality of education.

#### SUGGESTIONS – FBA UIN IN BODØ

No further suggestions.

#### **Chapter 9. STUDENT ADMISSION AND ENROLMENT**

#### 9.1 UNDERGRADUATE COURSES

#### 9.1.1 UNDERGRADUATE STUDENT NUMBERS

Table 9.1 asks for numbers of undergraduate students in the veterinary training institution. This means students enrolled for undergraduate training and paying the corresponding tuition fees (if applicable), except for those students who do not participate in the teaching offered.

Some veterinary curricula require students to successfully complete all courses presented in an academic year before they can start the subjects in the following year. In other establishments

students have to complete all the subjects in the curriculum before graduating, but can do so in a more flexible way. In the latter instance, it may be difficult – perhaps impossible – to place some of the students in a specific year of the programme.

If this is so, table 9.1 may: Be omitted, or be an approximate figure, or be calculated by reference to the course of year that corresponds to the largest number of subjects taken.

In any case, please indicate the minimum no of years (MNY) allowed to successfully complete the curriculum.

**MNY:** years

#### UNDERGRADUATE **STUDENT** NUMBERS -STUDY PROGRAMME **GENERAL VETERINARY MEDICINE**

In the academic year 2014/2015, a total number of 909 students were enrolled in the combined first and second level of university study in the GVM study programme, 676 of whom were Slovak students (the numbers from October 30, 2014).

#### Table 9.1.: Undergraduate student composition in 2014

Total number of students	909
Total number of male students	195
Total number of female students	714
Foreign students	233
- EU countries	79
- non-EU countries	154
MNIV = 6 magnet	

MNY = 6 years

The GVM study programme is a 6-year study (MNY = 6) in daily form, whose successful completion is followed by the award of a "Doctor of Veterinary Medicine" degree (DVM/ "MVDr." in Slovak).

The daily form of study corresponds to student workload of 1800 hours per academic year including self-study and independent creative activities.

Out of 172 students who commenced their studies in 2008, 50 (29,1%) students successfully completed their studies in the academic year 2013/2014. Over the past 5 years, the average length of study has been 6.46 years per graduate.

#### Subjects linked-up to other subjects (prerequisites) - making enrolment on study conditional on previous completion of other subject(s)

Organisation of study at UVMP in Košice is based on a credit system, which uses credits to evaluate the student's workload related to completion of subjects within a study programme in accordance with the rules set by the Study Guidelines. The student is awarded credits upon successful completion of a subject. Credits awarded for completion of individual subjects are added up. (Article 10 of the Study Guidelines)

In order to register for study in the following year the student must obtain the minimal number of credits recommended by the study plan of the respective study programme (Article 14).

Given the specificities of veterinary education, enrolling certain subjects in the study plan of the given year is conditional on previous completion of other subjects (prerequisites) taught in the preceding year of study.

Students may register for study in the following year if they earned all course credits, passed all examinations, and obtained the number of credits requested for the respective year of study before the end of the respective academic year (i.e. not later than August  $31^{st}$ ), (Article 21. http://www.uvlf.sk/sites/default/files/dokumenty/vnutorne-predpisy-a-smernice/vp-c-02-studijnyporiadok-uvlf-v-kosiciach 0.pdf)

#### UNDERGRADUATE STUDENT NUMBERS - PROGRAMME ANIMAL SCIENCE

Students of a joint bachelor study programme in the 1st level of higher education have their studies divided in two parts. At UiN they are estimated to use 1.5 years, completing 90 ECTS credits (30 ECTS per semester). At UVMP in Košice, they complete their studies by additional 1.5 years of study, completing additional 90 credits. During the 3 years of study at both universities students complete a total of 180 credits.

During autumn semester, UiN has both  $1^{st}$  semester students and  $3^{rd}$  semester students present. In the spring semester UiN only has  $2^{nd}$  semester students present. After  $3^{rd}$  semester, students transfer to UVMP in Kosice.

#### Table 9.1a: Undergraduate student composition in 2014

Total number of undergraduate students	54
Total number of male students	6
Total number of female students	48
Foreign students	
From EU countries (Island and Sweden)	8
From non-EU countries	46

#### 9.1.2 STUDENT ADMISSION

- State the minimum admission requirements.

- Indicate whether there is a limit to the number of students admitted each year.
- Describe how the number of government-funded student places is determined.
- Outline any selection process (or criteria) used in addition to the minimum admission requirements.
- Describe whether students applying for and/or starting veterinary training have an equal or
- very variable knowledge base in scientific disciplines from their previous studies.

- Describe any circumstances under which extra students may be admitted to the undergraduate veterinary course.

- Outline any changes foreseen in the number of students admitted annually. If applicable, describe how the Faculty plans to adjust to these changes.

Table 9.2 asks for the numbers of undergraduate students admitted to the Faculty over the last five years. Apart from the 'standard' intake, the Faculty may also be taking in students as transfers from other courses, privately funded students, etc. Please indicate any supplementary intake of this kind in the last column of the table.

#### STUDENT ADMISSION – STUDY PROGRAMME GENERAL VETERINARY MEDICINE

Student admission and the organisation of the admission procedure are in compliance with the Higher Education Act, Internal Regulation No. 2 – "Study Guidelines" and Internal Regulation No. 39 - "Admission Procedure and Procedure on Reviewing Decisions on Non-Admission to Study".

Information on admission conditions, admission procedure, the Admission Committee and announcement of the entrance exam results at the UVMP in Košice are available in the Organisation and

Study Guidelines of the UVMP in Košice for the respective academic year and on the UVMP website (http://www.uvlf.sk), as well.

#### **Admission requirements**

The applicant for study at the university hands in an application form, which must include: a curriculum vitae, an authenticated photocopy of the school-leaving certificate, a medical certificate confirming applicant's ability to study at UVMP, and a receipt for the payment of the application fee.

The deadline for applications is March 15th of the calendar year. The applicants may submit their applications in writing or in electronic form.

The basic condition for admission to study at the university is completion of full secondary education or full specialised secondary education.

#### Number of students (limits)

The Rector proposes the number of students to be admitted to the first year (numerus clausus) for approval by the AS. The number of admitted students takes into account the requirements of so-called regulated professions and the needs of society. A decision on the applicant's admission or non-admission is made by the Rector, following recommendations of the Admission Committee, which evaluates the results of the admission process. A scrutinising committee is appointed and withdrawn ad hoc by the Rector for the academic year in which the admission procedure takes place to check the results of the entrance examinations. These student places are funded from the state budget.

In addition to the intake of students mentioned above, applicants from abroad are also admitted to the university to study veterinary medicine in the English language. All study-related costs are covered from the foreign students' own resources.

Admission to study outside the system described above is possible only in exceptional cases, and always concerns the students who have been granted a transfer to the university from another university.

#### **Selection process**

Admission of an applicant to the studies at UVMP in Košice is conditional upon the applicant's successful completion of the entrance examination in form of a test from the core subjects – biology and chemistry.

The Rector appoints an Admission Committee as his/her advisory body to manage and supervise the admission procedure including preparation and evaluation of entrance tests, and to judge the applicant's suitability for study. The selection process takes several days depending on the number of applicants.

A system eliminating subjective factors affecting the evaluation of applicants was implemented. The system is used during the preparation and evaluation of the entrance examination tests. The tests are generated on the entrance examination day and evaluated anonymously under a code number.

The examination results are made public every day during the entrance examinations period on the UVMP website (www.uvlf.sk).

Other selection criteria that are taken into account are: successful participation in secondary school scientific workshops (Olympiads)  $(1^{st} - 3^{rd} \text{ place in the core subjects$ *biology*and*chemistry*), work for organisations whose activities are related to the chosen study programme, and other prerequisites that must be enclosed with the application in writing.

The evaluation of applicants is based on an approved scoring system, which is made public on the university website. Applicants for the study are listed in descending order, according to the points scored. The applicants with the highest scores are admitted to the study.

Decision on admission or non-admission is made by the Rector, following recommendations made by the Admission, which evaluates the applicant's entrance examination results.

Results of admission procedure are announced on the UVMP website through the AIS link on the day of the Admission Committee session, or within 5 working days after the completion of admission procedure at UVMP. Additionally, the results on admission or non-admission are sent by a registered letter to every applicant within 30 days after the Admission Committee session.

#### Appeals

A scrutinising committee is appointed and withdrawn ad hoc by the Rector for the academic year in which the admission procedure takes place to check the results of the entrance examinations and the decision on admission or non-admission to the studies. In the case of non-admission, an appeal against the decision may be addressed to the Rector of UVMP in Košice by the applicant at the following address: Komenského 73, 041 81 Košice (Internal Regulation No. 39)

#### Knowledge base of the applicants

The applicants' knowledge base as regards the core subjects (biology, chemistry) varies depending on the type of secondary school they attended. The applicants from secondary grammar schools have proved to have a higher knowledge base than applicants from other types of secondary schools. Therefore, optional preparatory courses in biology and chemistry are organised by the university for applicants before entrance examinations (in March – May). The courses cover biology and chemistry at the secondary school level and provide the applicants with the information about the scope of knowledge necessary for passing the entrance examinations. However, the differences in the applicants' knowledge levels are eliminated only later, during the first year of their study at the university.

#### Changes foreseen in the number of students admitted – N/A Undergraduate veterinary students admitted to the university over the last five years

The number of students admitted by UVMP in Košice to the studies in the combined first and second level of university study in the GVM study programme over the last 5 years is shown in Table 9.2.

Year	Number of applicants	Number of admitted students				
		'standard' intake	Other entry mode (describe)			
2014*	307	176	21			
2013	286	177	11			
2012	267	171	NA			
2011	268	181	NA			
2010	247	174	NA			
Average	295	175.8	16			

Table 9.2.: Intake of veterinary students in the past five yea
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\*the year prior to evaluation

Based on the data provided, it can be concluded that in comparison with previous years, the interest in the GVM study programme provided at UVMP in Košice has slightly increased.

#### STUDENT ADMISSION – STUDY PROGRAMME ANIMAL SCIENCE

Applicants for admission to UiN must meet the minimum requirements for Higher Education Entrance Qualification in Norway ("generell studiekompetanse") and fulfil the language requirements in Norwegian and English. For admission to the Animal Science program, applicants need extended courses in mathematics and chemistry from upper secondary school (Mathematics R1 or S1 + S2 (equivalent to High School AS-level) and Chemistry 1 + 2 (equivalent to High School A-level).

According to the National Recording Regulations, UiN admits 50% of its student intake on the basis of the first passed diploma and 50% have taken further education or other issues that give extra points. There is a limit of eight extra points for age, and two points for either military education, 60 ECTS or one year Folkehøgskole. At UiN, there is no extra points for male applicants, although UiN has very low number of male applicants.

Applicants apply through http://www.samordnaopptak.no. Applicants must document proficiency in the Norwegian language in order to be eligible for admission. Applicants from other Nordic countries are eligible to apply, and meet the language requirements due to similar language education. Applicants from most European countries are eligible for admission upon completion of the secondary school leaving certificate that provides the basis for admission to university studies in their home country. Entrance requirements for applicants from non-European countries may include one or two years of university studies in addition to secondary school. All EU and non-EU applicants must document Norwegian language proficiency.

All applicants must use the online application form called *nettsøknad*, which is available from 1 February on http://www.samordnaopptak.no. The deadline is 1st March for applicants with foreign education or special requirements, and 15th April for other applicants. Applicants may list up to 10 different programs, in order of priority. When the application is registered, the applicant receives an application file in their online application. The applicant must fill in information about their educational background and return it with copies of relevant documents. Applicants must document their education with copies of certificates, diplomas and transcripts. Both upper secondary and higher education must be documented. For Norwegian applicants, a national databank contains all diplomas of pupils educated in the recent years. The diplomas and certificates of a Norwegian applicant become available in UiNs student administration system (FS). Applicants are still required to send in paper copies of all documents. Applicants must fulfil all requirements before 1st July.

Applicants with foreign secondary education will be assessed individually and UiN decides who will be offered a place. The assessment is based on the grade point average/grades from upper secondary school/high school, the grade or points in the examination in Norwegian amongst other things. The offers of study places are published on 20th July and the applicant has to accept or decline the offer by a given deadline. Admission to the Animal Science program in Norway is quite competitive.

There are 25 places for Animal Science students and about 250 applicants each year. UiN admit about 30 students each year, due to experience of students not accepting the offer of study place, or deciding to study elsewhere before going to Košice. This number is set by what UiN has the capacity to teach and what number UVMP in Košice may accept.

The requirements set by the national admissions scheme contributes to the students admitted to UiN having a very homogenous academic background.

	Number	Number admitted			
Year	applying for admission	"standard" intake	Other entry mode <sup>1</sup>		
2014*	267	31	1		
2013	251	32	0		
2012	223	17	12		
2011	220	17	12		
2010	218	18	7		
Average	235.8	23	6.4		

Table 9.2a: Intake of Animal Science students in the past five years

\*Year prior to evaluation

If few applicants accept in "standard intake", we use supplementary admission to fill student places.

#### 9.1.3 STUDENT FLOW

Table 9.3 establishes to what extent students make progress in their studies. To this end, we look at the students who were admitted initially and which year they have reached after the MNY (see page 63) has elapsed.

#### STUDENT FLOW – STUDY PROGRAMME GENARAL VETERINARY MEDICINE

#### Table 9.3: Student flow and total number of undergraduate veterinary students

Number of students present after admitted y	Number of additionally admitted students		
$1^{\text{st}} \text{year}^{(1)}$ (2008/09)	172	0	
2 <sup>nd</sup> year (2009/10)	139	0	
3 <sup>rd</sup> year (2010/11)	127	0	
4 <sup>th</sup> year (2011/12)	110	0	
5 <sup>th</sup> year (2012/13)	96	0	
$6^{\text{th}}$ year (MNY)(2013/14) <sup>1</sup>	50	0	
>6 <sup>th</sup> year (2014/15)	46	0	
number of undergraduate veterinary students	909		

<sup>1</sup> mark year matching MNY

#### Table 9.4: Number of students graduating annually over the past five years

Year	Number graduating
2014	90
2013	91
2012	108
2011	108
2010	120
Average	103.4

#### Table 9.5: Average duration of studies (distribution of students in years)\*

duration of attendance	number
-years $0^{1}(2014) = MNY = 6$ years	38
years $1(MNY + 1)$	46
years $2(MNY + 2)$	88
years 3 (see 9.1.3.2.)	NA
years 4	NA
years 5	NA
years > 5	NA

1) Year matching MNY allotted to the veterinary curriculum

\* the year prior to the visit

# Describe the requirements (in terms of completing subjects and examinations) for progression to a subsequent year of the course. Describe the academic circumstances under which the Faculty would oblige students to leave the course.

Registering of students for the following year of study is conditional upon earning the minimal number of credits required by the study plan of the respective study programme. In a case of a subject linked-up to other subjects, enrolment in such subjects is conditional on previous completion of other subject(s).

A student passes to the following year of study if he/she earned all credits, passed all examinations and obtained the number of credits requested for the respective year of study before the end of the academic year (i.e. not later than on August 31<sup>st</sup> of the respective year).

In addition to termination of study by its proper completion, the study is terminated:

- a) by withdrawal from study,
- b) by exceeding the standard length of study by more than two years,
- c) by exclusion from study for failure to satisfy requirements resulting from the respective study programme and the Study Guidelines,
- d) if the student has failed to earn all requested credits by the end of winter semester,
- e) by failure of the student to earn credit for obligatory or obligatory optional subjects even after second enrollment of these subjects (with regard to obligatory optional subjects this does not apply to students who have completed successfully the requested number of obligatory optional subjects),
- f) if the student has earned by the end of the academic year less than 51 % of credits requested for the given academic year by the relevant study plan for individual study programmes,
- g) for breach of discipline, i.e. violation of legal regulations or internal regulations of UVMP in Košice, or the public order, caused by the student according to Section 72 (2) c) of the Higher Education Act,
- h) cancellation of the study programme according to Section 87 (2) c) of the Higher Education Act, provided that the student refuses the offer of the university to continue with the study in another study programme
- i) in a case of the student's death.

A student who failed to fulfil the conditions resulting from the study programme and the Study Guidelines of UVMP in Košice is dismissed from the university based on Section 66, (1) c) of the Higher Education Act.

#### STUDENT FLOW – STUDY PROGRAMME ANIMAL SCIENCE

#### Table 9.3a: Student flow and total number of undergraduate veterinary students

Number of students present after admitted year	Number of additionally admitted students	
1 <sup>st</sup> year (intake 2011)	29	0
2 <sup>nd</sup> year	26	0
3 <sup>rd</sup> year (class of 2011 Graduated Animal science in	21	0
2014)		
4 <sup>th</sup> year Continued at veterinary medicine	NA	
5 <sup>th</sup> year	NA	
6 <sup>th</sup> year	NA	
>6 <sup>th</sup> year	NA	
Number of undergraduate students	64	

FBA does not take in additional students during the 1.5 years at UiN

Year	Number graduating
Class of 2014	
Class of 2013	
Class of 2012	
Class of 2011	21

Table 9.4a: Number of students graduating Bachelor in Animal Science annually over the past five years

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#### Table 9.5a: Average duration of studies (distribution of students in years)\*

Duration of attendance for students graduating 2014	number
years $0^{11}$ = students that used minimum time of 3 years	20
years $1 =$ students that used 4 years	1
years $2 =$ students that used 5 years	0
years 3	NA
years 4	NA
years 5	NA
years > 5	NA

<sup>1)</sup> Year matching MNY allotted to the veterinary curriculum \*year prior to visitation

#### Progression

Class of 2010

Average

Students are required to pay semester fee, and sign up for course by 15<sup>th</sup> of September in autumn semester, and 15<sup>th</sup> of February in the spring semester. Students that fail to pay semester fee or sign up for courses will lose their student rights at UiN and will not be able to take courses that semester. This is controlled by the central administration at UiN.

The curriculum requires that students have produced a certain number of credits to continue to the next academic year. At UiN, students must complete at least 30 ECTS credits each year to keep their study place. The university is flexible in the way that it accept students falling behind for a limited period of time, and students are allowed to continue the next semester if they don't pass every course.

UiN schedules for re-takes the same semester, and it is possible to take the failed course again next semester. Students are allowed to continue their studies as long as this demand is met, and transfer to the next semester.

UiN has cases where students use more time than 1.5 years to pass all 90 ECTS credits in Animal Science. In regards to Regulation concerning studies and examinations at University of Nordland (amended July 2014), students in programs containing 60 ECTS or more are allowed two extra years to finish the degree, if falling behind in their studies due to extraordinary issues.

The maximum time a student may use in Animal Science 1.5 years in Bodø is then 3 years. Legal leave such as maternity leave is added to this period. The student is informed of the examination rules and of the consequences if they do not pass the examination at retake. The student is invited to a counselling session at the Study department, if they want.

Animal Science program at UiN has quite high finishing rate, if we compare with other UiN study programs. Students are required to complete and pass all courses (90 ECTS) before they leave for UVMP, Kosice. Students at JBPAS leave for Kosice in spring semester, and start their 4<sup>th</sup> semester at UVMP. If students have not successfully passed all 90 ECTS credits, they will stay at UiN finishing their courses, and transfer to next class and leave for Kosice next spring.

- Comment on standard of the students starting the course.

- Comment on the ability of the Faculty to satisfactorily decide the number of students it can accept.
- Comment on the factors that determine the number of students admitted.

- Comment on the adequacy of the facilities and teaching programme to train the existing number of students.

- Comment on the progress made by students in their studies, and the Faculty's ability to ensure that satisfactory progress is maintained.

- Comment on the percentage of students that will eventually graduate.

### COMMENTS – UVMP IN KOŠICE

Although the entrance examinations tests require a high level of the applicants' knowledge, the students' knowledge of the core subjects (biology, chemistry) varies depending on the type of secondary school they attended. The students from secondary grammar schools have proved to have a higher knowledge base than students from other types of secondary schools. However, the existing differences in the levels of knowledge gradually disappear during the first year of study.

The Rector proposes the number of students to be admitted to the first year (numerus clausus) for approval by the AS. An increase in percentage of women in the past decade constitutes no complication in terms of pedagogical process. However, it may affect the supply/demand ratio in the livestock (large animal) practices, and consequently the future employability of the graduates.

The number of students admitted is determined by the capacity of the university and its ability to ensure and guarantee adequate veterinary education. It is influenced by the resources allocation per student from the state budget, availability of space for the teaching process, public interest in veterinary education, requirements of the state veterinary administration and private veterinary practice, and the needs of the labour market with regard to supply of sufficient number of veterinarians.

The design and structure of the GVM study programme reflects the possibilities of the university to provide quality education to students. The material and technical equipment which is constantly being improved and renewed along with a lot of hands-on experience create the suitable conditions for training the existing number of students.

The established system of prerequisites (subjects linked-up to other subjects) enables monitoring of the progress made by the students during their studies. Proceeding to the next level of studies is conditional upon passing these subjects in the previous study year.

Moreover, the organisation of university study at UVMP in Košice is based on a credit system, which enables, by means of credits, to evaluate the student's workload related to the passing of subjects in accordance with the regulations set by the study programme.

The percentage of students that have graduated after 6 years of study in the past 5 years is 30.05% on average. The number reflects the high expectations for student performance during study. The average length of study is usually greater - 6.46 years.

Some of the most frequent reasons for repeated registration, withdrawal from studies or interruption of studies at student level are as follows:

- uneven level of knowledge acquired during secondary education (biology, chemistry, physics)
- insufficient adaptation to the university study system
- absence of systematic preparation/studying during the semester
- underestimating the importance of consultations and self-learning, particularly in the first and second year of studies
- unsystematic preparation for continuous study performance assessment (during semester) and for earning credits during the credit weeks (last week of semester)
- poor organisation of study, particularly exams distribution in the examination period and moving of exams from the winter semester to the summer semester.

In the past few years, an increased number of international student mobility programmes has also contributed to the extension of studies.

#### **COMMENTS – FBA UIN IN BODØ**

In the national context, the standard of students entering UiN and JBPAS is very good, as are the completion rate and study progression. However, many higher education institutions in Norway have problems with low quality of student intake, large dropout rate and low study progression. However, there seems to be a good correlation between the standard of students entering the studies, the study progression and the final candidate production.

FBA has worked systematically with study quality to reduce the failure rate, most recently to establish one-one conversation between the students and representatives from the administration at FBA.

In this way, FBA offers extensive student guidance/counselling that is offered to all first year students at the Faculty. This type of guidance is called ForVei, and is common among Norwegian universities. ForVei-project stands for "forebyggende veiledning" or "preparatory guidance" in English. This is face-to-face guidance with the student for one clock hour, where the student can talk about all aspects of student life. This is voluntary, but many students accept this offer and have grate value of it. This is a way to prevent dropout among our students.

Due to high application numbers for the JBPAS, in 2014 we had the highest standard of students enrolled in the programme since the start up in 2010. This number is the highest at all faculties at UiN. On "first diploma students" the point limit for acceptance was 45,6. For students with extra points "secondary diploma" the acceptance was 50,3 points. From Norwegian High school, students get grades from 1 - 6, whereas six is the best. This means that "first diploma students" had a grade point average at 4,5 out of 6. In addition, students with "secondary diploma" applied with extra points from age, previous studies, military education etc.

The Faculty is satisfied with the number of admitted students. UiN experience some drop out related to location in Norway, admittance to other veterinary schools etc. That is why we accept about 30 students, so that we will have about 25 leaving for Košice. UiN has the facilities to teach this number of students.

#### 9.3 SUGGESTIONS

If you are not satisfied with the situation, please state in order of importance any suggestions that you may have concerning this Chapter if you feel unhappy about:

- The number of students admitted;
- The drop-out percentage and reasons, if known
- The average duration of studies;
- Other aspects.

#### **SUGGESTIONS – UVMP IN KOŠICE**

Attracting greater public interest in the study at the university is highly desirable. Therefore the university will aim to:

- 1. increase employability of the UVMP graduates by taking into account the needs of practice, and develop study plans in liaison with professional organisations
- 2. create optimal conditions in terms of personnel, organisation, and provision of material and technical resources for a successful EAEVE combined Stage 1 and Stage 2 evaluation, consolidating and strengthening the position of the university in the international higher education area as a result.

The drop-out rate, particularly in the first year of study, can be reduced by more demanding admission criteria regarding the knowledge base of applicants for study.

Making better use of consultations with the head study group teachers and of time for self-learning is a way of helping the students in the first and second years of study to adapt to the system of university study.

#### SUGGESTIONS – FBA UIN IN BODØ

University of Nordland should continue and improve the follow up system for students admitted to JBPAS. UiN should gain a better understanding of the reasons for students discontinuing their studies. Focus on teaching quality and learning environment as a focus area.

#### Chapter 10. ACADEMIC AND SUPPORT STAFF

#### **10.1 FACTUAL INFORMATION**

Budgeted and non-budgeted posts: A distinction is drawn between:

- posts that are allocated to the Faculty and financed by the university or ministry responsible for the Faculty. These posts can be regarded as more or less permanent. They are termed "budgeted posts".

- posts that depend upon finance in addition to the allocation of budgeted posts from public money. These posts can fluctuate in number. They are termed "non-budgeted posts".

Full-time equivalents (FTE): Posts can be occupied full-time or part-time. The number given should correspond to a total of full-time equivalents (FTE). For instance 10 full-time posts plus two part-time posts at 50% plus 1 part-time posts at 80% should be given as a total of 11.8 FTE.

VS versus NVS academic personnel: A distinction has to be made between teaching staff holding the degree of veterinary surgeon (VS) and non veterinary surgeon (NVS) teaching staff.

Teaching staff: It is understood fact that "teaching" staff will also do research.

Research staff: This category includes academic personnel whose main task is to do research work, even though they may from time to time participate in undergraduate teaching.

Support staff: This includes all posts, regardless of the work undertaken; secretaries,

administrators, technicians, animal caretakers, cleaners, etc.

Interns, residents, doctoral (Ph.D.) students are not included in the staff numbers unless they perform regular, paid, teaching activities for at least 20% of their workload.

If you find that the distinctions made between different groups of staff do not fit your situation, make the best distribution you can of your personnel between the headings we use. Add an explanatory note if you wish.

#### FACTUAL INFORMATION – UVMP IN KOŠICE

UVMP in Košice staff includes teachers, researchers and support staff. All of them are paid from financial founds allocated to the university for this purpose by the Ministry of education, science, research and sport. The teaching staff are professors, associate professors, assistant professors and assistants. The teaching staff is required to do some research and research staff is expected to present some results of their research to students in the form of selected lectures.

		Budgeted posts (FTE)		Non-budgeted posts (FTE)		Total (FTE)	
1. Ac	ademic staff	VS	NVS	VS	NVS	VS	NVS
	Teaching staff (total FTE)	152.35	42	0	0	152.35	42
	Research staff (total FTE)	22.5	7	0	0	22.5	7
	Others (please specify) (FTE)	0	0	0	0	0	0
	Total FTE	174.85	49	0	0	174.85	49
	Total FTE (VS + NVS)	223.	.85	(	0	223.85	
	FTE providing last year teaching	223.85				223.85	
2.	Support staff						
a)	responsible for the care and	19		0		19	
	treatment of animals						
b)	responsible for the preparation of	49		0		49	
	practical and clinical teaching						
c)	responsible for administration,	52		0		52	
	general services, maintenance, etc.						
d)	engaged in research work	25		0		25	
e)	others (please specify)						
	Total support staff	14	5		0	14	15
3. To	tal staff	368.	.85	(	0	368	.85

Table 10.1: Personnel in the establishment provided for veterinary training

In table 10.2 supply information on the allocation of personnel to the various departments. The technical term 'Departments' refers to the component academic units of the veterinary Faculty and may have another name (e.g. 'Institute'). The titles of the academic staff grades in the table may differ from country to country, and should be modified to suit your particular situation

Table 10.2: Allocation of academic (veterinary surgeon and non veterinary surgeon) teaching staff – expressed as FTE – and support staff to the various departments

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		7	Inauci	DI LI	1. TIME	IIPIG					dna	ANCI ITENS 1 INC	1 au. 10.1)
	Prof.		Assoc.	Prof.	Assista	nt	Assista	nnt	Other <sup>1</sup>		Technical/	Animal carers	Administrative/
	VS <sup>2)</sup> NVS	3)	NN SA	S	VS NVS	7.	N SA	SA	SVN SV		$(\mathbf{b} + \mathbf{d} + \mathbf{e})$	(a)	(c)
Anatomy, histology and physiology	2	0	2	0	11	0	1	0	1	0	8	0	5
<b>Biology and genetics</b>	2	2	2	0	4	1	0	0	2	0	3	0	3
Chemistry, biochemistry and biophysics	0	0	7	2.5	4	12.5	0	1	1	1	10	0	3
Nutrition, dietetics and animal breeding	1	1	б	0	12.2	0	1.4	0	3	0	7	1	4
Microbiology and immunology	2	0	Э	0	3	0	0	0	4	4	4	1	4
Pathological anatomy and pathological physiology	4	0	7	0	4	0	0	0	5	0	9	0	4
Environment, veterinary legislation and economy	1	0	4	0.5	12	3.5	0	0	1	0	4	0	4
Epizootology and parasitology	4	0	3	0	8	0	0	0	1.5	2	7	1	5
Food hygiene and technology	3	0	7	1	4	1	0	0	1	0	8	0	5
General education subjects	0	0	0	0	0	6	0	0	0	0	0	0	4
Small animal clinic	3	0	2	0	10	0	1	0	2	0	9	4	4
Clinic of ruminants	2.25	0	1	0	4	0	0.5	0	1	0	3	3	2
Clinic of horses	2	0	0	0	3	0	2	0	1	0	5	5	2
Clinic of swine	1	0	1	0	4	0	0	0	1	0	1	2	2
Clinic of birds, exotic and free living	0	0	1	0	3	0	0	0	1	0	2	2	1
animals													

<sup>1</sup>please specify <sup>2</sup><sup>1</sup>veterinary surgeon <sup>3</sup>non-veterinary surgeon

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#### Ratios: From the above data please delineate the following ratios

#### Table 10.3: Ratios students/staff

	no. of total academic FTE in veterinary education		223.85		1	Denominator
R1:	no. of undergraduate veterinary students	=	808	=	3.609	3.609
R2:	no. of total FTE at the UVMP no. of undergraduate students at the UVMP	=	<u>368.85</u> 2154	=	<u>1</u> 4.961	4.961
R3:	no. of total VS FTE in veterinary education no. of total veterinary students	=	<u>174.85</u> 898	=	<u>1</u> 5.136	5.136
R4:	no. of total VS FTE in veterinary education no. of students graduating annually	=	<u>174.85</u> 341	=	1.950	1.950
R5:	no. of total FTE academic staff in veterinary education no. of total FTE support staff in veterinary education	=	<u>223.85</u> 145	=	<u>1</u> 0.648	0.648

- Outline how the allocation of staff to the Faculty is determined.

- Outline how the allocation of staff to the departments (or other units) within the Faculty is determined.

- Indicate whether there are difficulties in recruiting or retaining staff.

- Describe (if appropriate) any relevant trends or changes in staff levels or the ability to fill

vacancies over the past decade.

- Indicate whether it is easy to employ additional staff from service income (*e.g.* from revenues of clinical or diagnostic work).

- Describe the regulations governing outside work, including consultation and private practice, by staff working at the establishment.

- Describe the possibilities and financial provisions for the academic staff to:

a) attend scientific meetings;b) go on a sabbatical leave.

Numbers of personnel at UVMP in Košice is directly determined by the financial resources allocated to salaries, wages, tax and other payments from the total package of subsidies from the state budget received by the university.

Allocation of staff to individual departments, institutes and clinics is determined according to the system of budgeted posts of teachers, researcher and support staff. The number of teaching posts allocated to individual university units is calculated from the sum of total hours of teaching (direct teaching) provided by the respective unit in one academic year with the provision that the obligatory extent of direct teaching hours per one teacher and one academic year is 270 hours. The number of research posts allocated to individual units is determined by the results of scientific and publication activities in the past six years, number of PhD students who successfully completed their studies, success in obtaining financial funds for research through grants, and the research goals set for the subsequent period. The number of support staff allocated to individual departments, institutes and clinics is based on the number of budgeted

teaching and research posts and differentiated according to demands on support work necessary for providing education and conducting research.

With regard to overall economic situation in Slovakia, relatively high unemployment and limited opportunities of employment in the agro-sector, it is not difficult to recruit or retain qualified staff.

In the past decade the number of staff did not change significantly, however, the philosophy of determination of budgeted teaching posts has altered. Up to 2007 different standards were applied to direct teaching for individual categories of teachers with the lowest load on professors, and the highest on assistant professors and assistants, and thus the practical teaching was provided by less qualified and less experienced teachers. Also, with increasing qualification of teachers, the requirements on the number of teachers increased but the institution was unable to cover the related increase from the financial point of view.

Revenues of provided services are not on sufficient level to create real basis for employing additional staff.

The university staff is allowed to provide outside services including consultations and private practice only upon agreement with the statutory person of the university. The agreement is granted only in case of anti-competitive practices which do not affect university-provided services.

Participation of academic staff in scientific meetings and conferences is supported financially particularly from budget obtained from the running projects (grant financing). In case of justified prestigious events, such meetings are supported from the central university budget. In the past ten years no member of academic staff applied for sabbatical leave.

#### FACTUAL INFORMATION – FBA UIN IN BODØ

#### Table 10.1a: Personnel at the FBA involved in the JBPAS

(we should prepare a table for the Animal Science only, please see format below, probably they will)

	Budgeted J	posts (FTE)	Non bud F	lgeted posts FTE	Tot	al (FTE)
	VS	NVS	VS	NVS	VS	NVS
1. Academic staff						
Teaching staff (total FTE)	1	10				
Research staff (total FTE)						
Others (FTE)						
Total academic staff				11		
2. Support staff						
a) responsible for the preparation of practical and clinical teaching.		4				
b) responsible for administration, general services, maintenance, etc.		1				
Total support staff				5		
3. Total staff				16		

FTE: full time equivalent

VS: veterinary surgeon (I guess only myself!)

NVS: Non veterinary surgeon

## Table 10.2a: Allocation of academic (veterinary surgeon and non veterinary surgeon) teaching staff – expressed as FTE – and support staff

					Acad	lemic	teaching	g staff		Su	pport staf	f
F prof	ull essors	Ass Prof	ociate fessors	Assi Profe	stant essors	Lec	turers		Other	Technical	Animal carers	Admin.
VS	NVS	VS	NVS	VS	NVS	VS	NVS	VS	NVS	5	-	1
-	3	1	6	-	1	-	-	-	-			

#### **Recruitment of staff**

#### The appointment process for academic posts

All procedures at UiN related to the recruitment of academic staff follow the regulations described in the Act relating to Universities and University Colleges § 6-3. In brief, all positions are advertised in public and all applications are registered. After the submission deadlines, academic expert committees are formed, which prepare a report on the ranking of the applicants who are qualified for the position. Then, interviews and trial lectures are scheduled. All applicants are continuously informed about the process and the termination of the evaluation.

Faculties at UiN decide the need for relevant academic staff, and have a frame budget from UiN to cover all expenses at the faculty level.

Applicants for the position are requested to send:

- An application in which the motivation for applying is clearly stated
- A complete CV (education, scientific publications as well as work experience)
- Certified copies of educational certificates. Other qualifying activities should be verified.

All documents must be uploaded as attachments to the electronic application form.

After expiry of the application deadline a publicly available applicant list will be announced. Here we would like to draw attention to the fact that information about the applicant can be published, even though the applicant wishes this information to be left out. Applicants nevertheless asking for confidentiality must specifically explain the reasons for this in their application. The applicants will in which case be given advance notice of announcement.

#### Regulations for employment

Act relating to Civil Servants, applies to employees of the Norwegian Civil Service. https://lovdata.no/dokument/NL/lov/1983-03-04-3

#### Scientific meetings and sabbaticals

Upon request from any academic or technical staff, FBA can fund relevant scientific meetings, or training courses that can increase the knowledge and experience of the staff. Each application is considered individually, according to the relevance and importance to the applicant.

- Comment on the numbers of personnel in the various categories.

- Comment on the salary levels, especially those of academic staff in relation to the level of income in the private sector.

- Comment on the ease or difficulty of recruiting and retaining personnel.

- Comment on the percentage of veterinarians in the academic staff.

#### **COMMENTS – UVMP IN KOŠICE**

Numbers of personnel in the various categories are based on financial possibilities and needs of the university. They were stable in the past ten years so was the composition of staff, which provided good conditions for good performance in both education and research fields.

The salary levels, particularly of academic personnel, are insufficient compared to the income in the private sector and, unfortunately, reflect the financial possibilities of the university.

Paradoxically, it is not difficult to retain personnel due to relatively high unemployment and low job opportunities in the Slovak Republic, particularly in the field of animal production.

The percentage of veterinarians in the academic staff is proportionate to the aims set for education and research. The university does not support discrimination of non-veterinarians when filling in vacancies of teachers and researchers. The essential selection criteria in competitive tendering are qualification, work experience or publication activity.

#### **COMMENTS – FBA UIN IN BODØ**

FBA has a significant autonomy to manage its needs. Although there is a significant allocation of funds from UiN, there is always a need for more funds to meet the increasing demands for a continuous development of the academic, administrative and technical staff. There is a contestant dialogue between the central administration of UiN and the faculties to solve any issues, as these arise.

#### **10.3 SUGGESTIONS**

### SUGGESTIONS – UVMP IN KOŠICE

Maintaining high qualitative level of academic and support staff also in the future will require better financial remuneration and increased differentiation not only with respect to qualification but also with regard to acting as real guarantors or co-guarantors of study programmes and study subjects.

It is also important to comply consistently with the approved system of budgeted posts of teaching, research and support personnel.

#### SUGGESTIONS – FBA UIN IN IN BODØ

No further suggestions.

#### Chapter 11. CONTINUING EDUCATION

#### **11.1 FACTUAL INFORMATION**

Please describe the role of the Faculty in providing continuing education.

#### FACTUAL INFORMATION – UVMP IN KOŠICE

Continuing education of veterinary surgeons, specialised veterinary personnel and other personnel working in agriculture and in private practice plays an important role in permanent deepening of professional knowledge and maintenance of high level of competence and skills.

The legislative frame for continuing education has been set by the Act. No. 39/2007 Coll. on veterinary care, Act No. 442/2004 Coll. on CVS, Act of the National Council of SR No. 400/2009 on state service, as amended, and Act of the National Council of SR No. 568/2009 on continuing education, as amended (Continuing Education Act thereafter), as well as the Ordinance of MARD SR No. 480/2007 on details concerning postgraduate education of veterinary doctors and additional education of staff of veterinary administration bodies and official veterinary laboratories (Ordinance on Postgraduate Education thereafter)

In the field of veterinary medicine, the continuing education is based on current legislation, for example Council Regulations (EC) No. 852/2004, No. 853/2004, No. 854/2004, No. 882/2004 and No. 178/2002, Act on veterinary care, Act of the National Council of SR No. 152/1995 on foodstuffs, as amended, Act of the National Council of SR No. 271/2005 Coll. on production, placing on the market and use of feed (Feed Act), Act of the National Council of SR No. 362/2011 Coll. on drugs and medical aids (Drugs and Medical Aids Act thereafter), Council Regulation (EC) No. 1/2005 on the protection of animals during transport and related operations, Governmental Order of SR No. 275/2010 Coll. on minimal standards for protection of chickens kept for meat (Order No. 275/2010 thereafter), ordinances and decrees of the state administration central bodies and Ordinance on Postgraduate Education, and Council Regulation (EC) No. 1099/2009 on the protection of animals at the time of killing (Council Regulation (EC) No. 1099/2009 thereafter). In the field of organisation of the market the relevant legislative includes Council Regulation (EC) No. 1234/2007, general and specific trade standards (e.g. 1580/2007), specific quality standards and international quality standards.

The institutions offering continous education include UVMP in Košice, IPEVS as a subordinate organisation of SVFA in Bratislava and CVS. These three main institutions provide continuous education by organising education individually or in collaboration, making significant use of professional qualities and experiences of teaching and research staff of UVMP in Košice. The continuous education is organised also with participation of specialist groups and associations of veterinary surgeons specialised according to their activities concerning individual animal species, namely Slovak Small Animal Veterinary Association, Slovak Farm Animal Veterinary Association, Slovak Association of Avian Veterinarians and Slovak Hipiatric Association. Continuous education of their members in collaboration with the CVS, UVMP in Košice, and SVFA of SR is priority on the agenda of these associations. Continuing education in Slovakia can be found in Annex 11.1.

#### Continuous education activities organised by UVMP in Košice

In addition to participation in many education activities co-organised with the above mentioned institutions, the university organizes every year individually various lectures, seminars, courses, conferences, workshops and other events with the aim to provide continuous education in the field of veterinary medicine. The university organises continuous education of veterinary doctors, veterinary specialists and other agricultural specialists, as a supplementary form, mostly upon request of SVFA of SR, CVS of the SR or other establishments and institutions subject to MARD.

In the previous years, the education activities organised by UVMP in Košice focused on issues related to health of farm and companion animals, horses and poultry, involving particularly dermatology, haematology, quality and safety of food, animal nutrition, infectious and parasitic diseases, laboratory diagnosis, economical aspects of keeping farm animals, rearing and diseases of free living animals, and relevant pathological problems.

Education activities organised by the UVMP in Košice in the years 2013/2014 are described in Annex 11.2.

#### **Continuous education activities organised by the CVS**

CVS is a self-governing professional organisation uniting veterinary doctors performing private veterinary activities and providing veterinary service in the territory of the Slovak Republic. One of the topics on the agenda of CVS education of its members as an essential tool contributing to maintenance and increasing of professional competence of its members and high level of provided veterinary services. One of the basic duties of private veterinarians, members of CVS, is to educate themselves professionally in terms and ways specified by CVS. This obligation is anchored in the statute of CVS, in the part Education organisation. Practical veterinarians are obliged to obtain over the period of 3 years 300 education points by participation in education activities stipulated by the CVS. This education is implemented in two forms: passive – participation in lectures, seminars, congresses, conferences, courses, workshops or similar; active – in the form of presentation of case reports, publication of specialised papers, translations, presentation of lectures, study stays, etc. CVS prepares every year a list of education activities for the following year in the form of the so-called Calendar, available on web page of the CVS (http://www.kvlsr.sk). This Calendar is updated during the year and new available education activities are added. Calendar of education activities in 2012 - 2014 prepared by CVS for its members is in Annex 11.3.

#### **Continuous education organised by IPEVS**

IPEVS is a state-subsidy organisation established by MARD. Its primary community service role is to contribute to the development of human resources in the agricultural department with focus on continuing education of staff of SVFA bodies in Slovakia. IPEVS functions as the only organization of its kind in the Slovak Republic providing relevant education continuously since 1958.

IPEVS as the only state departmental education organization is involved in providing lifelong education to veterinary surgeons who perform state veterinary activities and to other staff of veterinary administration bodies and official veterinary laboratories. With regard to this, the mission of this organisation is based mainly on the following:

- national and European concepts, strategies and legislative documents (Programme for government of SR, Strategy of lifelong education in Slovakia, European legislative concerning continuous professional development of human resources, and other),
- concept documents of agricultural department particularly Education strategy in the agricultural department for the period of 2007–2013.

From the point of view of continuous education of veterinary doctors involved in state veterinary activities, the most important is the annual obligatory education of all official veterinarians (Article 5 of the Regulation (EC) No. 854/2004, Supplement I, Chapter IV A) and annual obligatory education of all official veterinary assistants (Article 5 of the Regulation (EC) No. 854/2004, Supplement I, Chapter IV B).

In agreement with the Act No. 39/2007 Coll. on veterinary care, as amended, and in the intentions of its statute, IPEVS ensures continuous education of veterinary surgeons who perform state veterinary activities, of other staff of veterinary administration bodies and official veterinary laboratories, particularly by means of a National education programme, segmented according to professional activities of the SVFA SR into following areas:

- animal health and animal protection,
- foreign relationships, import and export,
- food hygiene, ecology and veterinary pharmacy,
- hygiene of products of animal origin,
- hygiene of raw materials and foodstuffs of plant origin,
- organisation of the market,
- laboratory diagnosis, rapid alert system and certification.

Continuous education of veterinary surgeons who perform state veterinary activities, of other staff of veterinary administration bodies and official veterinary laboratories is implemented to a wider extent through the following education activities:

- preparation of veterinary doctors and graduates of other higher education establishments for passing the attestations of the 1<sup>st</sup> and 2<sup>nd</sup> levels,
- passing exams for attestation of the 1<sup>st</sup> and 2<sup>nd</sup> levels,
- education of heads of the service offices,
- education of staff of official veterinary laboratories of the SVFA and the SVI,
- education in the field of sensory evaluation of foodstuffs,
- education for obtaining professional qualification,
- publication activities.

In addition to the above mentioned IPEVS is involved, within the scope of its mission, in providing education focused on relevant professional issues in the intentions of national and European legislative provisions currently in force. The list of activities in the field of continuous education is presented on website of the Institute (http://www.ivvl.sk). Education activities implemented by IPEVS in 2012 - 2014 are described in Annex 11.4.

#### FACTUAL INFORMATIONS – FBA UIN IN BODØ

The legal basis and official requirement for continuing education in all universities for all professional groups in Norway are set by the Ministry of Education.

The FBA board established a Centre for Continuing Education in Aquaculture (SEVH), with support from NCE Aquaculture in 2009. SEVH offers customized continuing education courses and gives competence needed in the seafood industry. FBA has contributed to give continuing education to people across the country and raised their formal qualifications. Short programs at FBA that could be of relevance to veterinarians are:

Principles in Animal Experimentation (DR436F) (10 ECTS). The course follows the guidelines suggested by the Federation of European Laboratory Animal Science Association (FELASA) on the training of persons responsible for: carrying out procedures on animals (Function A), designing procedures and projects (Function B) and killing animals (Function D). Participants can choose between two specializations: aquatic animals and pigs. The theoretical part covers all the necessary issues in relation to the use of aquatic species (mainly fish and decapods) and pigs in research and it is divided into general modules, which are common for both groups of animals and species-specific modules. The practical training contains species-specific modules related to the handling, care and manipulation of animals, with or without anaesthesia. At the end of the course, the participants receive a certificate that is required of all those involved in animal experimentation.

Fish Health (AK205F) (10 ECTS). This independent course discusses various issues on fish diseases (pathology, treatment and prophylaxis) and welfare. The welfare component is run separately by the Laboratory AS, and gives a certificate of approved training as required by the Norwegian Food Safety Authority (Mattilsynet) for all who work in fish farming.

Seafood (BI108F) (10 ECTS). Through the course the participants learn about some of Norway's most important marine products both from wild fish/shellfish and common farmed species. Subjects that are coved include: a) chemical composition and muscle structure of marine raw material, b) short introduction to parasites, environmental pollution and toxins in seafood, c) quality deterioration during storage, d) microorganisms and microbial decomposition of marine raw material and products, and the importance of hygiene and cleaning during processing of seafood, e) the effect of temperature on decomposition and rancidity, f) methods of food preservation, like chilling, freezing, salting, smoking, drying, canning, MAP and sous vide products. An obligatory practice in freshness grading is part of the course. The course also gives an introduction to HACCP and traceability.

#### **11.2 COMMENTS**

Comment on the quality of the continuing education programmes in which the Faculty is involved.
Comment on the degree of participation of veterinarians in the continuing education programmes in which the Faculty is involved.

#### **COMMENTS – UVMP IN KOŠICE**

Continuous education of veterinary surgeons, specialised veterinary staff and other staff employed in the agricultural department in SR is organised by IPEVS in Košice, subject to agricultural department of SR and directly controlled by SVFA of SR. Continuous education of private veterinary surgeons is provided for mostly by their professional organisation, CVS. UVMP in Košice and its personnel participate actively in this education through direct teaching or preparation of contents of individual forms of education. Programmes and topics of continuous education are appropriately updated according to the needs of practice, national and European legislative standards and new knowledge in veterinary medicine relevant to various areas of veterinary practice.

The programmes and topics for every year include all animal species, various areas of health issues and diagnostic specialisations and actions of veterinary professionals and their practical services provided to society. Continuous education is implemented mostly in the form of lectures, seminars, courses and workshops. However, active participation of veterinarians in the form of publications in professional journals and presentation of lectures on topics related to their own veterinary practice and experience is also important part of continuing education. Three specialised veterinary journals are issued in the Slovak Republic where papers dealing with veterinary issues can be published - Slovak veterinary journal, Infovet, and Information bulletin issued by CVS. These journals play an important role in continuous education in the field of veterinary profession. Teaching and scientific staff of UVMP in Košice are regular contributors to these journals. Other important education activities with regard to the number of participants, extent of topics and participation of university staff, organized regularly each year, include events such as New veterinary medicine, Congress of CVS and a Seminar preceding this Congress. The university units which take part in continuous education include first of all the clinics and some other departments or institutes dealing with specific health problems of animals (e.g. infectious and parasitic diseases, specific diagnostic workplaces, and other). The above presented review of education activities indicates that this education is provided regularly and covers a broad spectrum of topics with involvement and close collaboration of the three principal institutions, the higher education institution (UVMP in Košice), CVS and the institute controlling veterinary activities at the level of SVFA.

The guarantors of quality of education are prominent specialists in respective fields of science from veterinary university and external veterinary and non-veterinary institutions. Close collaboration and guarantee of quality is based on agreements concluded with SVFA and CVS. The quality of implemented education programmes have been increased by participation of many lectors from universities abroad and experts from practice and specialised institutions..

Progress of continuous education is related to the SR becoming a member state of EU and to the process of establishing European space for higher education. In future we anticipate a broader collaboration with European veterinary institutions and European professional associations.

#### **COMMENTS - FBA UIN IN BODØ**

Most of the one-semester or one-year programmes that FBA offers at the moment are tailored according to the needs of the aquaculture industry. However, as the number of veterinarians who are interested in working in the aquaculture industry increases, new programs and courses will be developed.

#### **11.3 SUGGESTIONS**

#### SUGGESTIONS – UVMP IN KOŠICE

As the continuous education of veterinary surgeons, specialised veterinary staff and other support personnel in the agricultural department is organized by the IPEVS in Košice, UVMP in Košice should concentrate more on continuous education of private veterinary doctors organized in CVS, particularly in the field of veterinary medicine and food hygiene where the university occupies an irreplaceable space particularly due to its facilities and equipment. We also envisage more intensive participation in the continuous education of young colleagues who, within their post-graduate studies, focus on various more specialised diagnostic procedures.

Because the university plays an irreplaceable role in the field of modernisation of teaching that includes development and offer of e-learning education programmes on national and international levels, this way of education will be used more intensively in the future. Joint development of e-learning education programmes and offer of this form of distant education will be included in the university strategic plan for the future period to make this form available to a wider range of practical veterinarians as one of the options in continuous education. In order to increase the quantity of activities and quality of organization of continuous education at the university, it appears desirable to form a special team or section within the education sector of UVMP in Košice, focused specifically on these activities.

#### SUGGESTIONS - FBA UIN IN BODØ

No further suggestions.

#### Chapter 12. POSTGRADUATE EDUCATION

#### **12.1 FACTUAL INFORMATION**

This heading covers all further training leading to a diploma - special postgraduate studies, Ph.D. courses, research training programmes, and national or European College specialised qualifications. Please provide details of all postgraduate training opportunities in tabular form under "Factual Information".

### FACTUAL INFORMATION – UVMP IN KOŠICE

Further training of veterinary surgeons who carry out state veterinary activities, and the employees of the food administration authorities and official veterinary laboratories is provided by the Institute of IPEVS, with the academic staff of UVMP in Košice also participating in the training. IPEVS is a public organisation receiving contributions from the state budget, established by the MARD. Its primary mission is the development of human resources in the agricultural sector with the particular emphasis on life-long learning of the employees of SVFA and its organisations. IPEVS' scope of activities is nationwide and it is the only organisation of its kind in Slovakia with a continual tradition of education since 1958.

The legislative framework of the life-long learning is constituted mainly by the Act on Veterinary Care, the Act No. 400/2009 Coll. of the National Council of the Slovak Republic on the Civil Service and on amending and supplementing certain acts, the Act No. 568/2009 Coll. on Life-long Learning and on the amendments of other acts and the Decree No. 480/2007 of MARD relating to postgraduate education of veterinary surgeons and further training of the employees of veterinary administration authorities and the official veterinary laboratories.

The purpose of the further education of veterinary surgeons carrying out state veterinary activities and of other employees of veterinary administration authorities and the official veterinary laboratories is to ensure continuous deepening and enhancing their qualifications and professional competence in accordance with the current requirements for the performance of the professional activities.

Pursuant to the Decree on Postgraduate Education, the official veterinarians – employees of the SVFA authorities - are enrolled on preparation courses for a Stage 1 attestation examination within two years of the start of their civil service. The abovementioned veterinarians obtain Stage 1 and Stage 2 attestations within their postgraduate training. In order to obtain a Stage 1 attestation, the veterinarians must attend professional preparation courses in prescribed subjects, and conclude them by passing an examination.

In order to obtain a Stage 2 attestation, in addition to completing of professional subjects the candidates must prepare and defend a final work. The preparation periods for both Stage 1 and Stage 2 attestations are based on a 2-year cycle.

The number of veterinary surgeons who obtained either a Stage 1 or a Stage 2 attestation at IPEVS in Košice between 2010 - 2014 is shown in Annex 12.1.

#### FACTUAL INFORMATION – FBA UIN IN BODØ

FBA offers two MSc programs (MSc in Aquaculture and MSc in Marine Ecology) and one PhD program in Aquatic Biosciences. All programs are taught in English and the candidates should meet the general criteria set by UiN.

The students who graduate the JBPAS are eligible to apply for one of the MSC program, but they have to take 10 ECTS in mathematics/statistics to cover admission requirements.

#### Master in Aquaculture

The main aim of the Master programme is to provide students with scientific and practical skills crucial for the development of the aquaculture industry. Students can specialize in reproductive biology, fish health and welfare, nutrition, seafood quality, or molecular biology/genomics. Further, students will develop perspectives and skills relating to ethical consciousness and interpersonal relations (http://www.uin.no/en/studies/aquaculture-master2).

#### Master in Marine Ecology

Plants and animals evolve over long time spans. Knowledge about such evolutionary adaptations is necessary to understand biodiversity and variation in ecosystems. The Master of Marine Ecology gives students the opportunity to research and write exciting theses within the field of marine ecology and marine genomics. Students will be part of an international research environment (http://www.uin.no/en/studies/marine-ecology-master2).

#### PhD in Aquatic biosciences

Aquatic Biosciences at FBA is the study of the structure, function and behaviour of living organisms in aquatic ecosystems, predominantly related to the marine sector. The PhD in Aquatic Biosciences will first and foremost qualify the students for positions within higher education institutions and for research and development work at research institutes. They would also have opportunities within the aquaculture or marine life science-related industries in Norway and abroad.

It should be noted that in Norway, the PhD candidates are considered as employees of the university during their period of study, having the same rights as other academic employees. Their positions are announced openly and usually applicants from Norway as well as outside Norway in welcome to apply. They need to have a relevant 5-year Master's degree or other relevant professional degree from a Norwegian institution or equivalent foreign institution (http://www.uin.no/en/studies/phd-in-aquatic-biosciences2).

#### 12.1.1 CLINICAL SPECIALTY TRAINING (INTERNS AND RESIDENTS)

Postgraduate clinical training programmes have not yet been organised by the university. The further specialty training resulting in a "veterinary specialist" degree in a specific field, which has a long tradition in many European countries, has not yet been initiated.

UVMP in Košice employs four European specialists at the moment. All of them are members of the European College of Bovine Health Management (ECBHM) and they have successfully undertaken the re-evaluation process in the past three years. One of them is a member of the ECBHM Credentials Committee. The knowledge gained from working at ECBHM is transferred to the pedagogical process at the university and passed on to veterinary practitioners working in the field of farm animals by means of further training. The three active ECBHM members work at the Clinic of Ruminants, where new technical improvements are being finished at present to enhance the quality of the clinical training and the advisory services provided. It can be assumed that once this process has been successfully completed, it will be possible, with active involvement of the diplomates and the university, to set up a training centre for residents at the Clinic of Ruminants, making one of the European specialties available to other veterinary surgeons in Slovakia as a result.

The university strives to create conditions for obtaining other European specialties. Intensive support is planned to enable the different university units to create conditions for postgraduate students and postdoctoral scholars to apply for residencies within 23 European specialties.

Table 12.1.1 Chincal specialty training	Table	12.1.1	Clinical	specialty	training
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Clinical discipline	Number of diplomates/ specialty	Number of enrolled on training	Number of residents	Diploma or an expected degree
ECBHM	4/ECBHM	-	-	Diplomate

Indicate whether students involved in this training receive a grant or a salary.

Indicate any programmes that are certified by the European Board of Veterinary Specializations.

#### **12.1.2 RESEARCH EDUCATION PROGRAMMES**

UVMP in Košice offers postgraduate study programmes for students at the third level of higher education (PhD students) in both the full-time and the external forms in 17 accredited study programmes.

In Slovakia, the postgraduate doctoral study (higher education study of the  $3^{rd}$  level) is governed by the Higher Education Act, amended and supplemented by the Act No. 455/2012 and by the UVMP Internal Regulation No. 2 – Study Guidelines of 2013.

A board of specialists has been established at the university for each study programme, comprising at least 8 members. The board organises and evaluates the doctoral study at the university. The board members are appointed by the Rector from among the teachers and other non-university experts from practice after the approval of the Scientific Board of UVMP in Košice. Accredited study programmes of the third level of higher education at UVMP in Košice are described in Annex 12.2.

#### Please indicate when and where and whether the students require a grant or salary

The standard length of doctoral (PhD) study in the full-time form is four years. The PhD study in its external form lasts five years.

The PhD graduates obtain higher education of 3rd level and after successfully defending their dissertation theses they are awarded a "philosophiae doctor" academic title (abbreviated as PhD) by the respective board of specialists.

The full-time students are awarded scholarships during their PhD studies. In 2014, the scholarship amounts were as follows:

a) for the period prior to passing of dissertation examination:  $\in$  511,

b) for the period after passing of dissertation examination:  $\in$  596.

The students in the external form of study are not awarded scholarships. They receive a salary form their employers, the amount of which corresponds to the established rates of pay at the organizations at which they work. The external students are charged an annual fee of  $\notin$  365.

PhD study involves participation in a scientific research project. The aim of PhD study is to make a provably novel contribution to the current state of scientific knowledge as a result of scientific research and the student's independent creative activities in a field of science. PhD students participate in projects supported by the Scientific Grant Agency (SGA), the Slovak Research and Development Agency (SRDA), in applied research projects as well as projects supported by the EU (Structural Funds, etc.). Number of PhD students enrolled in the study programmes between 2010 - 2014 and in the 2014/2015 academic year are presented in Annex 12.3.

Each PhD student pursues his/her studies within a scientific research project and a specific topic on the basis of an individual study plan set up by his/her tutor. The individual study plan of a PhD student comprises:

- a) a study part,
- b) a scientific part and
- c) in the full-time form of study teaching part or other professional activities.

PhD students are awarded credits within the different components as shown in Annex 12.4.

The study part of a PhD student's individual study plan comprises mainly lectures, seminars and individual reviewing and studying of scientific literature related to the topic of the student's dissertation thesis. The study part is concluded with a dissertation examination, which must be taken within 18 months from the enrolment to PhD study in its full-time form and 36 months in its external form.

- A dissertation examination consists of:
- a) defence of a dissertation thesis Project, which is included in the written part of a dissertation examination
- b) theoretical examination.

The written part of a dissertation examination is composed of an overview of the current state of knowledge in a given topic, the PhD student's own theoretical contribution, an analysis of a methodological approach used to address the topic and the project of the dissertation thesis. The written part of a dissertation examination is reviewed by the opponent.

The dissertation examination consists of three subjects, of which two are obligatory and one is obligatory elective. It is taken in front of a commission comprising at least four members, of whom one is a non-university teacher. The dissertation examination is evaluated by a resulting grade, which is either "*passed*" or "*failed*".

The scientific part of a PhD student's individual study plan consists of either his/her individual or team scientific work, which addresses the dissertation topic. The PhD student's scientific plan includes, inter alia, his/her active participation in scientific seminars and conferences, other professional events within the scientific fields related to the topic of the dissertation thesis as well as students publication activity. The scientific part is concluded with a dissertation thesis defence.

Full-time PhD study involves teaching or other teaching-related professional activities, not exceeding four hours a week on average throughout the academic year.

#### **Dissertation thesis**

A PhD student applies for a defence of dissertation thesis by submitting the dissertation thesis to the Rector. The defence must take place before elapsing of a four-year study period in the full-time form of study or a five-year period of study in the external form of study. The dissertation thesis is reviewed by three opponents.

The defence of a dissertation thesis includes a presentation and discussion of the thesis results, and the contribution of the thesis. The discussion involves the PhD student, the opponents, the members of the commission for defence of dissertation thesis and other defence participants. The conclusions and suggestions made in the thesis are scrutinised during the defence to ensure they are justifiable and reliable.

Based on the results of a secret ballot by the board of specialists for defence of thesis, the academic degree "philosophiae doctor" (PhD) is either awarded or not awarded to the PhD student. Number of PhD graduates in the academic years 2010/2011 - 2014/2015 is presented in Annex 12.5.

UVMP in Košice plays a vital role in providing postgraduate PhD education to students from abroad, on the basis of either intergovernmental agreements or an applicant's individual interest. At the moment, there are three foreign PhD students studying at the university full time.

The entire work of a PhD student from the announcement of a topic to the completion of studies by defending the dissertation thesis is recorded in the Academic Information System (AIS), which includes an originality check. The thesis is also registerd in the Central Registry of Publications (CRP).

#### Admission to PhD study

Candidates apply for postgraduate study by submitting an application for the announced topics of dissertation thesis.

The topics are announced by the Vice-Rector for Research Activities and Foreign Contacts upon the proposal of the departments, clinics and institutes, with prior approval from the heads of the study fields and the University Management. The following information is indicated for each announced topic: the name of a study programme, the tutor's name, the form of study, the conditions of admission to study, the form and the content framework of the entrance examination, deadline for applications and the admission procedure date. The topics for dissertation theses for the full-time and external forms of study along with the abovementioned information are published on the university website according to a schedule, usually at least 8 weeks prior to the admission procedure. Students are admitted to PhD studies on the basis of an interview, which takes place before an admission board. The Admission Board is appointed by the Rector and comprises a chairman and at least two members.

The admitted PhD students are enrolled in the first year of study at the beginning of the academic year following the admission. The number of student places in the full-time form of study is determined annually depending on the financial possibilities of the university. The numbers amount to 20 - 25 places on average.

In the 2014/2015 academic year, the following numbers of students were admitted to the PhD studies at UVMP in Košice:

- a) 25 students in the full-time form of PhD study (9 men and 16 women), out of whom 22 were UVMP graduates,
- b) 7 students in the external form of PhD study (3 men and 4 women), out of whom 6 were UVMP graduates.

#### Seminar of PhD students devoted to the memory of academician Bod'a

The Seminar of PhD students devoted to the memory of academician Bod'a has been organised by UVMP in Košice since 2006 in cooperation with the Institute of Animal Physiology of the Slovak Academy of Sciences and the Faculty of Science of Pavol Jozef Šafárik University in Košice.

The seminars are aimed to provide PhD students with opportunity to gain practical experience in presenting their own results from the scientific research they conduct both in oral and written form. A contest for the best contribution presented by the PhD student participants is held during the seminars. The contributions are evaluated by a panel of specialists comprising teachers and scientists. The contributions are published in peer-reviewed proceedings and are made available to general public.

There is no thematic restriction concerning the contributions. They cover a wide range of biological sciences: nutrition and metabolism, regulatory physiology and physiology of reproduction, neurobiology, anatomy, cell biology, molecular biology, microbiology, immunology, parasitology, food hygiene, zoology, ecology and the environment, breeding of domestic and wild animals, clinical disciplines, etc. The list of the PhD students' contributions presented at the Seminar of PhD students devoted to the memory of academician Bod'a is in Annex 12.6.

#### **12.2 COMMENTS**

Comment on the number of postgraduate diplomas/titles awarded annually. Comment on the percentage of veterinarians participating in postgraduate research training programmes.

#### **COMMENTS – UVMP IN KOŠICE**

Pursuant to the Higher Education Act, from the academic year 2004/2005 onwards higher education institutions in Slovakia may enrol PhD students only in the study programmes with the credit system of study, which were accredited in accordance with the current Higher Education Act.

UVMP in Košice fulfils conditions of PhD study set in the Higher Education Act since it has 17 accredited study programmes. It has also established and introduced a credit system of study.

Success in postgraduate education is an important criterion laid down by MESRS concerning funding of universities.

The study in the programmes *Microbiology, Biochemistry, Veterinary Physiology, Veterinary Morphology,* and the *Environment* is made available also to graduates from non-veterinary higher education establishments, particularly from faculties of science and agriculture.

PhD study at UVMP in Košice is evaluated at the levels of tutors, the respective university units (a department, a clinic, or an institute) and the university. A so-called annual evaluation of an individual study plan for a PhD student is performed on a yearly basis, and its results are delivered to the University Management, the Rector's Collegium and the AS of the university by the Vice-Rector for Research Activities and Foreign Contacts. The measures taken are binding for all PhD students.

Based on the results of the PhD students' annual evaluation, it can be concluded that the main reasons for drop out or interruption PhD study include:

- a) failure to fulfil requirement(s) of the credit system of study, particularly the one concerning the authorship of 2 articles published in the Current Contents database, with the PhD student being the first author in one of them,
- b) feminisation of PhD study often resulting in maternity leave,
- c) demanding PhD study in all veterinary medicine study programmes.

Considering the outcomes of the analyses obtained from the evaluations of PhD students at all university levels it can be concluded that the quality of the submitted dissertation theses has improved due to PhD students' publication activity and their active presentation of scientific and research results. The improved quality of PhD study at the university is related to the introduction of the credit system and the work of the new boards of specialists, which were established in the 2005/2006 academic year. The opportunity to present own research results at the Seminar of PhD students is also a significant motivation to PhD students.

UVMP in Košice has yet to initiate a further specialty training resulting in a "veterinary specialist" degree in a specific field, which has a long tradition in many European countries.

#### **COMMENTS – FBA UIN IN BODØ**

At the moment, there has been no interest from any graduates of the JBPAS to continue in any of the MSc programmes, as all of them aim to continue their veterinary studies. However, it is possible, once they finish their studies, some of them to continue in the PhD programme.

#### **12.3 SUGGESTIONS**

#### SUGGESTIONS – UVMP IN KOŠICE

The university should take measures to create larger space for the PhD graduates to find employment opportunities at the university or elsewhere. The university would be able to solve the problem of high average age of its teachers and scientists.

In order to increase the level of organisation of the PhD students' scientific and research activities, it is necessary to introduce institutional grants for projects that could be applied for by a PhD student, who would then implement a project as the principal investigator, with the support of his/her tutor and the respective unit. A publication in a scientific journal would be an output of such scientific and research activity.

To ensure the PhD graduates' employability, needs of practice will have to be taken into account when deciding on the topics of dissertation theses in the different fields of study, with the emphasis placed on new trends in veterinary medicine.

The university has also been working towards creating conditions necessary for obtaining the European specialities – the diplomates. Intensive support is planned in this area to enable the university units to create suitable conditions for postgraduate students and postdoctoral scholars to apply for a residency within 23 European specialities.

#### **SUGGESTION – FBA UIN IN BODØ**

No further suggestions.
#### **Chapter 13. RESEARCH**

The details requested under this heading relate only to research experience offered to students during their undergraduate training, for example through project work.

#### **13.1 FACTUAL INFORMATION**

Indicate the involvement of undergraduate students in research, including the time spent, percentage of students involved and outcome required.

## FACTUAL INFORMATION – UVMP IN KOŠICE

There are two basic possibilities for the undergraduate students of UVMP in Košice to become involved in the scientific and research activities conducted at the university departments, institutes and clinics, where under supervision of experienced academic/research staff they directly participate in the scientific and research activities. One of the possibilities is the Student Scientific and Professional Activity, which is optional and voluntary. The other possibility is the compulsory diploma thesis, with successful defence of achieved research results in front of a scientific committee, which is the basic condition for successful completion of study for all students. Both these forms of student research are funded from research grants at the respective departments where the students directly become coinvestigators responsible for implementation of a research stage.

One of the first opportunities for students to conduct research at the university is their participation in the Student Scientific and Professional Activity.

The Student Scientific and Professional Activities organically complement the teaching process at the university and make it more profound. They gradually prepare the students for independent creative work from simpler towards its more demanding forms, help the students become acquainted with methodological problems in the various branches of science, teach them about the fundamental work habits of a scientist, and instil precision and a sense of social responsibility into their work.

The Student Scientific and Professional Activities are voluntary. The students can participate in them practically from the first year of study, acting on their own initiative and if inspired by desire to develop their talent. The students who are interested in participation may register with their department heads. They are assigned to a supervisor, with whom they prepare a work plan to work on the chosen topic for one year. This gives the students an opportunity to be engage in the research grants at the respective departments. The students are obliged to present the results of their scientific work at a Student Scientific Conference (SSC) which is annually organized by the university.

SSC has its scientific chair and scientific panels appointed by the Rector from among the university teachers. It is a one-day event, which takes place in a variety of sections: pre-clinical, clinical, environmental, a section of food hygiene, and a bachelor thesis section in the bachelor study programmes that has been running only recently.

Three best contributions are chosen by the panel in each of the sections and recommended for the Rector's Award, which has the form of financial reward. The chosen and awarded contributions are published in the second volume of Folia Veterinaria, a scientific journal issued quarterly in English language, which constitutes a significant motivational element for students. Improved quality of preparation and a higher success rate of diploma theses are additional motivational factors contributing to active student participation in the SSCs.

Representatives of Merial, Waltham, Pharmacopola, Vetis, Imuna Pharm a.s., Siemens take part in the SSC each year providing sponsorship, with Zoetis being the general sponsor in the past few years. Representatives of the CVS also regularly participate and sponsor the SSC. The sponsoring companies individually award the best contributions according to their own criteria. The awards are either in the form of material gifts or financial contributions. The number of contributions presented at the SSC between 2005-14 is in Annex 13.1.

Other form of the students' involvement in science and research at the university is their participation in scientific research projects that result in a "diploma thesis", a more advanced professional and scientific work of a student.

Pursuant to the Higher Education Act, a diploma thesis is obligatory for each student enrolled in the GVM study programme. The diploma thesis is considered part of a final state examination, and its preparation is compulsory. It is a precondition for successful completion of study.

Students may start preparing their diploma thesis in the 3<sup>rd</sup> year of study, with a work span of 4 semesters. The students work on their diploma theses at the university departments, clinics and institutes. Responsibility for posting the topics for diploma theses lies with the heads of departments, clinics and institutes. At the beginning of an academic year, each academic/research staff and researcher of the university is obliged to post a diploma thesis topic, which is entered into AIS and made public in the system. The topics are approved by the heads of the respective units. Each posted topic must include the title of a diploma thesis, the name of the supervisor, and the conditions of admission. The topics for diploma theses result from the scientific and research tasks performed at the respective department. The diploma theses supervisors are nominated primarily from among the teachers, fulfilling a minimum requirement of having a PhD degree. The students register for thesis topics via AIS, mostly after having consulted the topic at their department. Each department makes its own selection of students who will prepare the diploma theses in the topics that the department has listed. The students who actively participated in the student scientific and professional activities and a Student Scientific Conference are more likely to succeed. The selection of students for diploma theses to be prepared at the individual departments must be completed until 30 October of the respective academic year by means of accepting the students in AIS (student's name, year of study, study programme, diploma thesis topic, date of the thesis assignment, supervisor or supervisor – consultant, if proposed).

After the student has registered for a diploma thesis topic, the topic becomes binding and is entered into the student's study book (index) along with the supervisor's name.

While preparing a diploma thesis, the student learns how to work with literature and approach the assigned topic methodologically. He/she gains practical skills and experience, learns how to evaluate and correctly interpret results obtained and compare them to the data found in the literature. He/she is able to decide whether the findings can be used in basic or applied research and also learns how to present them to public.

At the final stage, the diploma thesis is finalized in the written form. The scope of the diploma thesis must be at least 60 pages and comprise the following chapters: Introduction, Literature Review, Aim of the Thesis, Core of the Thesis, Materials and Methodology, Results, Discussion, Conclusion (in Slovak and English, or, if appropriate, in another world language), List of the Bibliographic References, Appendices. Direct costs related to the thesis preparation (printing, binding services, photographs, etc.) are covered by the student.

The final diploma thesis along with the supervisor's review must be submitted by the student at the Study Office in two copies including an electronic form on a CD until 31 March of the respective academic year. It must be in hard case binding with a prescribed cover. The thesis is reviewed by one opponent and also checked for plagiarism in the Central Registry of Theses and Dissertations. The diploma thesis is defended in front of committee for diploma thesis defence. The committees approved by the university Scientific Board at the beginning of the respective academic year and their members are nominated by the Rector. The committees comprise at least three members (2 UVMP teachers and one member not affiliated to the university), and one opponent.

The date, time and place of a diploma thesis defence are determined by the Rector, no later than one month before the defence takes place. The diploma theses prepared outside the university departments are also defended at the university.

The following documents are submitted for a diploma thesis defence: two copies of the diploma thesis, the opponent's review and the supervisor's review.

At the beginning of a diploma thesis defence, the student gives a 15-minute presentation of the thesis aims and the main results obtained during the thesis preparation. After the thesis has been assessed by the thesis supervisor and the thesis opponent, the opponent's and the commission members' questions are answered by the defender. A public discussion is followed by a non-public comprehensive evaluation of the student's work.

A "Record of Diploma Thesis Defence" is drawn up after the defence, which contains, inter alia, the evaluation of the defence outcomes using an A-E, FX grading scale, and a "Thesis License Agreement". The diploma theses are then made available at the Institute for Scientific Information and Library of UVMP in Košice.

## FACTUAL INFORMATION – FBA UIN IN BODØ

Faculty of Biosciences and Aquaculture (FBA) is a leading academic centre in the fields of aquaculture and marine sciences in Norway. Bodø, with its coastal location just north of the Arctic Circle, is a perfect environment for studies and research in Aquaculture, Ecology and other fields of Marine sciences in the Northern hemisphere. Aquaculture and fisheries are important economic activities in this region and they bring societal and financial support to the faculty.

Research at FBA focuses on the fields of Aquaculture, Marine Ecology and Marine Genomics, and the interaction between these subject fields (Annex 13.2). Research is divided into three strategic research groups, which are organized into research units. The faculty offers modern facilities, including state-of-the-art laboratories and a large, well-equipped research station with its own harbour.

The Marine Ecology group has three research units with advanced knowledge of the basic functioning of the high latitude marine communities, in the fjords, on coastal shelves and in oceanic waters.

Its multidisciplinary research has an emphasis on new technology to enhance the understanding of system responses to environmental changes. The common theme is to relate traditional ecological observations to genetics at the molecular level.

Topics of interest include climate and anthropogenic impacts, for example of exploitation strategies, on the genetic developments in marine organisms. Organisms studied include commercial fish species, zooplankton and algae and other key species in the pelagic and benthic zones. Food web and other inter-relationships between these species are of interest. The group is providing insights into episodic events such as destructive grazing, parasitic outbursts and kelp forest decimation and resultant loss of biodiversity in the benthic zone.

The Benthos Ecology Research Unit is studying the ecology of benthic organisms, which comprises the flora and fauna living in or on the seafloor. Our research aims at understanding and predicting how climate change and other anthropogenic or natural influences affect marine benthic systems and to apply this knowledge to sustainable ecosystem management.

The understanding of what determines species distribution in benthic environments and how that affects ecosystem functioning and processes is a key element of our research. We are using modelling methods, field and experimental studies to investigate how benthos communities respond to climate change, anthropogenic impacts and natural variability.

Another research focus of the unit is on networks among benthic species, specifically food web interactions. Benthic species constitute a main food source for higher trophic level species, but specific knowledge about their role in the food web is scarce. Therefore, we study food webs with different methods in several regions of the NE Atlantic. This knowledge will contribute to our understanding of how exploiting one component in the food web (e.g. by fishing) could affect others.

In the Biophysical Research Unit they study interactions between marine organisms and their environment on all scales from the cell level to ocean basins.

We believe the application of new technologies and novel analytical tools are central to resolve ecological variability across different scales in the North Atlantic and Arctic. Our approaches include the use of optical plankton counters in combination with size-spectrum theory to investigate vital rates of zooplankton, simulation of ocean circulation systems and implications on the spreading of marine organisms, as well as the temporal and spatial components to the ecology and dynamics of important organisms in the marine food web.

#### AQUACULTURE

Aquaculture has three research units: Aquatic Animal Health, Reproductive Biology and Seafood Quality. The Aquaculture group aims to improve sustainability in the production of farmed aquatic species. To supplement the global initiative to realise the potential of micro-algae as unique and sustainable biotechnological production systems for food and feed, the group is also involved in national and international research endeavours. Close contact is maintained with fish farming companies, feed producers and the animal health industry to ensure the relevance of research.

Sustainability is addressed from several angles including feed ingredients/additives, preventive health care options including biological control and bioremediation, and bio-technologies related to reproduction, larval quality, fish welfare monitoring and management practices that influence the quality

of seafood. The objective is to contribute to the development of knowledge that would ensure the sustainable production of safe and nutritious food from aquaculture.

The Aquatic Animal Health unit is involved in multidisciplinary research to ensure better health and welfare of aquatic organisms, primarily farmed species, through improved management practices that reduce stress and prevent outbreaks of diseases.

Combating diseases through eco-friendly means is an essential tactic to make aquaculture sustainable. The unit contributes to this approach by investigating the natural defence factors present in the mucosal organs of fish — skin, gills and gut. Antibacterial peptides and proteins are studied in-depth for their future use in vaccine development. Exploitation of commensal microbiota, the beneficial microorganisms primarily from the fish gut, for use in countering pathogenic microorganisms is another productive line of investigation. This research also covers the interaction between the host and the microorganisms present on the skin and gut surfaces, as well as the application of probiotics in bioremediation.

Many natural compounds are bioactive and can stimulate the defence mechanisms of fish. The unit has long-standing experience in monitoring and assessing the potential of such compounds as health-promoting aquatic feed ingredients in a variety of fish species. The current focus is on the application of products derived from yeast cell walls for combating diseases of Atlantic salmon and Atlantic cod. The unit is also active in the development of microalgae as a health feed ingredient for aquaculture.

The relationship between diseases in farmed and wild populations, developing rapid disease diagnostic methods and stress monitoring techniques for use on farms are also important research areas of this unit.

The Reproductive Biology unit is involved in research within reproductive and developmental biology and biotechnology of aquatic organisms.

The unit addresses both applied and basic science problems. Atlantic salmon, Atlantic cod, Atlantic halibut, cleaner fishes and spotted wolffish are aquaculture species of special interest. In addition, we use zebrafish as a model species.

Controlled reproduction, gamete and larval quality, embryonic and germline development, broodstock management and larval nutrition are the main areas of interest for the unit. Efficient reproduction of farmed fish begins with maintenance and care of the broodstock that ensure good quality gametes. The unit investigates various intrinsic and extrinsic factors affecting gamete and larval quality, as well as developing techniques for gamete collection, in vitro storage, fertilization, embryo incubation, and larval rearing. Early maturity leads to the reallocation of nutrients and energy towards gonadal development, thereby negatively affecting growth and final product quality. In addition, sexually active fish that escape can interbreed with wild populations. The unit researches biotechnological methods to induce fish sterility and sex reversal as tools to control reproduction and sex of farmed species. Control of sex is achieved via induced sex-reversal. The unit has established a broodstock of sex-reversed halibut as a means for all-female halibut production. These halibut females grow faster and reach sexual maturation later than males, showing clear advantage for commercial production.

Transcriptomics is important part of the unit's research. In several ongoing projects, we investigate the role of regulatory elements, such as microRNA, in development and reproductive processes in fish. We are also developing functional tools to study gene functions.

MarLIP (Marine Larval Innovation Platform 2011–2014) is a research innovation platform of FBA that serves activities in marine aquaculture. The programme provides resources to undertake small and medium scale commercially-orientated research projects on larval rearing of marine fish. For marine species, suboptimal culture conditions during first feeding and live feed of inferior nutritional quality are still considered as barriers to successful production. The unit explores options to enrich the live feeds, or replace live feed with other diets to improve larval growth and survival.

The seafood quality unit conducts research on a wide range of aquaculture- and fishery-related issues on all stages of fish, from early life to adult.

The seafood quality unit is one out of three research units under the aquaculture research group. This unit has a broad scope and is working with several aspects within aquaculture including fisheries, from early life stages to adult fish. Common for most research executed in this unit is that it is of an applied character with good industrial connections. One of the main focus areas is to investigate growth and flesh quality related issues with respect to feed and feeding in commercial farming to assist the industry in problem solving and optimizing production.

The research is supported by good in house laboratory facilities incl. marine research station, strong intra-faculty collaborations and advanced methodology. Enquiries from the industry provide a valuable learning opportunity.

Several unit members are key players in the unique "Life Long Learning" program developed at the faculty. This teaching program is targeting the industry and is designed to meet the industrial needs of education within both biological and economical training courses. Norwegian Centres of Expertise in Aquaculture (NCE) has played an important role in the development and networking of the program contributing to its success.

#### MARINE GENOMICS

Marine Genomics has two research units: Aquaculture Genomics and Evolutionary Genomics. Molecular and bioinformatics technologies are applied in the study of the structure, function and evolution of genes and genomes relevant to aquaculture and marine ecology.

Research topics include inter-relationships of genes controlling immunity and growth in aquaculture species and the influence of external factors on gene expression (epigenetics), and genes related to adaptation and behaviour in marine species such as Atlantic cod. A SOLiD deep sequencing platform, the first of its kind in Norway, performs whole transcriptome sequencing and micro-RNA profiling of specific tissues, and genome sequencing/re-sequencing. The group is developing bioinformatics resources to process the data generated

The Aquaculture Genomics Unit investigates various aspects of fish growth and health, with focus on their regulation by environmental factors

The research unit uses state-of-the-art molecular tools to understand how muscle development and growth are influenced by environmental factors, including nutrition, light and temperature. We also study the biological significance and evolution of antimicrobial peptides and toll-like receptors, which are critical in recognising and neutralising potential pathogens.

One of the major research interests is the epigenetic regulation of muscle growth and innate immunity through DNA methylation and microRNAs. Research is aimed at commercially important species such as Atlantic salmon, Atlantic cod and Senegalese sole but we also use zebrafish as a convenient model species.

The Evolutionary Genomics Research Unit explores the molecular genetic diversity of marine organisms. The information explosion due to novel DNA sequencing technologies is currently transforming our understanding of biology. We use genomic tools to investigate molecular evolution, genome structure, gene expression, and phylogenetic relationships of marine animals. Experimental research and molecular markers are used to study the evolution of animal behavior.

The group address biodiversity issues, the amount and distribution of genetic variation in natural populations, and how it is affected by environmental change, highly relevant to management and conservation policies. The research focuses on several species of fish, seabirds, and benthic organisms.

#### **13.2 COMMENTS**

#### Comment on the opportunities for students to participate in active research work.

#### **COMMENTS – UVMP IN KOŠICE**

The university departments guarantee that the scientific and research activities of both the undergraduate and postgraduate students who study at the university are of high quality.

The university has a long and successful tradition of organising the Student Scientific and Professional Activities, already with their 57<sup>th</sup> edition in 2014. The students' work is usually evenly spread among the various departments, clinics, institutes and other units and the presentation of the student scientific and professional work at the university-wide student scientific conferences is ensured on a very high professional level. The student scientific conferences appeal also to the companies working in the area of biological and pharmacological industries and research, which ensures sponsorship for the best thesis awards.

Pursuant to the Higher Education Act, successful completion of higher education of the second level is conditional upon a successful diploma thesis defence. Therefore, this form of student research has

a long tradition at the university. Moreover, the long tradition of the student scientific and professional activities at our university has helped create supportive environment for many of our students, who later prepare their diploma theses and often decide to continue their studies at postgraduate level at the university.

### **COMMENTS – FBA UIN IN BODØ**

No further comments.

#### **13.3 SUGGESTIONS**

Will students be given more opportunity to participate in research activities? If so, how will this be done?

# SUGGESTIONS – UVMP IN KOŠICE

The university will continue to provide suitable conditions for the involvement of its students in science and research within the Student Scientific and Professional Activities, and for the preparation of diploma theses, including their presentation on both the national and international levels.

In order to increase active student participation in research, establishing a University Grant Agency that would accumulate resources for student projects appears to be of particular importance. It would enable the students to prepare project proposals in liaison with the university teachers/researchers to be submitted for funding to the University Grant Agency. A successful student applicant would then become an investigator for the approved project, whose output could be a publication in a scientific journal.

#### SUGGESTIONS - FBA UIN IN BODØ

No further suggestions.