2014

Self-Evaluation Report

Faculty of Veterinary Medicine Cluj-Napoca, Romania
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Annexes can be seen and downloaded by clicking on this link

Please follow the corresponding chapters
Abbreviation list

AGMVR - General Association of Veterinarians in Romania
AMVAC - Association of Veterinarians for Companion Animal
ANSVSA - National Sanitary Veterinary and Food Safety Authority
ARACIS - Romanian Agency for Quality Assurance in Higher Education
ATER - Romanian Equine Veterinary Association
CACRU - Council for Quality Assurance and Human Resources
Carta USAMVCN – USAMVCN Charter
CMVR - College of Veterinarians in Romania
CSUD - Council of USAMVCN Doctoral Studies
DAC - Department of Quality Assurance
DPPD - Teacher Training Department
DSVCN - Sanitary Veterinary and Food Safety Direction Cluj-Napoca
EAAVA - European Association of Veterinary Anatomists
EBVS - European Board of Veterinary Specialization
ECTS - European Credit Transfer System
ENQA - European Network for Quality Assurance
EQAR - European Quality Assurance Register
EQF - European Qualifications Framework
ER/EH – Emergency Hospital
ESF – European Social Fund
ESVP - European Society of Veterinary Pathology
EUA - European University Association
FC - Faculty Council
FMVCN - Faculty of Veterinary Medicine Cluj-Napoca
FVE – Federation of Veterinarians of Europe
GHP - Good Hygiene Practices Guide
GMP - Good Manufacturing Practices
IADS - Institution for Administering the Doctoral Studies
IVSA - International Veterinary Student Association
MEN – Ministry of National Education
MNY – Minimum Number of Years
NPCE - National Program of Continuing Education
NQF - National Qualifications Framework
OIE – World Organization for Animal Health
PBL – Problem Based Learning
POSDRU – Sector Operational Program for Human Resources Development
QA - Quality Assurance
QM - Quality Management
RACD - officer responsible for quality assurance
RACF - Faculty Quality Officer
RASFF System - Rapid Alert System for Food and Feed
RC 1...X – Regulation annexed to USAMVCN Charter
RFID – Radio Frequency Identification of Journals
RON – Romanian currency (approx. 4.5 EURO)
RoSAVA – Romanian Small Animals Veterinarians Association
SRL - Ltd.
USAMVCN - University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca
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. Main organizational changes

The Faculty of Veterinary Medicine Cluj-Napoca (FMVCN) was established in 1962, as a constitutive part of the Agronomic Institute Cluj-Napoca of that time, and later/at present of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (USAMVCN). From 1962 to 1974, the Veterinary Faculty represented a distinct unit, and beginning with 1974 and up to 1989 it was integrated in the Faculty of Zootechnical Sciences and Veterinary Medicine. In 1990, it regained its name as “Faculty of Veterinary Medicine”, being one of the largest of all five faculties of the University.

The main changes in the Faculty occurred after the previous EAEVE visitation/approval may be summarized as follows:

- The Faculty was accredited in 2009 and reaccredited in 2014 by the Romanian Agency for Quality Assurance in Higher Education (ARACIS). ARACIS is the only recognized agency for Quality Assurance in Higher Education in Romania is a full member of the European Association for Quality Assurance in Higher Education - ENQA and is registered in the European Quality Assurance Register for Higher Education - EQAR. Also, the University is accredited and re-accredited by ARACIS.

- In 2011, the national classification of Universities and field of study hierarchy was done (Order No. 4072/2011). USAMVCN ranks 5th among the 12 Category I Universities (first value group) - "University for Advanced Research and Education" (USAMV Classification) and FMVCN is the only Faculty included in category A (the first value group), the rest of the faculties for veterinary medicine in the country are included in category B and E (hierarchy of fields of study).

- The USAMVCN is certified (2013) by TUV AUSTRIA CERT GMBH for activities of management in higher education, research and support activities, according to EN ISO 9001: 2008 (TUV Austria-tuv.ro).

- In 2013 USAMVCN won first prize for Excellence in Research offered by Edu Manager, a web portal dedicated to educational matters in Romania.

- In 2014 USAMVCN is proposed to win the first prize for Excellence in International Relations offered by Edu Manager, a web portal dedicated to educational matters in Romania.

- In 2005 the whole system of higher education in Romania entered the Bologna process, which is fully implemented including in USAMVCN.

- In the Faculty, there were established two new lines of study of veterinary medicine (English line - starting from 2008 and French line - from 2012), each with a maximum number of 30 students / year.

- By Law 1/2011, the elections process and the attributions of functions and leadership in the Faculty and University (see chapter 2.1) were changed. The persons with executive functions (Rector, Vice Rectors, Deans, Vice Deans, Directors of
Departments, and Director of Doctoral Schools) are no longer part of the USAMVCN Senate (the debating structure of the University).

- The Rector and Senate members are elected by all staff members of the University. The Deans are selected in a competition organized by the new elected Rector.

**New regulations relating to teaching**

**A. National Regulations** (new education of law - Law 1/2011)

- In Romania, the minimum subjects that are mandatory and included in the curriculum of doctor of veterinary medicine training are regulated by the provisions of GD 1477/2003. Moreover, the Directive 36/2005/EC is transposed into national legislation.
- Master studies have disappeared in veterinary training; the master is included in the bachelor degree studies - 6 years and minimum 5500 hours.
- The extramural doctoral study form has disappeared and in 2014, was replaced with the part time form.
- The Faculties of Veterinary Medicine can organizes internship and residency type studies (Law 1/2011), but there are no application methodologies yet.
- In Romania, the levels of funding from the state per student equivalent, and also the rate of funding veterinary students have increased (from 1.9 to 2.25 x student equivalent/basic).

**B. Adopted by the faculty**

- The "minimal practical skills logbook" is compulsory for all students in order to prove the fulfillment of all day one practical skills.
- Establishing a procedure manual for the extramural practice (tutoring, supervision, share of clinical/non-clinical activities, etc.).
- Initiation of a new strategy regarding clinical teaching in order to create teams of specialists/teachers and facilities dedicated to animal species-focused training. In this aspect, the Faculty nominated clinical coordinators for different species (companion animals, equids, ruminants, swine, poultry and leporids, new companion animals, fish). Each coordinator has the duty to develop dedicated teams/specialists.
- Implementation since 2012 of the internship program for intensive care and emergency medicine;
- Increase in the quality of clinical education through planned visits to farms and improving the mobile clinic;
- Fees for students who do not benefit from the state budget increased from approx. 500 Euro/year to approx. Euro 1,100 in the Romanian section and 4,500 Euro for the English and French sections.

**New buildings or major items of equipment**

**A. New buildings**

i. Research laboratories for seminal fluid, oocytes, *in vitro* fertilization, stem cells;
ii. Milk analysis laboratory;
iii. IT laboratory (12 new computers, new furniture laboratory);
iv. Molecular biology and cytometry laboratory;
v. Clinical laboratory;

b. Life sciences institute (2006)
   i. Own FMV CN laboratories - microbiology and food hygiene laboratory, parasitological laboratory, electron microscopy;
   ii. Shared laboratories with other faculties in the University - apiculture (honey, apiarian) products, Raman microscopy;

c. Building the didactic farm in Cojocna (2007);

d. Jucu cow farm (public-private partnership between USAMVCN and Modern Farm SRL);
e. New floor over the hospital with two classrooms, changing rooms and shift rooms for students and staff - initiated works;
f. New space for experiments with transmissible microorganisms;

B. Major items of equipments and renewals

**Major items of renewals**

- Large animal hospital renovation;
- Modernisation of the parasitology department (construction of an isolating niche for contagious cases in the small animal clinic, clinical isolation in the large animal clinic);
- Renovation biobase for laboratory animals;
- A new, state of the art unit for cleaning and sterilisation of instruments and surgery equipments;
- Modernisation of small animal surgery: 4 aseptic surgery rooms (2 new), 2 septic rooms and two preparatory rooms, changing rooms, climatisation, medical gases;
- Modernisation of aseptic equine surgery: changing rooms, new electrical elevator for patients, medical gases, climatisation;
- Modernisation of the anatomy department (new freezing room, new facilities for student welfare);
- Modernisation of the pathology department - necropsy hall (renovation, welfare facilities, electrical elevator for large animals cadavers);
- Modernisation of the radiology department spaces - eg. computer tomography spaces;
- Modernisation of the Emergency clinic (recovery room, medical gases, new cage modules;
Major items of equipments

- **Histology**: Scanning Electron-microscope; new microscopes for students;
- **Chemistry and Biochemistry**: two HPLC systems equipped with UV-VIS, fluorescence and Photo Diode Array detectors Shimadzu; GC/FID Shimadzu and GC/MS (Perkin-Elmer Clarus 600) systems; three UV-VIS spectrophotometers (Shimadzu 180, Perkin-Elmer Lambda 25); semi-automatic analyzer for Biochemistry – Screen Master Hospitex; laminar flow; two cold centrifuges (Hettich and Eppendorf 5804R); Electrophoresis system and mini gels dryer (Biorad); Western Blot unit; inverted microscope Zeiss Axio Observer; Rotatory evaporator Heidolph; system for ultrapure water Millipore;
- **Biophysics**: UV-Vis and FT-IR Spectrometers; Spectrofluorimeter;
- **Physiology**: Hematology and Biochemistry Analyzers; Microscopes with digital camera (4); Laboratory microscopes CX-22 HAL (5); Mir-Minispir spirometer;
- **Pharmacology**: Semi-automatic biochemistry analyzer; Tecan Elisa Line; Server with drug resistance analysis software;
- **Pathophysiology**: Olympus CX41 Optical Microscope IT; Vet Haematology Analyzer; Semi-automatic Biochemistry Analyzer; Hettich Universal 320R Centrifuge table with cooling; Incubator; pH-meter Consort;
- **Microbiology**: Olympus CX22 microscopes; Glarex Zeiss Microscope; Class II bacteriological hood - 900 Excelsior biohazard Asalair Hood; Vertical laminar flow hood - Mini-V Telstar Spain; Colonies counting device - Colony Counter BOECO CC-1; model various incubators; autoclave; TREN Diagnostic Systems - Electronic identification of microorganisms and antibiotic susceptibility determination;
- **Toxicology/Nutrition**: Atomic Absorption Spectrophotometer
- **Animal production and food safety laboratories**: Ekomilk (ultrasonic milk analyser, EON Trading), Ekotest (antibiotic identification EON Trading LLC), Somatos (somatic cell count Octun), Artificial digestion system for Trichinella; calciner; Class II laminar flow cabinet; Thermocycler PCR (G-Storm, UK); PCR centrifuge - Eppendorf Minispin PLUS; Electrophoresis chambers (Clever Scientific, UK);
- **Animal hygiene**: Gas analyser Drager; Colonies counter; Sonometer; Thermometer with IR; Thermohygrometer; Humidity tester; Catermometer Hill; Mobile milking device; Photo colorimeter; System for air monitoring MAS100; System for microbiological monitoring of water; Ekomilk (ultrasonic milk analyser);
- **Medical Imaging**: Computer Tomography 16 slices; upgrading of RX device (digitalization); new ultrasonographic devices (6) - 3 mobile and 3 stationary (one state of the art in year 2014; two endoscopes - one state of the art in the year 2014;
- **Surgery**: new state of the art devices for arthroscopy/laparoscopy (Karl Storz), unit for inhalatory anaesthesia (Drager Fabius XL) and patient monitoring (Drager Vista 120), orthopedic set of instruments (Medical Orthovit), electrocautery (Surtron 200); other devices in very good condition: small animal inhalation anaesthesia (Matrix VME 2 Midmark, Dräger Cato) large animals inhalation anesthesia (Matrix VML), patient monitoring (Drager Infinity Delta Multiparameter), automatic pump -

- **Internal Medicine and Clinical laboratory:** State of the art ultrasonography device (ESAOTE - Mylab 40) and videoendoscope (Karl Storz); Videoendoscope Pentax, Ultrasound Logiq alpha 100; ECG AT1 vet; Screen Master Plus Biochemical analyzer; Dialysis station for small animals;

- **Reproduction:** FACS Canto II flow cytometer Becton Dickinson; PCR thermocycler Corbett Research; Electrophoresis line; ELISA reader Arewarness Technology; Fluorescence microscope Nikon; Gas chromatograph with FID detector Shimadzu; Milk biochemical analyzer (EKOMILK); Milk Somatic Cell Counter; Mastitis indicator WAIKATO; Seminal liquid analyzer (SpermaCue); Stationary ultrasound scanner Mindray; Cryopreservation device Sy-lab; Blood biochemistry analyzer VetScan VS2 device; Semiautomated filling and sealing device for straws Minitube; Micromanipulator Narishige; CO₂ Incubator Shel Lab; Sterile hood; microscopes

- **Infectious diseases and Immunology:** laminar flow system Shimadzu AUW220D; Microscop Zeiss Axioskop 40FL, UV; Microscope Karl Zeiss optical and fluorescence; CO2 incubators; Millipore ultrapure water device; PCR thermocycler with gradient block; Horizontal and vertical electrophoresis Biorad; spectrophotometer SUMAL PE2 Karl Zeiss Jena; Autoclave Advantage Lab AL 02-08; ELISA reader with washer - Biorad; System for nucleic acids electrophoresis and analyzer for gel electrophoresis images; Real-time PCR; centrifuges Hettich;

- **Parasitology and Parasitic Diseases:** BioRad ELISA line; Molecular biology module (Conventional PCR Bioneer System, MyGenie 96 Gradient Thermal Block, RT (real time) System – PCR Bioneer, Exicycler 96, Environmental Shaker Incubator ES-20/60 BioSan); Spectrophotometry module (ECM 830 Electro Square Porator –BTX Harvard device, Picodrop Spectrophotometer model PICOPET01); Bio Rad electrophoresis; iPrep Invitrogen microarray scanner; Bio-analyzer and IPGphor GE Healthcare; ADN/ARN Hybridization oven Agilent Technologies, model G2545A; Olympus BX61 microscope; Olympus SZX16 with video digital camera; stereo microscope; new microscopes for students;

- **Pathology:** electrical saws for large and small cadavers, refrigerating trailer for cadavers, laser scanning confocal microscope (ZEISS 710), automat for immunohistochemistry and in situ hybridization (Leica Bond Max), complete state of the art line for sample processing, cutting and staining; new microscopes for laboratory and students (Leica, Zeiss, Olympus).

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**Main changes to the study programme**

- **new core separate (independent and compulsory) subjects** were introduced in the curriculum:
  - Veterinary therapeutics, Medical Imaging, Anesthesiology and Resuscitative Therapy, Agronomy, Rural economy, Career Development, Communication techniques, Preventive Medicine, Veterinary Public Health;
  - a more species-oriented approach by means of the species based-modules in the last year of study;
• new elective subjects:
  o Breeding and pathology of new company animals; Breeding and pathology of fish, Veterinary oncology; Veterinary cytology and hematology; Orthopedy; Etopathology, Cardiology, Dietetic nutrition.

• new free elective subjects
  o Ophthalmology.

• The European Credit Transfer System (ECTS) is fully implemented and students may benefit of national and European mobilities (eg. Erasmus + programme)

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

• The set up of two sections of veterinary education in foreign languages (English, French) in order to increase the internationalization of university education, foster mobility of students and staff;

• Implementation of post-graduate specializations like an internship in emergency medicine and intensive care (a total of nine doctors have already benefited from this training program);

• Supporting residential specialization/ specialization through EBVS; starting with this year we have a wildlife specialist, the first in Romania (Associate Professor Andrei Mihalca), and three other people are already accepted by colleges and began their residency in accredited centers (Vienna, Milan, Jerusalem);

• Stimulating teachers to pursue other international specialization (eg. summer schools externships in other faculties and centers of reference);

• Close collaboration with the Faculty of Medicine Cluj-Napoca in the field of education and research (eg. clinical training and simulations in surgery, anesthesia, imaging, comparative medicine, doctoral programs, research programs, joint scientific societies);

• Establishment of the faculty pharmacy, with a closed circuit;

• Development of a biosafety and implementation of biosecurity and quality management (QM) manual;

• Project for an Institute for Pathology and Large Animal Nutrition - Jucu, outside the city (15 km away from the city center), with several components: external clinic for large animals; sports medicine; equine reproduction bioengineering; farm animal nutrition; human-animal interaction.

• Measures to improve welfare of students and teachers - changing rooms

• Implementation of the vaccination program for all students and faculty staff;

• Implementation of training for veterinary technicians studies;

• Initiation of the study program (school) for orthopedic farriers - in collaboration with l'Ecole Departementale de l'Allier, France.

• Closure/liquidation of two engineering degree study programs organized by the Faculty which were reducing the focus on veterinary education;
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- Veterinary biotechnologies - qualification as biotechnology engineer;
- Food control and safety - qualification as chemical engineer;

- Increasing the number of students financed by the state budget, but reducing the number of students with a fee and the total number of students in the Romanian section;
- Introduction of a general knowledge biology exam for admission in order to aid selection of candidates (more selective admission) and reducing dropout rate;
- Contracts for assistance/services/applied research with the business environment;
- Implementation of 90% self-financed internal projects for applied research, in order to stimulate collaboration with the economic environment, stimulation of publication and increased of staff wages in FMVCN.

- Increasing the international presence and visibility of the Faculty by:
  - organizing international events (eg. XI European Multi-colloquium of Parasitology - 25-29 July 2012 or XXXth Congress of the European Association of Veterinary Anatomy, 2014);
  - financial support of mobilities (conferences, specialization) and publications for teachers, visiting professors;
  - supporting international students mobility and membership (in 2015 the summer congress of International Veterinary Student Association (IVSA) will be held in our Faculty;
  - supporting other types of international cooperation (eg. research networks - COST, Danube Region; European research grants, European specialization of teachers).
1 Objectives

1.1 Factual information

Official list of the overall objectives of the Faculty

The objectives presented in here are assumed by the Faculty and are actually agreed/assumed by the University, through specific procedures. A series of the presented objectives are permanent objectives of the Faculty, with a long-term target; others may be regarded as short and medium term objectives:

Objectives related to teaching

- Curriculum Review
  - Improvement of species-oriented clinical training by focusing towards a much earlier approach, in the 4th and 5th year of education;
  - Expanding the modular education system to clinical disciplines;
  - Adaptation of the curriculum to best European practices and new challenges of the profession;
- Increasing selectivity in admissions;
- Improving working protocols in clinical education;
- More and better bibliographic reference material and stimulation of self-study by students, including e-learning;
- Improving veterinary education based on problem solving in all subjects.
- Increasing of the number of clinical cases both in the Faculty's clinics and on the field (mobile clinic, partnerships with farms, food processing units, slaughterhouses, laboratories);
- Improving selection procedures for extramural practice tutors and amendment of the share of different types of placement.
- Improving student-centered learning, increase in the quality of Faculty-student partnership by the increase of the degree of student involvement into the decisional act at the level of the Faculty Council, increased involvement of the students in the evaluation of the didactic process (teachers, courses, curricula), and rewarding excellence for students (eg. scholarship budget, private scholarships, sustained professional mobilities);
- Increased international mobility of students (eg. Erasmus) and improving procedures of mobility agreements and recognition of credits (ECTS) obtained;
- Supporting the Veterinary Medical Student Association of the FMVCN to develop contacts and exchanges with student associations and professional associations in the country and abroad;

Objectives related to scientific research and publications within our Faculty

- Increase of research as a condition of quality of higher education and increase of the scientific visibility of the Faculty by international cooperation and publications.
• Increase of the visibility of the annual symposium by inviting a larger number of relevant foreign speakers
• Support for the teachers traveling abroad for scientific collaborations/congresses
• Encouraging the establishment of departments for interdisciplinary, national and international research teams
• Stimulating, sustaining and rewarding teachers to publish abroad and in highly ranked ISI Web of Science journals
• Doctoral and postdoctoral school development in support of research in the Faculty:
  o supporting habilitation and obtaining the right to tutor doctorates;
  o accreditation of Doctoral Schools in veterinary medicine;
  o the joint supervision of doctoral studies;
  o funding research programs and European sectorial operational programs.

Objectives related to material resources
• setting up an external clinic for large animals and sports medicine within the Institute for Nutrition and Pathology of Large Animals (external unit in Jucu, one of the University’s farms)
• setting up of new teaching, research and service laboratories;
• re-design of the hospital of the Faculty (especially for small animals);
• new units of relevant state of the art equipments to be purchased, especially for the clinical units
• new facilities for students and student welfare;

Objectives related to human resources
• Increasing the number of full time teachers and supporting the young employees, especially in clinical departments;
• Increase of number of the support staff, especially in clinical departments;
• Stimulating staff to access the European/American specialization system (residency) and stimulation of continuous improvement of teachers;
• Support for the teachers of the Faculty involved in teaching in English and French sections (language courses, certification for B2 level supported by Faculty);
• Stimulating the growth of wages of staff: ex. attracting research grants and research grants based on internal research application (funded by the Faculty);
• Increased selectivity in the staff recruitment - more restrictive conditions on specialization, publications, professional performance in general.

Objectives referring to national performance
• Increasing selectivity with respect to student’s admission and ensuring progressively higher day-one competences than the minimal ones required in Europe;
• Strengthening the link and consulting scientific and professional forums - eg. AGMVR (General Association of Veterinarians in Romania) CMVR (College of Veterinarians in
Romania), AVER (Romanian Equine Veterinary Association), AMVAC (Association of Companion Animal Veterinarians), various companies;

- Maintaining the value and the ranking of the Faculty (the top ranking Faculty among the Faculties of Veterinary Medicine in Romania);
- Higher involvement into the Post Graduate Programs;
- Keeping the Faculty's prestige as a reference institution in terms of diagnostic capacity, medical assistance and medical support for the entire Transylvanian region

**Objectives referring to international performance and internationalisation**

- By implementation of veterinary education in the English section (2007) and French section (2012), the faculty aims a greater openness for international mobility of students and staff but also increasing the number of associate professors and guests from abroad;
- Increased international mobility within the Erasmus/Erasmus+ programs;
- Organizing scientific/professional international events in the Faculty and participation of the staff in foreign ones.
- Supporting our own students in their involvement in the International Association of Veterinary Students (IVSA);
- Development of educational and research programs in international networks.

**Who determines the official list of objectives of the Faculty? By what procedure is this list revised?**

General objectives of quality of the Faculty have continuity across generations. With the changing socio-economic and scientific national and international conditions, the Faculty must find the directions of evolution/reform and means.

Faculty academic staff members who wish to participate in the contest for the position of Dean of the Faculty, present the Council a management plan. In the analysis, the Council selects at least two applications that can be submitted to a competition organized by the new Rector. The Rector candidates also based on a management plan that included targets and proposals related to FMVCN (based on their experience, consultation with the Faculty staff and other stakeholders). Dean candidates are evaluated by the Rector based on the quality and experience of management, professional prestige, and last but not least, based on strategic goals.

The rector’s management plan is approved by the Senate and becomes part of the contract that is signed between the Rector and the Senate. The Dean’s management plan is approved by the FMVCN Council. Thus these plans become official (lists of official Objectives). Annually, both the Rector and the Dean establish operational plans that require the Administration Board approval and approval of the Faculty Council. Approval of these plans requires, however, amendments and additions based on staff proposals and opportunities. Basically, revision of objectives of USAMV/FMVCN is done at each session of leadership election and the beginning of each academic year. Even during the academic year changes may occur. The Rector and Dean have the right and obligation to make proposals that need to be approved though.
Do you have a permanent system for assessing the achievement of the Faculty’s general objectives? If so, please describe it.

The fulfillment of the objectives, especially the short and medium term ones, is to be reported in the annual Dean’s Report (set for February/March each year). The Dean’s Report is presented to the general meeting of the Faculty (including student members of the Faculty Council and Senate), and analysed and approved by the Faculty Council. Then, the report becomes part of the Rector’s Report which is approved by the Senate and presented to all university members. The annual Rector’s Report is required by law and is sent to MEN.

1.2 Comments

To what extent are the objectives achieved?

Some of the goals are general and will always remain important objectives of the Faculty because they actually refer to the continuous increase of quality resources (financial, equipment, space, and staff, learning resources) and the increase in quality of teaching and research.

Other objectives are specific, short and medium term, and some of them are largely achieved or under implementation. In this respect we present some of the objectives under implementation/advanced implementation:

- Species oriented-education was improved by increasing the number of cases and species studied (e.g. fish, new pets);
- In the last years, teaching was significantly improved by direct involvement of the Faculty into the needs of farmers and food processing enterprises. This is achieved through agreements/contracts collaboration/services/applied research and the mobile clinic, activities in which students are involved directly or indirectly by the offered teaching materials. The result is the increase in the number of clinical cases and diagnostic equipment (e.g. cadavers, biological samples, food samples) necessary for didactic activities;
- FMVCN is the only faculty in the country that has restored the admission examination (the idea is increasing the quality of students admitted);
- The material base that belongs to the Faculty and University has been greatly improved since the last visit (see Introduction, Chapter 6), through new spaces, rehabilitated spaces, and new, relevant machines. Under construction there are: a new student facility, a new storey onto building VI C, with 2 larger classrooms (2x50 places), student wardrobes and lockers, toilets and showers as well as rooms for students and interns;
- The redesign and relocation of the hospital premises is another short-term objective that will provide an increase in animal welfare, especially for large animals (new colic box with hoist, enlarged stalls for cows, new redesigned spaces for dog hospitalisation etc);
- The small animal surgery spaces are re-established, and the septic and aseptic spaces are functional.
An ambitious project refers to the setting up of the Institute for Nutrition and Pathology of Large Animals. There is a proposed EU-funded project in its advanced state (technical project done, feasibility studies, architecture etc) that refers to the building of a series of units in the external unit of Jucu (large animals external clinic and hospital, sportive medicine, horse reproduction, farm animals nutrition, necropsy, human-animal interaction institute).

Volume and findings of the FMVCN research have improved significantly and are superior to other universities in the country, reaching in recent years an average of one ISI Web of Science paper/teacher/year. This was largely due to interdisciplinary research contracts and collaborations with teachers/teams in human medicine and abroad. Accessing European research projects requires very rapid improvement, though.

Human resources are at an acceptable/good level, but we are preoccupied by the European specialization of our present and future staff. Currently there is one EBVS specialist (European Board for Veterinary Specialisations), the only diplomat in Romania - Associate Prof. Mihalca Andrei (Wildlife and Zoo Medicine), and other three young teachers are now included in residency programs (Alexandra Păvăloiu - Wien, Equine Internal Medicine, Ciprian Ober - Small Animal Surgery, Koret School of Veterinary Medicine, Marian Taulescu - Milan, Pathology). The Faculty stimulates enrollment of young staff in the residency programs, including by inviting EBVS specialists (eg. Professor Michael Day 2014, Prof. Stefano Romagnolli, 2014) for the presentation of specializations. The Faculty offers financial support to residents and also offers financial support to teaching staff for other types of specialization.

The degree of internationalization of faculty has increased significantly in recent years. As examples we mention the lines of study in foreign languages, more than 29 bilateral international agreements in veterinary medicine, increased student mobility SMS - Study and SMP - placement and of academics; organizing scientific/professional international manifestations in FMVCN (XI European Multi-colloquium of Parasitology - EMOP - 25-29 July, 2012; XXXth Congress of the European Association of Veterinary Anatomy - EAVA, 2014; International Veterinary Students Association - Summer Congres, July, 2015).

What are the main strengths and weaknesses of the Faculty?

**strengths:**
- enthusiasm, high motivation of the young teachers, despite the low income; desire to continue and enrich the tradition of the veterinary school from Cluj;
- new state of the art equipment and facilities for teaching and research;
- good level of staff and student international mobilities;
- many international scientific manifestations organized by Faculty and University;
- many staff members are members of European/ international professional and scientific association/societies (eg. ESVP, EAVA);
- new perspectives brought by the high internationalization degree and access to European specializations;
Self Evaluation Report 2014

- good collaboration of Faculty with similar institution, graduates and stakeholders - farmers, veterinary authorities, and professional/scientific organizations;
- good national and international employability of graduates;
- good international visibility of teachers (publications, research and teaching networks);
- good ranking as far as scientific research is concerned (the Faculty with the best results among Veterinary Medicine Faculties from Romania - based on the number of ISI papers published);
- good quality of candidates selection, good quality and commitment of students;

• weaknesses
  - high inertia regarding some members of staff (decreased desire to face the new clinical approaches, low personal motivation);
  - generally low personal incomes - salaries are not very motivating for the staff;
  - limited number of academic and support staff (national legislative/economic constraints);
  - understaffing leading to high teaching charge, which is not in the favor of personal, scientific and didactical development;
  - structural constraints (placement of the Faculty facilities in the central area of a growing city-metropolitan area, the absence (for now) of an external clinic for large animals, some old conceptual buildings, laboratories);
  - low number of diplomats specialists (EBVS);
  - legislative instability in higher teaching - e.g. financing levels, open positions official openings, national hierarchy criteria for universities and study programs, the legal statute of academic teacher.

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:
- The increase of differentiation in the financing between Universities/ Faculties according to their classification (made by ARACIS, EUA and EAEVE).
- The increase of differentiation in financing the study programs; veterinary medicine study program requires increased finaciation compared to other studies;
- The species-orientated clinical teaching needs to be implemented from the fourth or fifth year of study. In addition, in the last year of study, there need to be more species oriented optional study tracks;
- Building an external large animal clinics based on the project conducted; full conversion of existing clinics in clinical areas for pets;
- Increased number of residents and diplomates of European/American colleges;
- Progressive increase of selectivity in the admission of students and employment of teachers;
- Increasing the number of invited teachers;
- Progressive increase of the capacity of diagnosis and treatment, so improvement of the reference clinic status of faculty.

Limiting factors:
- One of the important limiting factor is the legislative one, regarding the employment of academic and non-academic staff;
- The low financing from the state budget;
- Very restricted salary motivation of the personnel;
- Failure to obtain European or national funding for building the external clinic.
2 Organisation

2.1 Factual information

2.1.1 Details of the Faculty

Name of the Faculty: Address: Telephone: Fax: Website: E-Mail:
Title and name of head of the Faculty:

Faculty of Veterinary Medicine Cluj-Napoca
400372 str Mănăștur nr 3-5, Cluj Napoca, Romania
tel: +264 596 384/192
fax: +264 593 792
webpage: http://fmv.usamvcluj.ro/
Dean - Prof. Cornel Cătăoi, DVM, PhD

Is the Faculty within a University? If so, please give address of the University

The Faculty of Veterinary Medicine is part of the University of Agricultural Sciences and Veterinary Medicine Cluj Napoca. The address of the University is the same, all five faculties that form the University being located in the same campus.

400372, Mănăștur Str, 3-5, Cluj-Napoca, Romania
tel: +264 596 384
fax: +264 593 792
webpage: http://www.usamvcluj.ro/
Rector: Prof. Doru Pamfil, PhD

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

The Faculty is structured into four didactical departments, the Veterinary Hospital and, starting this year, own Doctoral School. Each of the departments includes a series of topics/subjects that are grouped under the authority of the Departmental Council and the Director of the Department. The listed didactical units (chairs) comprise traditionally-named units that may cover several related subjects in teaching (as seen in the list of subjects)

- Department I (Preclinical Sciences)
  - Anatomy
  - Histology
  - Physiology
  - Chemistry/Biochemistry
  - Biophysics
  - Sports
  - Languages
- Department II (Animal Productions and Food Safety)
  - Nutrition
  - Hygiene
  - Genetics
  - Animal breeding/Animal production systems
  - Food safety and food hygiene
  - Communication
  - Career development
- Department III (Paraclinical Sciences)
  - Microbiology, immunology and epidemiology
  - Pathophysiology
  - Semiology
  - Medical imagistics
  - Pharmacology
  - Pathology and Forensic Medicine
  - General Surgery/Propaedeutics, Anesthesiology and Intensive therapy
  - Toxicology
- Department IV Clinical Sciences
  - Internal medicine
  - Reproduction/Obstetrics
  - Infectious diseases
  - Parasitology
  - Surgery and surgical pathology
  - Clinical laboratory

- The Hospital (including Emergency clinic) is a separate unit coordinated by a Director (associate professor in small animal internal medicine) and has 2 (3 starting this year) permanent employed doctors and also deals with the activity of the interns and partly with the clinical shifts of students.

- Doctoral School of Veterinary Medicine has a Director (DVM, PhD, PhD coordinator), a council, and is subordinate to the Council of USAMVCN Doctoral Studies (CSUD);

- According to the internal Regulations included into the University's Chart (and RC 1 Organizational and Operational Rules and Regulations), each Faculty has its own management structure that includes 3 Vice-Deans (for academic programs, research-international relations and for social-student issues), the heads of departments and the representatives of each department in the Faculty Council. Faculty Council has 21 members including 5 (25%) veterinary students.
Details of the competent authority overseeing the Faculty
Provide a diagram of the administrative structures showing the Faculty in relation to the University and ministerial structure of which it is part.

The University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca is a public higher education institution that functions under the guardianship of the National Education’s Ministry and member of the Romanian National Higher Education System. The University is organized in five faculties:
- Faculty of Agriculture
- Faculty of Horticulture
- Faculty of Animal Science and Biotechnology
- Faculty of Veterinary Medicine
- Faculty of Food Science and Technology

The senior management of the University is represented by the Administration Council with the Rector of the University as its President. The Administration Council comprises 15 members: the Rector, 6 Vice-Rectors, the CSUD Director, 5 Deans, the General Administrative Director and the Students Prefect. The Rector is elected by all full-time teachers and researchers and by students from the Senate. The Administration Council represents the executive organism within the institution and enforces the provisions of the management agreement entered into by the Rector and submits the strategically development plan and the annual action plan of the University to the approval of the Senate, subsequently carrying them out. The Administration Council submits the annual budget and presents modalities to implement the income and expenditure budget.

The University Senate is the deliberative assembly and the main decision forum at University level. The Senate numbers 35 senators - 26 (75%) of its members being part of the full-time teaching and research staff and 9 (25%) students. The staff members of the Senate are elected by all staff members of the University, every Faculty and department being proportionally represented. The students members of Senate are elected by all students of the University, every Faculty and level of studies (bachelor, master and doctorate) being proportionally represented. The person representing the Senate is the President elected by Senate members.

The Senate has six permanent commissions (Educational, Research, Administrative and Heritage, Student and Social, International Relations, Economical Environment and Ethics) and special commissions, if necessary, Senate deliberates ordinary monthly and in special sessions, when is necessary.

The General Administrative Directorate, by members of the staff, coordinates the entire administrative and technical activity of the University. The General Director is in charge of the General Administrative Directorate. The Financial and Accounting Directorate is coordinated by its Director.

Each department has responsible staff for its activities, reflecting the “up-down University’s management line”.

According to the organizational chart, the management for the academic and research, quality assurance, human resources, international relations, institutional development and social-students issues related activities, are comprised in the University
management structure, in connection with the administrative and support departments and services.

The coordination of the executive activities is done by the Council of Administration which includes, under the leadership of the Rector, the Vice-Rectors and the Faculty Deans, the administrative general manager, and the students’ prefect.

The Senate, coordinated by the President, assures the control of the activities’ legality and, by its legislative power, takes decisions and may modulate the executive-management power (the Administration Council). After approval of the Rector’s management plan, the Senate signs a management agreement with the Rector.

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

The election of the deliberative structures and officials in the University and Faculty is made according to national laws (Law 1/2011) and the University’s own regulations. (RC 5)

- Departments organize election of their own coordination structure;
- Faculty Council monitors procedures in each department (usually through a representative in the meetings dedicated to election);
- The department Director shall be elected directly by members of the department (mandatory presence of minimum ⅔ of members), by ballot, based on applications and standardized management plan submitted to the Dean's Office;
- The department Council is composed of 5-7 members nominated and elected by members of the Department:
  - Deputy Director (substitute the Director of the Department)
  - Responsible for education
  - Responsible for research
The Faculty Council is elected by secret ballot, under the supervision of an Election Commission of the University. Teachers are elected by all faculty teachers and researchers. Each department has a number of seats allocated on the Council, depending on the number of their members. Students are assigned a minimum of 25% of the Council seats. A place in the Council is reserved to a representative of student associations. Students are elected through direct, secret ballot, by all faculty students. Applications are accompanied by a CV. The Dean, Vice-Deans and department Directors are members of law in faculty council;

Faculty representatives in the University Senate are elected by the entire teaching and research staff of the University, by direct and secret ballot, under the supervision of the Election Commission of the University;

The Dean is selected through public competition organized by the new Rector, based on public nominations approved by the Faculty Council (minimum two nominations) and finally validated by the University Senate;

Vice-Deans are designated by the Dean, and then confirmed by the Faculty Council and University Senate: Vice Dean responsible for research issues, Vice Dean responsible for educational issues, Vice Dean in charge of social affairs and students.

The Dean and the Vice Deans are executive positions but the deliberative structure is the Faculty Council.

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

The Faculty has scientific and professional relationships with the National Sanitary Veterinary and Food Safety Authority (ANSVSA) and Sanitary Veterinary and Food Safety Direction Cluj-Napoca (DSVCN), for disease surveillance, food safety, animal welfare,
continuous training of personnel, and so on. On the other hand, these authorities evaluate and authorize certain activities of the Faculty (waste management, use of medicines, animal welfare, etc.).

The College of Veterinarians in Romania (CMVR) is a very important professional authority that oversees and certifies veterinary undergraduates training (according to European standards) and compliance with ethics and professional ethics. Also, CMVR are essentially involved in continuing veterinary education and the Faculty collaborates with them in this regard.

Prestigious representatives of the profession, such as veterinary practitioners, leaders of professional bodies (eg. CMVR), leaders of scientific and professional societies (eg. Romanian Small Animal Veterinary Association RoSAVA), are members of the University Strategy Board/Board of Trust. This forum also includes members of other professions (eg. economists, managers of companies) and has an advisory role for setting strategy and reviewing progress toward the University’s/Faculty’s goal.

FMVCN developed a traditional and exemplary partnership with the Faculty of Medicine Cluj-Napoca, consisting in the exchange of best practices in education, in human resource training and research.

### 2.2 Comments
- FMVCN takes advantage of the opportunities offered by a University with predominantly agricultural profile because it has a strong heritage with various species of animals and land.
- Even if there is a competition between different faculties inside of the University in terms of attracting resources (eg. new investment of financial resources drawn from University), buildings, etc., the Rector and Administration Council understand the specific needs of FMVCN and veterinary education and supports them (eg. allocation of land and payment of project for the external clinic, investments in buildings renovation and new equipment);
- Even if there is a wish for uniformity and equality of the education process management at an University level, the University agrees that veterinary education is different (eg. smaller groups of students, large volume of information, longer working);
- The Faculty is very well represented in the University’s Administration Council (two out of six Vice Rectors and the Director of CSUD).

### 2.3 Suggestions
- Increased involvement of veterinary authorities and professional associations in the development of the Faculty strategy;
- Developing public-private partnerships of the Faculty;
3 Finances

3.1 Factual information

3.1.1 General information

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.

The Faculty of Veterinary Medicine is funded by the State through the University and also has extra income. Even if in the past 10 years, the funding of the Faculty has greatly increased and this is reflected in the very developed and modern material base, diversified learning resources, facilities with equipment, renovation of premises, wage increases, we believe that veterinary education funding must increase both through the state Budget and the revenues of the Faculty.

Romanian State University funding, including the one for USAMVCN, is done by the state budget and the Universities’ own revenues from research contracts, consultancy, services, sales of properties (including intellectual), rentals, fees of students etc.

Funding from the State budget is based on an annual institutional contract signed with the Ministry of National Education which generally accumulates the following funds:

A. Institutional Funding (FI)

A.1. Base funding (FB) is allocated through study grants calculated per student equivalent, per domain, per study cycle and per teaching language. The amounts are allocated to each University for core funding for students enrolled based on the schooling numbers received from the university, in an undergraduate degree, master’s and doctoral programs. The amounts are allocated in proportion to the number of student equivalent. The number of student equivalents of the University students is determined by weighting the physical number of students to its equivalence coefficients (1 bachelor, 2 master, 4 PhD) and cost (e.g., 1 Humanistic sciences, 1.65 engineering, 2.25 veterinary medicine) - (See Appendices - weighting student equivalent-Annex 3).

Base funding concerns:
1. personal expenses (CP): salaries for teachers, teaching and non teaching auxiliary staff, research staff involved in conducting study programs, benefits, CAS, other legal contributions, domestic and international travel;
2. material costs (CM) and household maintenance expenses, expenses for materials and services related expenditures, expenses related to research curricula, inventory, current repairs, books and publications, personnel training, protocol, safety, etc.;
3. expenses to support educational projects and human resource development;
4. expenses of administration of higher education institutions to conduct a study program.

A.2. Additional funding (FS) takes into account the hierarchy of study programs, for the component based on excellence (quality criteria), as well as other criteria for preferential financing of programs for master and doctoral studies in science and advanced technology in international language programs and PhDs in joint supervision; b) increasing
institutional capacity and efficiency of management; c) assuming by the higher education institutions of an active role both locally and regionally.

A.3. Institutional development (DI)

B. Student transportation refunds

C. Grants and other forms of social protection for students

D. Funding investment objectives - buildings, land, etc.

For 2011, institutional funding (FB 3185.64 + FS 1485.51) was 4671.15 RON = 1056.82 EURO per student equivalent (x2.25 = 10510.09 RON = 2377.85 EUR for each budgeted undergraduate veterinary student, and x4 = 18684.6 RON = 4227.29 EUR for each budgeted PhD student) * 1 Euro = 4.42 RON.

For 2012, institutional funding (FB 1554.83 + FS 889.07 + DI 24.96 + 75.85 wage growth) was 2549.68 RON = 576.85 Euro per student equivalent (x2.25 = 5736.78 RON = 1297.91 EUR for each budgeted undergraduate veterinary student, and x4 = 10198.72 RON = 2307.40 EUR for each budgeted PhD student) * 1 Euro = 4.42 RON.

For 2013, institutional funding (FB 1734.79 + FS 666.43) was 2401.22 RON = 576.85 Euro per student equivalent (x2.25 = 5402.74 RON = 1222.34 EUR for each budgeted undergraduate veterinary student) * 1 Euro = 4.42 RON.

The institutional funding of the Universities by the State in 2014 is estimated by the Ministry of Education as follows:

A. Institutional Funding
   a. base funding (FB) - 73.5%
   b. additional funding (FS) - 25.50% of which.
   c. additional funding based on excellence (ESF) - quality criteria: 25%:
   d. assumption of higher education institutions of an active role in the local and regional level (FSL): 0.5;
   e. Institutional development: 1, 00%.

B. The compensation of student transportation
C. Scholarships and other forms of social protection of students
D. Financing investment objectives

For 2014, the institutional agreement signed is subject to change by addenda, provides the institutional funding of 3030.88 RON = 685.72 Euro per student equivalent (x2.25 = 6819.4, 8 RON = 1542.87 EUR for each budgeted undergraduate veterinary student, and x4 = 12123.52 USD = 2742.88 EUR for each budgeted PhD student) * 1 Euro = 4.42 RON.

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)

As discussed above, the University is budgeted by MEN, for all study programs.

In the University, veterinary medicine is best funded per physical student (cost coefficient of 2.25), for other programs, the cost coefficient per student is lower (ie. 1.90 for biology, 1.75 for engineering, 1.65 environmental sciences).

The University withholds maximum 20% of the funding received for institutional financing (FI) for general university expenses (taxes, maintenance, fleet, material costs,
protocol, etc.) and maximum 15% for salaries of administrative personnel and board staff salary increases. The remaining minimum 65% of the budget belongs to the faculties, is administered by the University accounting department and is used to pay salaries, mobilities and personnel expenses, educational materials, service equipment, scientific manifestations, etc.

Budgetary funds received from the MEN for scholarships and student transportation are split between the University Faculties and are fully expended for this purpose.

Budgetary funds from MEN for investment objectives (buildings, equipment) can target general interest objectives of the University or destines for the strict use of the Faculty. These funds are allocated according to availability, at the request of the University, based on the development strategy commitments.

**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**

**Personnel expenses**

Teaching salaries for each position shall be determined by national law, and are paid by the University. Also by the law, 15% of staff may receive a plus/bonus of 15% added to the salary, the performance criteria for this are set by the University. Increases (a salary plus) for personnel with a management position (Rector, Dean, Vice-Dean, etc.) are all set by law.

Other personnel expenses (eg. mobilities, continuing education, specialization, scientific participation fees, publication, etc.) are approved by the Faculty Council signed by the Dean and finally approved by the Rector. For all these approvals there are standard procedures.

**Material expenses**

Amounts necessary for the acquisition of reagents, medicines, equipment maintenance, bibliographic materials, and teaching supplies in general, rely on the proposal of departments, with approval of the Faculty (or the Dean and Vice-Dean in the case of minor acquisitions and contingencies).

**Major equipments**

Allocation of Faculty funds for the purchase of major equipment needed for didactic and service activities relies on the proposal of the departments/staff. The Faculty Council assesses the effectiveness and appropriateness of these acquisitions and their priorities in relation to financial reserves. The Rector is the last to approve the request. Approval of investment in new buildings, land, farms, is made by the Senate.

Departments may purchase, based on their own decision, equipment within the funds obtained from research, services, technology transfer and sponsorships. Approval of Dean and Rector remains relatively procedural.

The University also allocates funds for major, strategic equipment, by documented request and with the approval of the Faculty Council.

Construction and/or renovation of buildings (teaching, research or service) are done at the proposal of the department, the Faculty Dean (or candidate for Dean position). The Faculty Council examines the proposal which, after approval, becomes part of the faculty strategy (enters the strategic plan and annual operational plans). By the proposal of the Dean, the objective may enter the strategic and operational plan of the University, approved
by the Administration Council, and assumed by contract with the University Senate by the Rector. Necessary funds may be required from MEN (State), they can be obtained by competing from research or European funds, or they may be allocated by the University or come from Faculty funds (extra-budget).

All proposed investment objectives require approval by MEN, regardless of funding source. Obviously, MEN almost automatically approves investments from other funds than the State budget.

The mechanism(s) to provide the necessary support for building maintenance and how decisions are taken in this matter.

The building maintenance is provided by the University, which pays the usual expenses (water, gas, electricity, cleaning, current repairs).

The Administrative Director monitors needs for maintenance, energy saving measures, etc. and performs the needed work. Necessary funds come from budgetary funds (of the 30% retained from FI) and extra-budgetary funds.

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

  The University retains a fixed share of 30% of all FMVCN incomes from services (laboratory work, consultations, clinical activity).

- research grants

  As a consequence of the desire to stimulate the return of the finances towards the unit that is the source of income, and also in order to stimulate research based on grants, the University’s Senate decided that only a quota of 15% of the income will be withheld by the University as overhead expenses.

  In special circumstances (eg. conditions imposed by the financer, small budget), the University's share might be smaller.

- other (please explain)

  As far as state-budgeted students are concerned (in respect of financing), the University withholds 30% of the sums as overhead expenses. The same applies for most of the taxes paid by the students (registration, tuition, reexamination, recuperation of absences from didactical activities). In case of taxes paid by the students of the English and French sections, as well as students paying in foreign currency, the University takes up only 20% out of the sums collected from tuition fees.

Please indicate whether students pay tuition/registration fees. How much these are

Most of the students in the Romanian language section (eg. 160 in first year) benefit by a budget for their studies and a fraction (eg. 20 in first year) pay the annual tuition fee. Allocation of budgeted student seats is based on hierarchy after entrance examination (year I) and based on the weighted average obtained at the end of each academic year - grades x credits. To finance their own studies in the Romanian section, students, students pay 4800
RON / year (approx. 1100 Euro/year). For the English and French section, the tuition fee is 4500 Euro / year.

For the admission procedure, there is a fee of 120 RON (approx. EUR 25) applicable to any candidate as cost of processing the file, record, review, etc. There are a number of facilities (gratuitousness/ deductions), granted under regulations, for students that are active teacher children, children of Faculty of Veterinary Medicine graduates etc (see rules and admission brochure).

Students pay a fee to recuperate unexcused absences in practical works (10 RON / hour = 2.3 Euro) as well as re-examination fees for credited examinations (exams that were not promoted after two successive exam sessions 100 Ron / exam = approx 23 Euro). Other duties with an insignificant amount (1-2-3 Euro) - fees for school documents (student card, library permit, parking card if applicable).

- The complete list of different fees (not only tuition fees) is published annually as a consequence of the USAMVCN Senate decision.
### 3.1.3 Overview income (revenue) and expenditure

**Income generated by the Faculty**

<table>
<thead>
<tr>
<th>Year (1 Sept. - 31 Aug)</th>
<th>State (government)</th>
<th>Income generated by the Faculty</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To university administered outside the Faculty (IF - 70% to FMV)</td>
<td>Direct to Faculty (undergraduate student bursese)</td>
<td>Income from services provide (students fees, clinical/laboratory)</td>
<td>Research European projects</td>
</tr>
<tr>
<td></td>
<td>RON</td>
<td>EURO</td>
<td>RON</td>
<td>EURO</td>
</tr>
<tr>
<td>2011-2012</td>
<td>6,056,788</td>
<td>1,370,314</td>
<td>371,792</td>
<td>84,116</td>
</tr>
<tr>
<td>2012-2013</td>
<td>5,577,189</td>
<td>1,261,807</td>
<td>676,389</td>
<td>130,857</td>
</tr>
<tr>
<td>2013-2014</td>
<td>5,940,530</td>
<td>1,344,011</td>
<td>355,586</td>
<td>80,449</td>
</tr>
</tbody>
</table>

**Pay**

<table>
<thead>
<tr>
<th>Year (1 Sept. - 31 Aug)</th>
<th>Salaries</th>
<th>Students burses (undergrad. &amp; PhD)</th>
<th>Teaching support (equip., mat., mobil., taxes, renew.)</th>
<th>Clinical support (drugs, supplies)</th>
<th>Research support (equipments, materials)</th>
<th>Other (European projects salaries)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RON</td>
<td>EURO</td>
<td>RON</td>
<td>EURO</td>
<td>RON</td>
<td>EURO</td>
<td>RON</td>
</tr>
<tr>
<td>2011-2012</td>
<td>6,110,881</td>
<td>1,382,552</td>
<td>726,709</td>
<td>164,414</td>
<td>1,659,398</td>
<td>375,429</td>
<td>52,830</td>
</tr>
<tr>
<td>2012-2013</td>
<td>6,930,187</td>
<td>1,567,916</td>
<td>715,836</td>
<td>236,614</td>
<td>1,484,024</td>
<td>335,752</td>
<td>40,109</td>
</tr>
<tr>
<td>2013-2014</td>
<td>6,809,737</td>
<td>1,540,664</td>
<td>572,386</td>
<td>129,499</td>
<td>3,484,328</td>
<td>562,065</td>
<td>53,926</td>
</tr>
</tbody>
</table>
3.2 Comments

MEN has quit hierarchy-related financing of programs, based on quality criteria, that started and developed in 2011. At that time, the Veterinary Medicine program in FMVCN was the only one in the country in category A (the best), the rest of the country programs (Bucharest, Iasi, Timisoara) were classified in categories B and D.

Other USAMVCN programs were also framed in higher categories. In 2011, due to University classification in a higher level, as well as having several programs of study in the university category A hierarchy, the University has been financed better from the State budget than other Universities as well as better than in previous years.

Higher medical education is funded using a cost coefficient greater than in humanities and engineering education in bachelor level (2.25 to 1 or 1.65). On the other hand, medical education, having an integrated master in the bachelor degree, receives an equivalence coefficient of physical students of 1 and independent master studies (available in other fields than medicine and architecture) have a coefficient of equivalence of 2. As such, students of the master's degree in engineering have superior financing compared to medical ones.

3.3 Suggestions

- Increasing the amount of funding from the State budget per student in medical studies (including veterinary medicine);
- Funding per student/ budgeted number of students needs to differentiate more between Universities/ faculties, based on quality criteria validated at European/ international level;
- Increasing tuition fees per student in the Romanian section;
- Increased revenues from research, including applied research in favor of economic operators;
- The development of the Faculty veterinary services (clinical and non-clinical) based on entrepreneurial principles; revenue increase in these services;
- Raising funds through donations, sponsorships, etc.
4 Curriculum

4.1 Factual information

Indicate whether there is a defined national curriculum and (if applicable) how and by what body decisions are taken on this.

- In Romania, the minimal mandatory disciplines (subjects) that are included in the doctor of veterinary medicine formation curriculum are regulated by the Government Decision HG 1477/2003;
- Law 1/2011 provides that for the profession of doctor of veterinary medicine, the study duration should be of 6 years (bachelor with integrated master), with a minimum of 5500 hours in the curriculum and 360 ECTS (long-term higher education - Bologna). Also, the law expressly stipulates compliance with EU legislation in the field (in accordance with the EU Directive 36/2005);
- Structural problems, amendments and optimisation of the national curriculum is a constant topic of discussion in the professional faculties in the country, and even in 2014, a meeting of the Deans of Faculties in the country took place at the Ministry of Education in order to harmonize legislative elements which are freshly emerging according to the EU Directive 55/2013;
- Based on these data, the Faculty was accredited in 2009 and reaccredited in 2014 by the Romanian Agency for Quality Assurance in Higher Education (ARACIS). ARACIS is a full member of the European Association for Quality Assurance in Higher Education – ENQA and is registered in the European Quality Assurance Register for Higher Education – EQAR;
- The Faculty is EAEVE approved since 2004.

Describe the degree of freedom that the Faculty has to change the curriculum.

Based on the above-mentioned legal documents, academic autonomy and documents approved by EAEVE (“DAY-ONE SKILLS”), FVE (Study programme for veterinary surgeons) and World Organisation for Animal Health (OIE) (OIE Guidelines - May 2013), the Faculty of Veterinary Medicine assumes the liberty to introduce other disciplines (subjects) in addition to those listed in previous documents in a maximum proportion of 20%.

At University level, there is the Teaching Council whose main mission is to assess and monitor the proposals of the Faculties related to the teaching processes in the University. All items referring to the role of the Teaching Council can be found in RC 7, the University Charter of USAMVCN RC 7.

Outline how decisions on curriculum matters and course content are taken within the Faculty

- Suggestions for curriculum change (new disciplines of study, elimination of courses and rearrangement of course sequence, changing shares of courses) can start from any member of the academic staff, the Faculty departments, the Faculty board, the Dean, professional associations (eg. CMVR) and other stakeholders. Also, national and European legislative changes, as well as recommendations of international
organizations (eg. EAEVE, FVE, OIE) are subject to review by the Faculty Council, the only governing body that can take an official decision on the curriculum.

- The annual analysis and revision of the curriculum is the right and duty of the Faculty Council.
- The Faculty Council Decision is submitted to analysis by University Teaching Council and later submitted for final approval to the Senate of UASVM Cluj-Napoca.
- Some transversal subjects are imposed by University decision (Senate) to all faculties - eg. Communication. (RC 42)

**Curricular contents**

- The course content relies on the competent of the course coordinator, who is obliged to review it annually, when the course description form is drawn up. This sheet (subject outline) is approved by the discipline coordinator, then the Director of the Department, the Dean, and finally by the Rector of the University (matters which are stipulated by the specific rules RC1 art. 3.38, 3.37 in the University Charter.
- All study programs (including the ones for veterinary medicine) are subject to annual internal evaluations coordinated by the Teaching Council of UASVM in collaboration with the UASVM Quality Assurance (QA) Department in accordance with the ARACIS requirements. The Teaching Council and the QA Department also develop the annual internal assessment and, in accordance with the legal requirements, the periodic ARACIS assessments.

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).

The Faculty Council is responsible for the implementation of all changes in the curriculum. The allocation of hours between the various subjects and the balance between theoretical and practical teaching is proposed by the teachers responsible for these subjects within the national and European regulations/good practices and thereafter discussed by the Faculty Council. The final version is presented for approval.

At the end of each academic year, the Council examines proposals made by academic staff, students and stakeholders and has to approve the curriculum for the upcoming academic year. After this approval, the documents are sent to Teaching Council of University and then approved by the Senate (see RC 42 Carta USAMV/University Charter) for all the details regarding the amendment of the curriculum for one study programme.

**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.**

Subjects on the curriculum include all subjects or training in the extent required by Directive 36/2005/EC, on the recognition of professional qualifications (EU subjects), and follow up training on the training defined by the scope of the EU subjects.

In our Faculty, the Curriculum is fully integrated with the EU listed subjects.

The percentage of allocated hours for mandatory EU subjects in the FMVCN curriculum (5534 hours) is 93,17% (5156 hours).
The percentage of allocated hours for mandatory EU subjects within the frame of core disciplines in the FMVCN curriculum (5240 hours) is of de 98.39% (5156 hours).

Further, extra training in subjects outside or more thorough study of the EU subjects, focuses on the language skills of the students, communication techniques and some special-interest subjects like mycology, laboratory animals, oncology or embryo transfer.

4.1.1 Power of subjects and types of training

4.1.1.1 Power of subject

Core subjects taken by every student

The core veterinary training curriculum provides the graduates with competences required for the pursuit of the veterinary profession in all areas of veterinary care.

A General table of curriculum hours taken by all students

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<th>Hours of training</th>
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<th>Seminars (B)</th>
<th>Self directed learning* (C)</th>
<th>Laboratory and desk based work (D)</th>
<th>Non clinical animal work (E)</th>
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Total: 434 | 70 | 98 | 20 | 91 | 379 | 90 | 972
The core curriculum comprises basic subjects, basic sciences, animal production, clinical sciences, food hygiene/public health, professional knowledge. The curriculum covers all the important animal species, as well as food hygiene/public health and all the important commodities and foodstuffs of animal origin.

**B. Curriculum hours in EU-listed subjects taken by each students**

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<th>Core topics</th>
<th>Subject</th>
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<th>Seminars (B)</th>
<th>Self directed learning* (C)</th>
<th>Laboratory and desk based work (D)</th>
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Electives which each student must select from a list of subjects

- **Elective subjects** (named *optionals* in our curriculum). In their enrollment/registration procedure by means of the intranet application, students choose one from a list of 2-3 subjects at the beginning of each academic year. Once a subject is selected, it becomes compulsory with their corresponding ECTS’s.
- **Free-elective subjects** called also *facultatives* (from a list of subjects corresponding to each academic year) - provide supplementary credits, added to the main body of 360 ECTS.

### C. Curriculum hours in EU-listed subjects offered and to be taken as electives (optionals)

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<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Hours to be taken by each student per subject group</th>
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<td>Professional knowledge</td>
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The subjects cover a quite large area, from basic subjects to clinical subjects (see details below).

### D. Curriculum hours in EU-listed subjects offered and to be taken as free-electives (facultatives)

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</tbody>
</table>

** subjects part of the curriculum as part of POSDRU/86/1,2/S/63654 EU funded program in the period 2012-2015

### E. Curriculum hours in subjects not listed in previous tables to be taken by each student

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures</td>
<td>Seminars</td>
<td>laboratory and desk based work</td>
<td>Non clinical animal work</td>
</tr>
<tr>
<td>Sports</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comunication techniques</td>
<td>14</td>
<td>14</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

#### Obligatory extramural work

The **obligatory extramural work** is listed into the curriculum of each year, being structured according to the level of training of each year, as students become more and more aware of the importance of different subjects and specialisations (see below).

### F. Obligatory extramural work that students must undertake as part of their work

<table>
<thead>
<tr>
<th>Nature of work</th>
<th>Minimum period</th>
<th>Maximum period</th>
<th>Year in which work is carried out (recommended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farms- bovines, swine, poultry (farming in general)</td>
<td>50</td>
<td>70</td>
<td>77.78</td>
</tr>
<tr>
<td>Preclinical subjects/disciplines, veterinary clinics- maintenance work*</td>
<td>30</td>
<td>50</td>
<td>55.56</td>
</tr>
<tr>
<td>Farms- bovines, swine, poultry (farming in general)</td>
<td>30</td>
<td>50</td>
<td>55.56</td>
</tr>
<tr>
<td>Preclinical subjects/disciplines, veterinary clinics/ veterinary</td>
<td>80</td>
<td>50</td>
<td>55.56</td>
</tr>
</tbody>
</table>
G. Obligatory extramural work that students must undertake as part of their course (continued)

<table>
<thead>
<tr>
<th>Table 4.5 a</th>
<th>No of hours</th>
<th>Year in which work is carried out (recommended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice 1 - intramural</td>
<td>30</td>
<td>I</td>
</tr>
<tr>
<td>Practice 1 - extramural</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Practice 2</td>
<td>90</td>
<td>II</td>
</tr>
<tr>
<td>Practice 3</td>
<td>90</td>
<td>III</td>
</tr>
<tr>
<td>Practice 4</td>
<td>90</td>
<td>IV</td>
</tr>
<tr>
<td>Practice 5</td>
<td>90</td>
<td>V</td>
</tr>
<tr>
<td>Practice in veterinary units and ER shifts</td>
<td>42</td>
<td>VI</td>
</tr>
</tbody>
</table>

In terms of ECTS’s, the core curriculum covers a number of 322 ECTS, the electives/optionals 14 ECTS’s and the extramural work 24 ECTS. Free electives (facultative) subjects (see explanation below) provide supplementary ECTS’s to the main body of 360 ECTS of the study program.

4.1.1.2 Types of training

4.1.1.2.1 Theoretical training

- **Lectures** - conducted with large groups, usually all students enrolled in one study year. Students are usually expected to listen, to participate interactively and to make notes while the lecturer speaks. In some courses, lectures may be predominantly / fully interactive. The tools used vary from classical (blackboard-chalk) to modern (interactive, projectors, audio/ video, etc.).

- **Seminars** - consist of working with groups of about 30 students and are activities that do not require contact with organs/animal products, devices, laboratory instruments, reagents etc. The professors have a permanent relationship with the students, trying to have a direct dialogue. Here students discuss academic topics scientifically and participate actively to the designated activity.

- **Self directed learning** - In the process of self-directed learning, the teachers assist the students to diagnose their own learning needs, to formulate their learning goals, to identify the resources for learning, to choose the appropriate strategies and then to evaluate their learning outcomes. This process is a continuous one and happens during the seminars, during the practical works and also during some specific times when they have time to solve and understand the information presented. Self directed learning is not quantified separately in our curriculum (expressed in number of hours with related credits), but it is part of the discipline sheet as time dedicated to individual study. Time calculated is relative, being dependent on each individual's ability to understand and gather information. In order to exploit this type of training, in addition to the bibliographic materials provided (printed or electronic), there are periods in which the laboratories are made available to students both during the
semester and during the sessions (e.g. rooms and materials for anatomy, histology slides review, pathology slides review, microbiology etc.).

4.1.2.2 Supervised practical training

The work consists of direct contact with the material taught (products, animal carcasses, etc.) with small formations (groups - usually subdivisions in group forms, numbered according to the schedule) in laboratories dedicated to various subjects. Depending on the nature of practical work, these types of activities are divided as designated below:

- lab and deskwork
- non-clinical animal work
- clinical work - clinical works include practical training using animals in clinical environment, clinical patients/ herds. It is an important part of the activity in the 3rd, 4th and 5th year of study, divided in traditional subjects (propaedeutics, imagistics, reproduction, infectious disease, internal disease, surgery, parasitology), and organised on species (companion animals, equine, ruminants, poultry, rabbits and new companion animals and game animals) for the 6th year (clinical rotation).

4.1.2 Undergraduate curriculum followed by all students

4.1.2.1 Curriculum hours

The study structure (curriculum) in the FMVCN (as structured in the official document called Teaching Plan) consists of dividing the 5534 hours curriculum (Law 1/2011) during the six years (12 semesters of 14 weeks each). The last semester, 12, is shorter, part of this semester being dedicated to the preparation of the final graduation exam (12 weeks).

During each academic year there is a period of extramural practice (generally 90 hours, corresponding to 4 ECTS credits with the exception of the 1st and 6th year of study where the practice is structured differently - see tables).

Exam periods are clearly marked in the calendar of the academic year and are called sessions, placed after completion of each semester, usually in January and February (winter session) and June-July (summer session) (see Structure of the Academic Year).

- The optional subjects (electives) are offered as a packet, as below:
  - year I: English language, German language, French language;
  - year II: biochemistry of the tissular metabolism, veterinary mycology, breeding and pathology of laboratory animals;
  - year III: Cytology and hematology, Veterinary Oncology;
  - year IV: veterinary orthopedics and traumatology; biotechniques in reproduction;
  - year V: breeding and pathology of game animals; breeding and pathology of fish;
  - year VI: dietetics; veterinary cardiology; breeding of new pet species.

4.1.3 Further information on the curriculum
Provide the team with highlights and any unusual or innovative aspects of the teaching program

- Introduction of new subjects according to local situation and current trend. The setup of a new subject entitled “Breeding and pathology of new pet species”, proved to be a success based on the options expressed by students
- FMVCN established conventions / contracts with veterinary practices (pets and farm) selected on professional criteria. They ask for help when they have scheduled veterinary actions on a large number of animals (eg. deworming, vaccinations, castration, blood testing, IDR - tuberculin, etc.) or special cases (eg. colic in horses, dystocia, metabolic diseases in herds). In the first case we send various numbers of students to lay hold practical skills. In the second case, teachers and students go together on the field with the mobile clinic. Student’s document evaluation (eg. clinical observation sheets signed and evaluated by the veterinarian) and evaluation made by the teacher (on veterinary activities and acquired skills) can lead to the recognition of some mandatory curricular clinical activities for some animal species. Recognition is at the discretion of the teacher responsible for the clinic and supervisor of these external clinical activities;
- Student participation in professional workshops on various topics (eg. RoSAVA congress, journal clubs);
- Student participation in student scientific team (see chapter on Research);
- Volunteering (eg. dogs sterilization campaigns organized by different NGOs - EMFODO Foundation, NUCA);
- Student Scientific Symposium held annually (see chapter on Research)

Parts of the program that must be attended as obligatory by the students and how the attendance is verified

Student obligations conform to the provisions of the specific regulations (RC40), which stipulate the terms under which didactic activity is taking place.

- During the semester, 80% attendance is compulsory for practical works and seminars, unmotivated absence in 20% of activity is allowed until the end of the semester (when all absences must be recovered - there is a fee). Special situations are clearly stated (eg. medical excuses, participation to the scientifical/professional events - all approved by the Dean), they allow absences between 20 and 40% of the activities with the prerogative to recover activities and subsequently take the exam.
- Presence in the course activities is stipulated as necessary for at least 50% of them;
- Verifying the presence is a specific, general and compulsory procedure throughout the Faculty by listing nominal groups (for direct practical activities) or general lists under the guidance of the year coordinator (for courses).

4.1.3.1 Clinical training

Please provide specific information on the practical clinical training; are such rotations a structured part of the training given to all undergraduate students?

The clinical rotation is an integral part of the training of students in the 5th and 6th year. It is mandatory for all FMVCN graduates.

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:
Describe clinical exercises in which students are involved prior to the commencement of clinical rotations.

Prior to their entrance into the clinical rotations of the 5th and 6th year, students have already taken the basic courses of semiology, radiology, internal medicine, pathology, propaedeutics and surgical techniques, parasitology, obstetrics and reproduction. Also, primary knowledge of infectious disease is already implemented, so the direct approach of the clinical activities is adequate.

Clinical rotation is structured differently for the 5th and 6th year, respectively. The initial approach is specialty-oriented (for the 5th year) and the clinical approach (6th year) is species-oriented.

**Year 5 (sem IX, X)**

**H. Clinical rotation- V-th year**

<table>
<thead>
<tr>
<th>Semester/Number of hours</th>
<th>Infectious diseases</th>
<th>Internal Medicine</th>
<th>Reproduction</th>
<th>Surgery</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IX</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>168</td>
</tr>
<tr>
<td>X</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>168</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>84</strong></td>
<td><strong>84</strong></td>
<td><strong>84</strong></td>
<td><strong>84</strong></td>
<td><strong>336</strong></td>
</tr>
</tbody>
</table>

Rotation is performed by clinical subjects (reproduction, internal disease, surgery, infectious disease) in groups of 15 students accompanied by 1-2 teachers. Each group will have 42 hours each semester and clinic, divided into stages of 3-6 hours, three days a week over 3.5 weeks, accumulating a total of 84 hours during the two semesters in each clinical discipline and 336 hours per clinical traineeship as follows:

**Reproduction**

Clinical activity takes place in the reproduction clinic, section for large and small animals, as well as in the large and small ruminants and pig hospital. Also, at least two field visits to dairy, pigs, sheep farms (Didactic Farm in Cojocna or Hoia, Jucu, Unirea farm or other private farms in the region) are programmed for each group of students, per semester, accompanied by 1-2 teachers with transport assured by Faculty provided vehicles (minibuses with a capacity of 8-15 seats) or the mobile clinic. Usually the first meeting is held in the University, labor safety is taught, and the objectives that must be completed in the clinical stage are explained, as well as the gynecological sheet that needs to be filled out for each case. Students learn genital examination techniques in animals, general clinical examination, manual or ultrasound guided transrectal examination, mammary gland exams, clinical and laboratory techniques, diagnosis and therapy in the main species of farm animals or pets. The clinical stage ends with a practical test on clinical cases in farms.

For clinical cases (internal or field work, farms, clinics) assigned to each student/group, there is a need for them to prepare observation sheets specific for each discipline (gynecological sheet, clinical observation sheet) and the cases are written in the electronic
register at existing terminals in each discipline, laboratory by the students responsible for
the case, coordinated by teachers or tutors.

**Infectious diseases**

Clinical activity takes place within FMVCN in the Infectious Disease Clinic (allocated
space in the large animal and small animal clinic), as well as district veterinary field clinics
and private farms in Cluj County and other counties of Transylvania (Bistrita-Nasaud, Alba,
Sibiu, Salaj, Mures, Harghita). Field visits are planned so that each group of students
participates in the same activities or specific activities similar to those covered by the
preceding groups. The first meeting of each semester is dedicated to work safety measures,
with detailed specific measures designed to prevent or minimize exposure of risk persons
handling infectious materials (diseased animals, samples), and the working environment.
The major zoonotical disease risk and pathways of transmitting them to humans as well as
disinfecting agents that are active against etiological agents are described. Within clinic
hours, cases of infectious diseases are presented in both pets and large animals and exotic
animals. Clinical activities that take place in situ (clinics, farms) in which students are
involved include:

- Clinical examination of suspected / confirmed cases;
- Sampling for diagnostic purposes: eg. blood samples;
- Clinical diagnostic tests: IDR – tuberculin;
- Laboratory tests for diagnosis;
- Making antibiograms;
- Conducting epidemiological investigations determining the source/ sources of
  infection of susceptible species and ways of dissemination of infection;
- Establishing therapy protocols (including writing prescriptions);
- Establish protocols for nonspecific prevention (biosecurity measures) and for specific
  prevention (vaccination protocols);
- Administration of drugs according to therapeutic protocol for hospitalized cases and
  those submitted for consultation;
- Administration of vaccines to pets and large animals;

Evaluation of clinical knowledge is done permanently and at the end of the clinical
module of each semester of the 5th year, as a practical examination on clinical cases in
farms or in the Clinic for Infectious Disease.

**Internal medicine**

Student activity in the Internal Medicine Clinic runs on groups of 15 students
following a 3-week traineeship rotation according to the schedule of clinics.

The clinical stages are performed intramural and/or by mobile clinic. For the mobile
clinic (field visits to farms) the students are accompanied by a teacher and a veterinary
technician. The clinical stage is preceded by labor safety training aimed at acquiring specific
procedure techniques for accident prevention during the activity with diseased animals.

The case profile is dominated in intramural cases by pets, while farm animals
(equines, cattle, sheep, goats, swine, and poultry) are found predominantly on farms. The
laboratory evaluation of farm animals cases involves sampling (eg. blood, urine, ruminal
fluid) and intramural laboratory processing by students.

Depending on the number of available cases, students work in groups of 1-3 on a
animal/case. Clinical activity of students consists on taking the history, evaluation of the
vital signs, general clinical examination, special clinical examination by systems and recording the data obtained in a clinical observation sheet. The clinical approach is followed by paraclinical examination by the means of special laboratory exams and medical imaging techniques. Students must choose laboratory methods (blood chemistry, hematology, endoscopy, ultrasonography, electrocardiography, radiography) by justifying their appropriate use. Some laboratory examination techniques (eg. blood, urine, CSF, ruminal fluid, ultrasound, ECG) are actually performed by students under the supervision of a teacher. The groups of students that managed the case are responsible for compiling a group of possible diagnoses and final diagnoses by using elements obtained during clinical and laboratory examination. All these steps and applying the appropriate therapy scheme are conducted under the supervision of the teacher.

Students need to register all consulted cases in their clinical register books, during clinic hours. At the end of the clinical stage, there is a practical examination in which each student receives a clinical case. They examine and present the case by the protocol practiced during the teaching activity.

**Surgery**

The clinical activity takes place in the surgery clinic, with casuistry from farms specialized in raising different livestock species (cattle, sheep, pigs, horses) as well as from individuals, private breeders of animals, especially pets. For the clinical activity in farm animals, field visits to dairy farms, pigs, sheep (USAMVCN teaching farm, Jucu farm, dairy farm or other private farms) are offered. Each group of students, accompanied by one teacher and one auxiliary teaching staff, go to the farms with minibuses/mobile clinic provided by the Faculty (8-15 places). To avoid accidents and various troubles, the first meeting takes place in the Faculty, where students are notified of labor safety, the objectives covered during the clinical traineeship are explained, and the clinical examination methodology and the observation sheet that needs to be prepared for each case are also presented. Students learn and practice different protocols used in general and special surgery (eg. examination, preparation procedures, anesthesia, aseptic-antisepic procedures, and recovery).

**6th Year (sem XI, XII)**

I. Clinical rotations - VI-th year

<table>
<thead>
<tr>
<th>Species/Clinic</th>
<th>Internal medicine</th>
<th>Surgery</th>
<th>Obstetrics</th>
<th>Parasitology</th>
<th>Infectious diseases</th>
<th>Dermatology</th>
<th>Total hours/species/student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companion animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>Equids</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>52</td>
</tr>
<tr>
<td>Ruminants</td>
<td>15</td>
<td>15</td>
<td>18</td>
<td>17</td>
<td>13</td>
<td>0</td>
<td>78</td>
</tr>
<tr>
<td>Swine</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Domestic fowl/rabbit</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Total clinical hours</td>
<td>50</td>
<td>51</td>
<td>51</td>
<td>46</td>
<td>49</td>
<td>13</td>
<td>130</td>
</tr>
<tr>
<td>Total hours/module</td>
<td>130</td>
<td>130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horse+companion animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
depending on the specific casuistry and performed interventions: for general clinical examination, transrectal examination with maximum 2 students, for complex cases (colic surgery) teams of 3-4 students who participate directly in specific case activities (consultation, diagnostic clinical laboratory of therapy, supervision, including at night) are formed. The work in the clinics is based on a weekly schedule; the group of students is assigned in each scheduled clinic.

Splitting time allocated for each species on different topics (internal medicine, reproduction, surgery, infectious diseases, parasitology) is relative and is based on estimating the involvement of these clinical specialties. In Romania, teacher salary is based on a minimum number of teaching hours regulated by law (teaching load).

Programming is done so that the clinical activities will cover the number of allocated hours for each species (which is found in the table below):

**Equine clinic**

According to the diagram above, students benefit during semesters 11 and 12 of a total of 52 hours in the equine clinic (each 12 hours in Internal Medicine, Surgery and Reproduction, and 8 hours for Infectious disease and Parasitology).

Clinical activities take place inside of faculty, and in the field, with buses and mobile clinic. Due to the local situation of the specific region, most horses are working horses (ex. in Cluj county, the horse out of approx. 14,000, approx. 200 are sports/leisure horses, and the number of horses in the neighboring counties for sport/leisure is even lower). The price of most horses is low (500-1000 Euro), few owners can afford transportation to the clinic and for major medical interventions (eg. colic surgery, cesarean, artificial insemination). These problems are solved by student mobility/ clinical activity in the field and purchase of horse trailers for the difficult cases). Activities in the field are coordinated by teachers; the students receive clinical cases and are organized in study groups of 1 to 3 students per clinical case, depending on complexity. A real support for clinical activities is the collaboration between the Faculty and horse breeders in the area. Around Cluj-Napoca there are many horse breeders that own 5/20 horses each for sports/recreational means and the Faculty collaborates with them. (a total of 100 sports/ leisure horses).

A real help in the clinical training is the collaboration with Beclean stud farm and Sambata stud farm (about 100 km, and 200 km, from Cluj), state properties, which own about 250 horses (Lipizzaner and Draft horses), where we organize a weekly field visits of 1-2 student groups for day long traineeships on topics of reproduction (oestrus detection, natural breeding, pregnancy diagnosis, determining the best time to breed, stallion fertility assessment), preventive medicine, blood sampling, deworming, vaccinations, current clinical investigations and treatments.

There is also a significant number of horses belonging to smallholders where students participate with the county doctor during specific actions according to the veterinary activities, and to conduct consultations and treatment.

The caseload of the equine clinic (including mobile clinic) is represented by two major categories: patients requesting a first opinion and patients who are referred by other veterinarians.

**Clinic for small and large ruminants**
Each student has a total of 72 hours in the ruminant clinic and between 13 and 18 hours per subject (see table). The clinic is attended by groups of max 10 students, accompanied by 1-2 teachers usually in dairy, sheep, goat farms at distances of 35-100 km, usually with the mobile clinic. Activities include global and individual gynecologic investigation, mastitis, nutrition and nutritional diseases, internal and surgical pathology, epizootic investigation, diagnosis and therapy of lameness, dehorning, diagnosis and therapy of parasitosis, veterinary actions to prevent and combat infectious disease, etc.

Each student benefits of 1-3 cases, for which he performs clinical examination, establishes the diagnosis and performs treatment, under the supervision of teachers and/or field veterinarian. Each student/group of students shall document (clinical observation sheets, gynecological sheets) and register cases into the electronic register cases under the supervision of teachers or tutors.

Clinic for swine

According to the curriculum, students have a total of 26 hours in the clinic for pigs in semesters 11 and 12, distributed as follows: 5 hours for Internal Medicine, Surgery, Reproduction and Parasitology and 6 hours for Infectious Diseases.

Clinical activity takes place mainly in units in the field, private farms, individual households, but also inside of faculty. Due to the decreasing number, low diversity of pathology and access restrictions into the large pig farms, the clinical work is partially oriented towards individual households and small farms spread throughout the county. To access them, the clinic staff has developed a network of collaborators, veterinarians, former students, now doctors in villages in the county. Some locations in which the clinic carries out the main activities listed above are, Floresti, Gilău and Baciu (15-30 Km). Transport to these units is by adequate transport means (buses, mobile clinic). Field activities are coordinated by teachers; students receive clinical cases and work in teams consisting of 1 to 3 students on each case, depending on complexity. The team gets a history/anamnesis; they perform a clinical examination and usual copro-parasitological tests, establish the clinical and etiological diagnostic. The team completes a clinical observation sheet, finishing with the treatment and recommendations to the owners. Rarely, the students examine animals admitted to the hospital due to clinical relevant conditions.

Companion animal clinic

The Companion Animal Clinic offers students work practice that takes place in the 11th and 12th semesters accumulating a total of 78 hours for each student.

Hours are distributed by clinical subjects as follows: Surgery 14 hours, Dermatology 13 hours, Infectious disease 14 hours, Internal Medicine 13 hours, Parasitology 11 hours, and Obstetrics 13 hours. Highly trained medical personnel and high performance medical equipment purchased in recent period make the companion animal clinic a reference center with a good reputation both regional and nationwide. These facilities are complemented by the possibility of a significant number of patients being hospitalized in the spaces of the ER. In these circumstances, the companion animal clinic offers to the students multiple opportunities for training through their effective participation in the medical act and direct access to a diversified casuistry.

Caseload of the companion animal clinic is represented by two major categories, patients requesting a first opinion and patients who are referred by other veterinarians.

The number of cases submitted to the consultation allows the establishment of working groups of 1-5 students for one patient, the groups are coordinated by a teacher.
Activities that students perform during traineeship in the companion animal clinic are written in the clinical examination sheet, including anamnesis, clinical observation, clinical consultation and participation in conducting general paraclinical and laboratory tests (ultrasound, electrocardiography, endoscopy, monitoring by pulse oximetry). Sampling of biological samples (blood, urine, various secretions and excretions), processing and interpretation are current activities that students perform alone but assisted by teachers. Although, establish the diagnosis and formulating related therapeutic protocols are the responsibility of the teacher/clinician. The students from the working groups who investigated the case are actively involved. Routine clinical consultation methods, special methods of paraclinical examinations and therapy procedures are mandatory targets that students are required to perform and record individually in their first day skills book. All these activities are supervised by specialist clinicians as supervisors and countersigned by the responsible clinician supervisor represented by the species specialist. Through the collaboration contracts of the Faculty with some animal protection societies, students participate in programs to sterilize stray dogs. This action requires direct involvement of students in the early stages (clinical advice) and the medical act (surgery) itself.

Due to the nature of regional reference center of FMVCN, a significant number of cases have a profound interdisciplinary character. In these circumstances, students have the advantage of an overview on patients during consultation carried inter-clinically and a very good collaboration between specialists in the clinics. The observed effect of this working method is a successful grafting of a solid theoretical knowledge and practical skills offered by the variety of casework properly explored by modern methods and logistics available at this time.

**Domestic fowl and rabbit’s clinic**

Clinical activity takes place inside FMVCN in the Internal Medicine, Reproduction, Surgery, Parasitology and Infectious Disease, or outsourced in the field in poultry units, in private households in the county.

Outsourcing is done through avian clinic visits in territory locations in Cluj and in other counties in Transylvania (Bistrita-Nasaud, Alba, Sibiu, Salaj, Mures, Harghita). In field visitations are planned so that each group of students will attend specific activities similar to those taken by previous groups (eg. anamnesis, vaccination plans, deworming, rooster castration, blood sampling for surveillance and diagnostic tests). Sometimes we are called to establish a diagnosis and indication of treatment regimens. In these cases we move together with a group of students who are directly involved in taking medical history, feeding analysis, inspection of group, individual clinical examination, sampling, necropsy, etc.

The first meeting of each semester consists of a presentation of labor safety measures, specific measures detailed for each clinic, designed to prevent or minimize exposure of students to different risks that may occur during field trips.

Outsourced clinical activities (districts, farms) in which students are involved include, depending on the discipline, addressing specific examination techniques and intervention, consultation of sick animals. When cadavers are received at necropsy, in the Faculty, we recommended bringing also living survivors. They are examined by students, in the clinics and laboratory in specific disciplines.

The course is carried out by presentation of videos on the topics addressed (in the Faculty), described in the syllabus; dialogue during work on the topic presented, consultations, etc.
Activities made by students:

- Clinical examination of cases;
- Sampling for diagnosis: blood, feces, eggs, etc;
- Lab testing of field samples in order to diagnose different diseases, doing antibiograms, depending on the case;
- General context framing (technology, nutrition, prevention, etc) of detected cases and design of a complex therapy, control, prevention etc program, respecting (for infectious and parasitological diseases zoonoses risk and prevention of environmental contamination- biosecurity measures);
- The verification of clinical knowledge in fowl medicine is done permanently and at the end of the clinical module, in each clinic that is involved, and the final grade consists of the average of grades given in the five clinics.

Outline the student involvement in the emergency and hospitalisation activities of the clinics.

Student’s activity during 5th and 6th years in the Emergency Hospital is an important part of mandatory traineeship.

The specific activity of students in the Emergency Hospital is connected to the work in the specialty clinics through the casuistry required by this structure. Thus students are in direct contact with the owners, have the opportunity of taking history/anamnesis and strictly follow the evolution of the clinical case through the emergency hospital en route to specialty clinics.

Depending on the species, clinical cases may be hospitalized in spaces provided by the Emergency Hospital for pets and in the large animal hospital for horses, ruminants and pigs, facilitating unlimited access of students in 5th and 6th years to the clinical cases. Furthermore, during shift duty in the Emergency Hospital the students are required to perform strict monitoring of hospitalized patients and under the supervision of doctors this service actively participates to the application of treatment prescribed by the doctors in the specialty clinics.

During discharge, students participate in formulating recommendations to be applied to the patient during convalescence. Patients who die in the emergency hospital or large animal hospital are transferred to the Department of Pathology where necropsy is performed and the students who managed the case must attend.

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.

Student activity in the mobile clinic involves students in direct interaction with the specific environment provided by farms, small family farms, and individual animal breeders.

The caseload profile offered by the mobile clinic is dominated by farm animals cases and veterinary specific activities. Students have to participate in groups or individually in the epidemiological, gynecological exam, clinical investigation, simple surgeries (eg. chiropody, castration in piglets, etc.), analyses of feed rations and biological sampling (eg. blood, urine).

Mobile clinic activity is an integral part of the clinical curriculum in the species modules and as such, the hours spent with the mobile clinic are measured in different fractions for the species clinics, depending on the teacher and casuistry.
4.1.4 Obligatory extramural work

Student practice activity is regulated by law (Law 258/2007) and specific rules of USAMVCN (RC 17). Practical activity occurs usually during holiday and is marked as such in the curriculum for the specialization Veterinary Medicine - 90 hours / year study = 4 ECTS.

The USAMVCN regulation is quite general in nature and is not fully adapted to the specific veterinary activity imposing in fact an exact time for practice (July) for most faculties of USAMV. Up to 2012, there was no effective way to control and monitor this type of activity, students were only required to facilitate the conclusion of a practice agreement between the Faculty and a veterinary unit (of any type) and present it to the FMVCN Practice Center. Students were obliged to report during the period preceding the onset of the next academic year (September) to the team for the review and verification of this activity on the dates set by the University.

Since 2012-2013 the faculty has developed a "Specific extramural practice procedure" which is more accurate and tailored to specific veterinary training. It specifies more precisely the types of veterinary activities or a related field in which students undertake their practice. Also, it states recommended percentages of different types of activities in the portfolio of a student.

Evaluation methodology was improved by designating a larger number of practice supervisors whose duty is to inform and control directly (if possible) the activity of a small number of students (there are over 30 teachers preparing lists of supervised students) (displayed on the FMVCN site).

A complex procedure based on standard forms has been developed, that gathers many information on student work and its characteristics (feedback form from tutor, supervisor evaluation).

For students in the first year, a minimum of 30 hours of intramural practice has been imposed under direct tutorship by the FMVCN Practice Assistant for a period of a week in Cojocna Teaching Farm (where students are offered accommodation and free meals) or inside of the Faculty, hospital or biobase (where students carry out activities - routine cleaning, animal care, etc.)

Strict imposition of the period of practice was modified in the sense that students develop a personal schedule for the accumulation of practice hours during the academic years. For example, students enrolled in the first years (I-II) years acquire hours of practice when, outside teaching periods, they are willing to assist and help in the preparation of teaching materials for Anatomy, Histology or any other subject. Higher year students are encouraged to conduct their practice (odd hours) into the Emergency Hospital of FMVCN (excluding periods on call) or other clinical subject.

A list of tutors available and willing to work with students has been compiled as a way to help students who have already established arrangements with local veterinarians (website FVM/Practice)

Clinical departments are encouraged to take students for practice during the summer holiday.

Centralization and monitoring of data on student practice has been supervised for the first time by the Vice Dean responsible for student problems and Practice Center of FMV. This allows for better coordination of activities for students to practice in the sense of orientation towards another type of activities.
A reform of the practice log began by drawing specifications and practical hands-on material that comprises, compared to the previous model, a wider range of clinical sheets, sheets model etc. in order to familiarize the student with many of the documents needed for daily veterinary activities. In the same perspective, the personal practice log needs to be integrated in the "minimal practical skills logbook" a concept that aims to show how the student, in his academic course or during extramural activities, has managed to accumulate a minimum of practical skills to perform a minimal set of veterinary maneuvers.

A particular element has been given by a program run across USAMVCN (Agropractice) between 2012-2014, financed by European funds, which facilitated students placement in various practice sites and involved numerous veterinary clinics/authorities and economic operators such as farms, feed producing companies, processing animal products enterprises.

### 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.)

Preparation of students in the domain of food safety is performed by the teachers of the Veterinary Food Control team from the Department for Animal Production and Food Safety in FMVCN and comprises the following courses:

- **Food hygiene, quality and technology**, I, II
- **Food inspection and control**, I, II
- **Veterinary public health**


**The course for Food hygiene, quality and technology I** run in the 7th semester during 14 weeks (28 hours lecture and 28 hours of practical work) with an exam being the form of assessment and with a practical exam test as an elimination round at the end of the semester. Practical activities are carried out in the laboratories of the discipline, production units (meat processing units and slaughterhouses). Laboratory activities are conducted with groups of 12-15 students and the aims are learning laboratory techniques for assessing compositional parameters and integrity of meat, meat products and animal fats. Note that in the group, work takes place in teams of 3-4 students, who perform individual-specific practical activities. Issues concerning technology of slaughtering or processing of animal products are explained in the slaughterhouse and meat processing units referred in chapter 6.1.6 and 6.1.7. Each semester has four such visits, with groups of 12-15 students accompanied by a teacher, with the FMVCN minibus for units outside Cluj-Napoca city, or means of public transportation for the ones in the city (or outskirts).

**The course for Food hygiene, quality and technology II** run during the 8th semester for 14 weeks (28 hours lecture and 28 hours of practical work) with continuous evaluation of individual student and periodical evaluation of all students, twice both for theory and for
practical activities. Practical activities are carried out in the laboratories of the department, with groups of 12-15 students that practice/learn laboratory techniques for assessing compositional parameters of milk, milk products, eggs and honey. Also, students acquire basic knowledge through observance of the good hygiene practices guide (GHP), a guide for good manufacturing practices (GMP) and the HACCP system. Between the group, work is done/divided in teams of 3-4 students, who perform individual specific practical activities. The presentation of milk and milk products technology begins with a visit to the USAMVCN experimental teaching farms, to observe primary processing of milk (milking, filtration, cooling and storage), followed by two visits to the pilot milk processing unit of USAMVCN. This unit presents processing technologies of dairy: milk, cream, acid dairy, cheese, ice cream. Other units of milk processing are presented in chapter 6.1.7.

The course for Food inspection and control I run in the 9th semester, for 14 weeks (28 hours lecture and 42 hours of practical work), having as a form of assessment the exam, with a practical exam in the slaughterhouse - which serves as an elimination round at the end of the semester.

Practical activities take place both in the laboratories of the department and in slaughterhouses with groups of 10-12 students. Students learn techniques of ante mortem and postmortem inspection in slaughtering establishments - cattle, horses, swine, sheep, goats, poultry and rabbits - slaughterhouse decisions, marking of carcasses, including assessing compliance with GHP and GMP.

There are six practical works held inside of the Faculty. Organs (bovine, swine, sheep, horse, poultry, and carcasses (pig and sheep) are brought in from slaughterhouses (referred in chapter 6.1.6.), in order to be presented to students and help develop skills in performing postmortem examination and techniques in the listed species.

These activities are followed by two working visits of 6 hours each (four practical work sessions) to slaughterhouses for cattle, swine and sheep, as mentioned in chapter 6.1.6., with groups of 36 students, accompanied by three teachers, that will put into practice the knowledge gained in the laboratory. In the slaughterhouses, students will secure individual knowledge accumulated on ante mortem examination, including checking of veterinary documents, food chain, postmortem examination of organs and carcass etc. One of the practical work sessions is aimed to identify Trichinella spp. using the reference method (artificial digestion) and the compression method. At the end of the 10th semester, the student (12-15/group), accompanied by a teacher, experience a 3h working visit in poultry slaughterhouses (mentioned in chap. 6.1.6), in which students perform ante mortem examination, including verification of veterinary health documents, food chain, postmortem examination of organs and carcasses etc. In the last practice session, we check the slaughterhouse practical knowledge of students.

The course for Food inspection and control II runs in the 10th semester, during 14 weeks (28 hours lecture and 42 hours of practical work), with the exam as a form of assessment and a elimination round of practical exam in the laboratory at the end of the semester. Most practical activities are carried out in the laboratories of the department, with groups of 12-15 students. The focus is on laboratory techniques learning - physical-chemical and microbiological food safety parameters assessment and hygiene of milk and milk products, meat, canned food, animal fats and honey. Students works in teams of 3-4 students. A practical session about confirmation by molecular methods of pathogens is carried by all students (groups of 7 students) in the research laboratory of the animal production and food safety department in the Life Sciences building. At the end of the
semester, we plan a working visit of 3 hours with groups of 12 - 15 students accompanied by a teacher in the official Veterinary Laboratory for Food Safety Cluj. Students are given a presentation on specific procedures in a certified laboratory (analytical process, traceability and confidentiality evidence including areas of chemical analysis, food microbiology and determination of residues in food).

The Veterinary Public Health course runs in the 11th semester, during 14 weeks (14 lecture hours and 28 hours of practical work) with an exam as evaluation form. The course is presented each week in one of the great halls and focuses on: the community and national surveillance of communicable diseases from animals to humans as well as risk analysis; alimentary zoonoses basic knowledge and their control; how to disseminate information on veterinary public health; ensure the quality and safety of food production in integrated systems; programs for monitoring, control and eradication of diseases in humans; management system and food safety information through the RASFF (Rapid Alert System for Food and Feed). Most practical activities are integrated into the units of production, processing, storage and recovery in public consumption of foods of animal origin. For this, we undertake two study visits of 6 hours each with 30 students and 3 teachers in neighboring counties: Alba, Mures, Maramures, Satu Mare (units specified in the chapter 6.1.6. and 6.1.7.) Based on visits, students prepare individual evaluation reports for visited units in compliance with GHP, GMP, HACCP plan, risk analysis establishments. One session of practical work is dedicated to identification of counterfeits in foodstuffs of animal origin by molecular techniques and is done with groups of eight students. Also, practical activities and visits are aimed towards the Sanitary Veterinary and Food Safety Authority of the county, especially office for hygiene and veterinary public health where veterinarians, state inspectors present practical aspects of veterinary supervision by official control, methods of certification and RASFF System (Rapid Alert System for Food and Feed), including how to prepare activity reports.

4.1.6 Ratios

4.1.6.1 General indicators types of training

\[
R6 = \frac{\text{Theoretical training (A + B + C)}}{\text{Supervised practical training (D + E + F)}} = \frac{2170}{2986} = \frac{1}{0.972} = 1.31
\]

\[
R7 = \frac{\text{Clinical work (F)}}{\text{Laboratory and desk based work + non clinical animal work (D + E)}} = \frac{1052}{1442} = \frac{1}{0.73} = 1.36
\]

\[
R8 = \frac{\text{Self directed learning (C)}}{\text{Teaching load (A + B + C + D + E + F + G)}} = \frac{NA}{NA} = \frac{NA}{NA} = NA *
\]

* as explained in the previous subchapters, in our curriculum the self-directed learning is not quantified (r8)

4.1.6.2 Special indicators of training in food hygiene/public health

\[
R9 = \frac{\text{Total no curriculum hours Food Hygen, Public Health}}{\text{Total no hours vet Curriculum}} = \frac{422}{5534} = \frac{1}{0.076} = 13.15
\]

\[
R10 = \frac{\text{Total no curriculum hours Food Hygen, Public Health}}{\text{Hours obligatory extramural work in Veterinary Inspection}} = \frac{422}{50} = \frac{1}{8.44} = 0.11
\]
4.2 Comments

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.

- In accordance with the requirements of EU Directive 36/2005 and the national and international legal documents, training veterinarian must ensure first-day skills in all areas of the veterinary profession (clinical, laboratory, animal production, food safety, animal welfare, public health, etc.). In the past, veterinarians practiced especially in the animals of economic interest (cattle, pigs, sheep). Therefore, preparing graduates was more directed towards this direction. The number of pets has increased over the last 20 years. Therefore, the Faculty curriculum gave more importance to these species. Also, the new pet species started to occupy a significant quota of the presented clinical cases in the last 2-3 years, fact that led to the setting of a small clinical unit for exotic species in 2014.

- The feminisation of the student’s population (more than 65% of our students being females) leads also towards a more companion-animal (including horses) related type of preference among our future graduates.

- In recent years, the number of fish farms and aquarium fish trade increased (in the country and Transylvania); this has required the implementation in the curriculum of a dedicated course for fish pathology and breeding.

- Faculty strategy provides stronger orientation of clinical education on animal species. In this respect, the species oriented clinics are planned to start in fourth or fifth year of study and the last year to be devoted more to the optional tracks.

- Continuous and gradual modernization of the curriculum is dependent on the training of specialized (e.g., European diplomats) teachers in different clinical areas, on the modernization of the equipments, on the national and regional socio-economic evolution, on the new challenges of the profession but also on the ability of Faculty staff to adapt and accept changes/challenges.

The local conditions or circumstances that might influence the ratios in 4.1.6.

Local circumstances (dependent on the opinion of the Faculty Council or professional and economic regional environment) favored framing the curriculum within the limits recommended by EAEVE for R6-R10.

It is possible to produce an improvement in indicators R6 and R7 by reducing the time allocated to theoretical training and by increasing the time allocated to practical training in a clinical environment. It is also possible to better quantify the time dedicated to the self directed learning (R8) in future curricula.
4.3 Suggestions

- Study of basic topics (eg. anatomy, histology, physiology) in systems/organs oriented modules.
- The introduction of species oriented clinical education in 4th and 5th years of the veterinary study.
- Introduction of optional tracks in the last year, focused on different species;
- Inserting a module of undergraduate training in emergency medicine - the Faculty is partner in a national project funded by European funds (ESF);
Describe the measures taken to ensure coordination of teaching between different departments, sections, institutes and services

- Permanent procedure of evaluation/re-evaluation of curricular content based on the responsible person for the department/faculty council, etc.
- Changes/update in course content are annually done by their coordinator;
- The content of each course is reviewed annually on a teaching group and at department level (the department council has a responsible teacher);
- Departmental directors are members of the Faculty Council, where proposed changes to course content or proposals for new courses are discussed and approved;
- At the Faculty level, coordination is done by the academic Vice-Dean and the Dean of the Faculty;
- All teaching regulations and activities are approved and monitored by the Faculty Council;
- At University level, coordination is done by the Teaching Council and led by the Vice-Rector for teaching, with its own regulation (RC7).
- Faculty Deans (and academic vice-Deans) are a part of the Teaching Council of USAMVCN.

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.

According to the general objectives of the entire veterinary teaching program, the main direction is given by the European/national regulations, EAEVE, FVE and OIE recommendations. The training is set up by its main components - basic training, preclinical training, clinical training, paraclinical training, food inspection and animal breeding and production.

The Faculty Council designed a curriculum (permanently amended, according to regulations) based on these requirements, containing all the EU recommended subjects (see chapter on Curriculum). The fulfillment of the objectives for each subject taught is reflected by the learning outcomes clearly established by each course description form. All these have standardized formats, provided by the Department of Quality Assurance (DAC).

Teachers are responsible for teaching as well as for assessment of students. Course coordinators complete the course description form containing learning outcomes, course content, teaching methods and assessment methods. The contents of course description form are discussed in the departments, with the person responsible for education, in particular. After approval by the Faculty Council and their signing by the department Director, Dean and Rector, the course description forms are uploaded to the Faculty’s internet platform - accessible to students. Depending on the specific subjects, each teacher determines appropriate teaching strategy, from demonstrations, dissections (anatomy), histological examination, case studies and problem solving (laboratory subjects), computer simulations (eg. pharmacology, physiology, nutrition) and direct clinical assessment (clinical
sciences) or necropsy. Teachers try to not only transmit information to be stored, but use methods that develop medical thinking skills and training for future veterinarians. Using problem-based-learning (PBL) students learn domain knowledge but also thinking strategies. The teacher facilitates learning by guiding and monitoring the learning process.

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

The current trend, used especially by young teachers, is to use the teaching model/information provided by the international reference books for each subject/clinic specialty. National regulations require the authorship of books (according to the teaching position in title list) in the selection procedure for academic teaching positions. Thus, most teachers have published books that are given to students. Most materials are available in hard copy or as material that can be bought at the specialized kiosk inside the University or they can be borrowed from the library. In addition, for each course, teachers post a syllabus/course outline or the entire course contents as presentations (PowerPoint or PDF) on the Intranet platform.

Most of the material taught or used as course support or indicated books are being uploaded on the University Intranet platform. There is also the possibility of posting on the dedicated site (example: students from the French and English language section began to use a simple site created in Google that facilitates sharing of materials and direct communication with teachers).

*Describe (if applicable) any established or contractual arrangements that support undergraduate teaching between the Faculty and outside bodies, e.g. farms, breeding centers, 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.*

The teaching takes place in the Faculty, the Didactic Experimental Farms (Cojocna, Hoia) and the dairy farm in Jucu, where the University has signed a cooperation agreement. Besides these locations, the Faculty has contractual/factual cooperation, assistance and applicative research agreements with several small animals clinics, NGOs for the protection of animals, farms for cattle, sheep, horses, poultry in the area, slaughterhouses and dairy or meat processing units where visits with the mobile clinic or students visitations are organized. Visitations are organized during the specialized clinics hours, or at the request of farmers.

In addition to these contracts, the Faculty collaborates with veterinarians in the field (free practitioners) by referral, generally in two cases: the cases are sent for further investigations (radiology, laboratory, ultrasound, echocardiography, gynecological diagnosis) or in the case of difficult therapeutic procedures (surgery, obstetrics, dialysis, artificial insemination, ultrasound-guided puncture, diagnostic necropsy or laboratory) mostly in pets and horses. This is the preferred situation because more students can benefit from the casuistry. In cases when the animal movement is impossible/uneconomic, field visitations with small groups of students (mobile clinic) are organized for preventive action, control, diagnosis and therapy. All students are programmed for this type of clinical training.

Besides these possibilities, many veterinarians in the area that work with large herds of animals, usually cattle, sheep, horses, ask students support (groups of 2-4) in the
scheduled activities (vaccinations, deworming, blood sampling, piglet castration, stallion castration). Theoretically, all students have access to this type of practical training during the semesters (even during weekends), additionally to the extramural practical training in the summer. All students have the chance to participate in these activities.

The Faculty encourages this type of supervised practical training but only with prestigious veterinarians and in the good equipped clinics. All these activities (including the reports) are supervised by teachers.

During the mandatory practice or outside it, students are welcomed in most veterinary clinics in the city, where they operate as volunteers, participate in campaigns to sterilize stray dogs with specialized staff and can perfect their approach, restraint, handling, care, clinical and laboratory investigations, etc.

The Faculty has contractual collaboration relationships with prestigious pet clinics/practitioners in Cluj-Napoca (but not only). In consideration of accepting students in practice, the Faculty provides them free or discounted veterinary services for referred cases and laboratory.

Students attend the annual congress (eg. RoSAVA, AVER (RoEVA)) and thematic workshops organized in the clinics of FMVCN. Usually, there are sessions dedicated to students where participation is free or half of the fee, with invited speakers from abroad or local speakers.

Describe the general learning objectives underlying the veterinary curriculum and how this is ensured

The learning objectives of the curriculum aim at giving a solid theoretical and practical knowledge enabling the graduates to successfully practice as veterinary surgeons from their first day after graduation.

In order to achieve these goals, students must learn day-one skills acquiring approaches to solve a diagnostic problem, including the taking of samples and the interpretation of laboratory test results. Learning objectives are achieved through theoretical lectures, practical demonstrations and practical sessions in small groups using laboratories, dissection and necropsy rooms. Practical hands-on training is also provided through intra- and extramural fieldwork.

The objectives are based on the directive EC 36/2005 and OIE recommendations on the Competencies of graduating veterinarians (“Day 1 graduates”) to assure high-quality of National Veterinary Services

- The students are familiarized with the concept of day one skills from the first year of study and they are encouraged/obligated to acquire these competences.
- Subject structure is greatly linked to these concepts, following the way each subject insures learning of these elements from the rules of day one skills.

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

The main procedure is to check the fulfillment of the learning objectives for each topic/subject taught. In this way, the grades (and additional credits - ECTS) obtained by each student are illustrative. In order to obtain data regarding the clinical activity and the practical activity, an important source are the recorded cases into the practice notebooks. Implementing the “minimal practical skills-personal notebook” will enhance the importance of the record keeping and also the fulfillment of the learning outcomes for each subject.
In this respect, the activity of the Didactic Council (governed by the specific regulation RC7) that evaluates the opportunities of a certain training/educational program and its sustainability plays an important role.

At the level of the Faculty, the control is performed by means of the Commission for Evaluation and Quality Assurance, coordinated by the Dean and the person responsible for Quality Assurance (see chapter 5.1.4).

An important source of feedback is given by the responses of practicing veterinarians and stakeholders the Faculty collaborates with (eg the feedback forms from the extramural practice).

Another significant source of indirect evidence of learning is given by the anonymous answers to questionnaires received from FMVCN graduates (qualitative assessment). They actually show the difficulties they encountered and the satisfaction obtained in the first period of practice in different areas of the profession.

5.1.2 The teaching environment

Describe the available staff development facilities, particularly in relation to teaching skills

According to the National Law of Education (Legea 84/1995 1/2011 and the Government’s Decision 49/2014) all teachers from the Romanian Higher Education System have to follow the psycho-pedagogical training courses. In USAMVCN there is a Teacher Training Department (DPPD) that deals with topics like Educational psychology, Pedagogy, Methodics of Teaching, Educational Management. All of the teachers of FMVCN attended these courses (or similar) and obtained a formal qualification. Another possibility for the development of the teaching skills (but not exclusively) is represented by the Professional Specialisation Courses developed with the help of the Life Long Learning Center of USAMVCN.

On the other hand, in Faculty or at the level of other veterinary bodies, courses are organized on a regular basis:

- diverse professional specialization courses (specialized radiology, imaging, different skills workshops, AVER);
- refresher courses for communication skills in foreign languages (examples: courses to obtain certificates for English language in 2012, 2013 and the French language from 2013 to 2014);
- courses in the POSDRU 86/1.2/S/ 63654 Bucharest program for teachers that focused on the academic quality management. The program was conducted in 2007-2013;
- teaching mobilities ensure international exchange of teaching experience.

Describe the available systems for reward of teaching excellence (e.g., accelerated promotion, prizes, etc).

- highlight and reward system at University level (on staff categories, according to scores obtained, mainly based on scientific achievements);
- awarding on Faculty level - "Professor of the Year";
- salarial reward - merit bonuses/gradation of merit (15% increase of salary);
- teaching excellence score is important in evaluating candidates for teaching positions;
Describe other measures taken to improve the quality of teaching and of learning opportunities

- A series of long term measures were implied at the level of departments as well at the level of each subject. Among these, the need for problem based approaches in many subjects, emphasis on more individual work of students, project based lectures and seminars must be mentioned.
- The students have more and more self learning opportunities due to the facilitating atmosphere in most of the classrooms (eg. sources of electronic materials, wi-fi possibilities), a higher involvement of students into the “behind the scene” elements of departments (eg. research, preparation of teaching materials, services).
- Another aspect that becomes more and more obvious is the more clinically-orientated approaches in basic and fundamental sciences (eg. more radiographs used in anatomy teaching or approaches of some basic surgical techniques in order to highlight the importance of a certain anatomical region or structure); students are very interested in the early contact with the real-life situations that are in the area of the clinical sciences;
- Realization and presentation by students of essays, case studies, review articles;
- One difficult aspect is the qualitative evaluations made by the students, which offer, in a certain amount of time, information about the sensible spots throughout the teacher’s academic trajectory.

5.1.3 The examination system

Is there a Central examination system?

The examination system is clearly stated into the regulations of the USAMV’s Carta/. There is a dedicated chapter that deals with these issues only (RC 40 Regulation regarding the Professional activity of the Students). The 5-th chapter is dedicated to the examination of the students and examination procedure and it is common for all faculties of the entire University (as procedures and contents).

The regulation states:
- the objectives of the examining system;
- the responsibility of the departmental council and members in establishing a clear evaluation procedure and to establish the minimal criteria for the general evaluation;
- that it is compulsory to present at the beginning of each semester the procedure of examination, among the curricular contents and curriculum outcomes;
- the types of evaluation (continuous/periodical/final theoretical examination, colloquium/practical examination)
- the course description forms states the type and the period of examination used for each subject;
- procedures for examination of the students (timetabling, intervals between the exams, ethics of the examination procedures, how to set the list of topics for one student, how the teacher should exam the student, how many teachers are in charge of the examination, which teachers are entitled in examining a certain group of students, etc.).
Are there special periods (without teaching) during the year for examinations?

According to the specific regulations, the University has three distinct periods for the examination of the students. These periods are clearly set at the beginning of each academic year by the Senate (Structure of the Academic Year).

After the 1st semester with a total of 14 weeks of didactic activity (October-January) split by a Christmas holiday of three weeks, there is the 1st exam session (“winter session”) that lasts for three weeks (end of January - part of February). After this period, there is one week of student’s holiday that may overlap with a retake exam session (for students that did not pass the regular exams).

The second semester (14 weeks of didactical activity) commences in late February and finishes at the end of May or early June. It is interrupted by an Easter Holiday of one week usually (the precise time depends on the religious calendar). The second exam session (called traditionally “summer session”) lasts for four weeks (until late June usually) and it is followed by another period of retakes (in the academic year 2013-2014 it has been set for two weeks at the end of July). Traditionally, this last-mentioned period has been set for early September (“autumn session”), but this year the Academic Management decided to follow the examples of other universities from Cluj-Napoca in the attempt of clearing the last month of September from the weight of examinations and establishing a clearer path for students in the next academic year (closure of scholar situations occur earlier, the dimensions of the study formations, etc).

There are also some short periods of examining at the end of September for special cases (called “medical” - with proven medical excuses mostly are approved for examining by the Faculty Council).

In addition, according to university regulations, each teacher sets 2 days (during the semester) of re-examination of students who failed exams in ordinary session of examination.

Is use made of external examiners?

Generally, the use of external examiners is not a common procedure for FMVCN because the grades can be established only by teachers who taught the subject. So, in case of subjects taught by external collaborators/associate professors (approved by the Faculty Council and Senate), they are fully responsible for the evaluation. There are some curricular subjects taught by professors from other universities or other faculties from USAMVCN and the evaluation is their full responsibility. Examples - Medical Statistics (taught by professors from University of Medicine and Pharmacy Cluj-Napoca), Genetics in French language section (taught by a professor from Cordoba, Spain), Agronomy (taught by a professor from the Faculty of Agronomy), Animal Hygiene, etc;

External tutors (eg. practitioners, veterinarians in slaughterhouses, laboratories) can propose various grades for practical activities and the supervisors (teachers) usually take into account these recommendations.

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

The mode of examination for each subject taught is very clearly stated by the curriculum and course description form. These documents specify very precisely which examination form is allocated to each subject (see linked tables for details) and the number of credits allocated to the discipline.
USAMVCN Regulations specify the general frame and how each type of examination must be conducted (RC 40) (English version).

The law and University regulations require that all forms of assessment leading to the award of marks must be made face to face and all types of at distance evaluations (eg. online) are forbidden.

There are generally two forms of theoretical examination - oral and written papers. In written form, there are two variants - multiple choice or classic reproduction of topics. The faculty encourages the oral examination of students.

Evaluation of all practical/clinical skills is done directly, face to face, through demonstration and oral dialogue.

In some subjects, student assessment is continuous, without a final exam in regular sessions. In most of the subjects on which the assessment is made by the final examination, there is also continuous assessment with a certain weight in the final grade (all of these are stated in the course description form).

How many retakes? do students have to pass the examination within a certain time?

Students have three regular sessions and a number of retakes sessions during the semester established at central level by the specific regulation (RC40) which is correlated with the calendar of school activities.

For each subject, the maximum number of examination are twice free of charge (during periods of assessment established for normal and retakes sessions) and then, if the student does not pass the exam, he will have at his disposal another two presentations for an extra fee (the fee for such examinations is set annually at the beginning of the academic year).

According ECTS, there are a number of credits for each academic year:
- Number of credits allocated for each academic year: 60 ECTS
- Minimum number of credits to be achieved by the student in order to promote the study year - \((Y \times 60) - 24\) compared to the year that he is enrolled in. \((Y - Nr \ of \ the \ study \ year)\).
- The inability to accumulate the minimum number of credits leads to repetition of the year corresponding to the number of credits accumulated up to that point, with the recognition of evaluations in subjects that were already promoted.

Do students have to pass an examination before they start another course?

The older rules had a time limitation linked to the obligation of promotion of exams by year, and more than two years of a not passed examination/subject was not allowed (eg. passing to the third-year was not allowed if the student still had not passed exams from the first year).

For different reasons required by student associations (eg. the lack of a small number of credits, national and international students mobilities and transfers - different sequence of topics into the curricula), this relatively rigid approach was abandoned. A minimum number of credits in relation to the year of study (see paragraphs above) was reinforced.

5.1.4 Evaluation of teaching and learning

The Quality Assurance Department (DAC) supports the University management in undertaking the policy to ensure quality in education through specific actions for assurance
of evaluation conditions and continuous quality improvement, integrated in the Quality Assurance System.

In the FMVCN there is a Committee for quality assurance and coordinated by the Dean and the Faculty Quality Officer (RACF).

In each department there is an officer responsible for quality assurance (RACD), coordinated by the department director and RACF.

Since 2008, the quality assessment and quality assurance procedures was implemented, we followed several aspects:

- self-assessment of teachers on teaching and research activities;
- student evaluation of teachers, and curriculum (last year of studies);
- peer evaluation;

In the Faculty of Veterinary Medicine, the course description forms are updated annually and verified by the academic department heads and officers, activity which is coordinated by the academic Vice-Dean. The aim is to avoid overlapping of different subjects, and removing outdated scientific data, in accordance with the new ARACIS regulations. Given that the veterinary profession is regulated at European level, the preparations of the course description forms take into account the provisions of Directive EC 36/2005, which regulates the liberal professions, in accordance with the EAEVE recommendations.

### Student's evaluation

Evaluation of teacher activity by students is done individually after each session (May and October).

This year, teacher evaluation by students was done through questionnaires, and was an activity undertaken with the support of the tutor of the study year, with a representative from the Department for Quality Assurance - RACD or RACF.

Evaluation questionnaires are anonymous and target two aspects: first, to know how students perceived the quality of courses and practical work in terms of their content, timeliness, teaching methods, and the involvement of teachers in resolving the issues raised by students; second, a SWOT qualitative assessment was done (strengths, weaknesses and opportunities for improvement of teaching in FVM) including moral and professional quality of teachers, respectively the skills that students believe that they have accumulated.

Given that in the past two years the evaluation system has switched to paper (before has online), it significantly increased the percentage of students who performed this rating, so that each course/teacher was rated by at least 50% of students.

The results were processed by RACD and their deputies, and centralizing of data for all teachers was done by RACF, according to the procedure developed by the Council for Quality Assurance and Human Resources - CACRU and transferred to DAC. The results of teacher evaluations by students are confidential and sent in sealed envelopes to each assessed teacher and to the Dean of FMVCN.

Following receipt of the results of student assessment, the Dean, together with the department directors have a responsibility to identify those aspects of teaching that could use improvement (teachers who have obtained the qualifications sufficient and insufficient in the evaluation of teaching by students). Also they have the responsibility to check the quality of teaching for each subject for all years of study in the faculty, following completion of the evaluation of teaching by students. Following the tabulation of results of the evaluation sheets of teaching by students, their interpretation was performed as follows:
For scores in the range 4-5 = very good; which means that all criteria of the evaluation form of teaching by students were successfully met;

For scores in the range 3-4 = good; the teacher assumes the realization and fulfillment of a plan to improve teaching;

For scores in the range 2-3 = sufficient; the Dean and director of the department convene and ask the teacher for a plan for improvement of teaching. He/ she is given a timeframe for the fulfillment of the plan, then the teacher will present in front of the Dean and director of department an explanatory presentation of the achievement of the objectives contained in the proposed plan, until the next assessment made by students.

For scores in the range 1-2 = Unsatisfactory rating; an action plan is recommended, consisting of: written warning from the Dean of the Faculty and participation in a counseling program of the teacher, in the Department of Pedagogy. If during two consecutive year’s assessment, the same low grade is obtained, a decision on a sanction of 10% of the salary of the teacher for 3 months is issued. These steps apply if the teacher has an evaluation made by made at least ½ the number of students.

Based on the results obtained in recent years we found that the vast majority of teachers in the FMVCN received ratings ranging from 4-5, which are very good ratings. There have been several cases in which scores were between 3-4, which shows good ratings, where the measures to improve the quality of teaching are taken directly by the teachers concerned, without requiring the intervention of the Dean of FMVCN, respectively the director of the department. It was also found that those teachers who in the previous year received ratings between 3-4, in the current year they were assessed with scores ranging from 4-5, which means that those teachers have improved those aspects that were evaluated with lower scores.

Regarding the SWOT analysis, the results are currently available for only one academic year (2012-2013), the second year is being processed (2013-2014). As such, despite the cues received by the Dean on some vulnerable points (teachers attitudes, problems in teaching activities, timetable), it was considered that these elements should be judged based on a series of successive assessment. The relative aspect of this type of evaluation should not be ignored, as well as the possible consequences of premature conclusions/decisions.

Other issues reported by students (teaching materials, new equipments, schedules, field visits, new study topics, topics balance, correlation between the number of credits to the amount of information/demanding teachers) were taken into consideration and have been improved.

Self-evaluation

Evaluation of teaching and research performance of teachers was done by filling in the self assessment sheets A and B, on-line, via the University intranet platform.

Self assessment sheet A quantifies:

a) Teaching activities (books published in national and international publishers)

b) Scientific and research activity (ISI Web of Science and international databases-IDB research papers, international and national research contracts, patents);

c) Professional prestige (citations in international databases, member of national and international commissions and awards/prizes).
All these criteria are criteria for evaluation, classification and funding from the state budget of the university. According to these criteria and depending on facilities for learning and students, USAMVCN is ranked 5th among the all 12 Universities from the first/best category - "Advanced Research and Education Universities" and FMVCN is the only Faculty included in category A, the remaining faculties in the country are included in categories B and E.

The calculation formulas give a total for each teacher, each department and each faculty. Individual results are important and are used by the University (eg. for awards, salary bonuses, selection of candidates in permanent/ temporary teacher positions, teacher activity extending over the retirement age).

Self assessment sheet B, quantifies, by the same criteria, different administrative activities into the University plus tutoring of students (eg. year Deans/tutors) activities to promote the University and Faculty participation in fairs and exhibitions.

The teachers fill the self-evaluation sheets. These are centralized by department and an internal audit is performed by a RACD (by drawing lots) that are not part of the FVM and by the External Audit Committee of the University. Then the results are displayed on the DAC website.

5.1.5 Student welfare

Describe any measures taken to protect students from zoonoses (e.g. rabies) and physical hazards

Ensuring health and labor safety procedures across the Faculty was done by outsourcing these activities according to the requirements of law no. 319/2006 for occupational security and health and GD. 1425/2006 by a specialized company (IC Protect Consult SRL Cluj) that manages these elements. To ensure specific procedures throughout the facility in accordance with legal requirements, several components were taken into account:

- Officers were appointed in Faculty and department levels responsible for implementing specific measures in accordance with the law. In order to disseminate materials and specific documents, we created a website that hosts a series of materials needed for these procedures.
- It was made an assessment for the chemical and biological risk for certain laboratories and submitted it to the University management.
- Documents that contain specific rules for veterinary medicine, that incorporate students aspects and some broken down for larger areas (preclinical / clinical / etc), are developed and in use.
- In each discipline, based on these broad pronouncements, individual procedures are developed:
  - There is a minimal set of rules for the labor safety in the laboratory ("rules of labor protection activities in xxy laboratory."). Informing students on the biological, chemical and physical risks is mandatory at the start of activity in each subject. The teacher is required to teach students according to the mentioned standards and procedures and students acknowledge and assume this risk;
  - A specific procedure for training/monitoring (at the beginning of each semester) is assigned;
- **Records are compiled** (lists of students who have taken note of the specific elements of labor safety in the laboratory)

At Faculty level, it was recently appointed a committee responsible for internal documentation, development, implementation and monitoring of specific requirements for biosecurity specific for education spaces and laboratories of FMVCN with the support of an external consultant with experience in implementing QM and rules from the Sanitary Veterinary and Food Safety Directorate Cluj-Napoca (both on free movement issues of students, biological materials and personnel).

For students and for teachers rabies prophylactic vaccination wasn’t mandatory, but was recommended. If there is a risk of contamination, students and staff members are vaccinated obligatory in specialized hospital units of the clinics of Faculty of Medicine Cluj-Napoca.

As an element of absolute novelty, a **vaccination program** was implemented this year (2013-2014) for students in 4th and 5th years through collaboration with the Infectious Diseases Hospital of Cluj-Napoca. Faculty did an awareness campaign risk of infection among students and staff. The vaccination program aims to cover all students and teachers who work directly with the animals. Until July 2014, a total of about 70 students have benefited from this free program, following that with the onset of the academic year we will begin the procedure for another 1 or 2 series of students in higher years (completing the vaccination series for one group lasts about 2 months-boosters).

In addition, the Faculty has been signaling all areas with the marking "Biohazard" and developed visuals to indicate areas with different types of risks. For all operating premises for our students, we have developed a simple scheme that is visually showing this. In addition to the areas with biological, chemical or physical risk, there is an appropriate signaling. All these data are available through the website for internal communication.

Faculty has organized its own system of disinfection, pest control and rat control. Within each facility, depending on the level of risk, personal protective equipment is provided (gloves, masks, booties, caps, disposable gowns, etc.). Each area of interest or corridor has personal hygiene facilities (sinks, eye-washers, soap, disinfectants, etc.) in accordance with legal and constructive indications.

**Describe the facilities (not related to the teaching programme) which the establishment provides for students.**

The facilities offered to veterinary students are an integral part of the services offered to students of the entire University.

**Housing**

There are approximately 240 positions/each academic year for FMVCN students housing. Thus FMVCN manages to provide accommodation for approximately 60% of those who require such a service. Allocation of accommodation is in accordance with specific regulations (RC34 - student housing functioning rules) which specify the methodology for allocating places. This is based on the overall average grade and number of credits accumulated by each student at the end of the previous academic year, there is also a quota of places reserved for students with poor social situations or those with exceptional performance.

Accommodation services are offered at a symbolic price, some of the costs are subsidized by the state, a student pays about 120 RON/month (equivalent to about 30 euro) for accommodation and utilities (water, electricity, heating, internet, TV, etc.).
FMVCN has rooms in the housing facility VIII in the Haşdeu campus within walking distance from the USAMVCN campus;

- housing conditions refer to a number of 4-5 students/room of about 15 to 18 square meters, with shared bathroom in most cases;
- the students benefit of cooking facilities, at each level there is an kitchen with refrigerator, cooking stove and dishwashing facilities;
- laundry services managed by the Student's administrative servicing (on the spot);
- for international students, the attic part of housing facility VI was built in 2005 which benefits from wider housing spaces, in around 20 double rooms with a bath for which the fee is 100 Euro/month;

**Dining facilities**

USAMVCN has an own restaurant which is situated approximately 500 m from the main campus, which can provide dining for 150-200 people.

The average price of a meal (a la carte) is not higher than 10-15 RON (2-3 EUR).

**Medical facilities**

The University offers basic medical service for the students. In the entrance area of the Agronomia Restaurant there is an own medical office, where one doctor and one nurse offer services to all USAMVCN students (in the same location) (based on the national health system).

**Recreational facilities**

- artistic/cultural club located in the area of the restaurant where there are mainly artistic activities/recreation activities organized by student associations or by group request;
- Erasmus Club - organizes various indoor and outdoor events for socializing between Erasmus students, and between Romanian students and Erasmus students;
- bar/pub - same location;
- Sport hall with a normal capacity for football, tennis, volleyball - based on prior appointment (free for students) and with periods of time allocated to student organizations; open tennis, football court, gym;

**Other facilities**

- a small booklet is edited annually for the students accepted into the first year of study in order to introduce the main obligations, facilities and resources offered by the University (called “Student Guide”)
- cafeteria inside the main campus, providing snacks and refreshments during the day;
- kiosk called “Blue Shop” which offers own products of the USAMVCN food production units, greenhouses and USAMVCN farm (milk, cheese, vegetables, fruit, etc.)
- copy shop;
- USAMVCN/FMVCN provides scholarships for student in poor social status, under regulations RC43. Out of the total fund of allocated scholarships, a proportion of 15% is allocated to social and medical cases. The average value of such scholarships is within about 200 RON/month (equivalent to 45 Euro) granted during a semester or full academic year.
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

- Each year of study has a teacher which is in charge with the relationship with students, appointed by the Faculty Council at the beginning of the University year. The name used is "year dean/tutor":
  - Maintains contact with students and guides when it comes to the problems inherent for the beginning of the semester.
  - Directs the students towards different parts of the University, informing students about regulations, how to address different subjects, different teachers, etc.
  - Maintains contact with the representative student of that year to offer guidance for all arising situations. Also, facilitates contact with the management of the Faculty or University.
  - Is the main facilitator for scheduling the session and the management problems when organizing student events (e.g. prom organized by the final year for the first year students) or graduation celebrations and procedures organization as well as procedures for final graduation exam;
  - Creates and maintains a database of contact details of graduates of his year, this database is then delivered to the Graduate Relation Office (Alumni) who conduct monitoring of employability.
- Students appoint a representative of the year, to liaise with the teaching staff.
- For larger formations, a group representative is appointed, that manages the affairs of the group, and not necessarily the entire year;
- In addition to current issues, students can benefit pointedly by the support of teachers. Usually every teacher is approachable either at his office (in accordance with the timetable) or via email.
- Regarding career orientation, students have a compulsory discipline (28 hours) - "Career development". In addition to this, students have free access to career guidance services through a specialized center (Career Service Center). Here, they receive directions for accessing employment, attend specialized training, employer presentation or they are evaluated for correct career orientation. The center offers counseling for problems related to learning difficulties, stress, emotional problems, etc.

5.2 Comments

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

Veterinary training at the Faculty is provided at a very good standard, its quality is regularly assessed by institutionalised standard procedures (USAMVCN System of Evaluation of Quality) and the conclusions are used to improve the academic environment and to rectify any weaknesses identified. Faculty provides veterinary education based on a modern teaching-learning-evaluation, student-centered, well-regulated and controlled institutional system.

Students have access to rich learning resources, welfare and recreation facilities, are counseled, career oriented, involved in leadership of faculty/university and in the entire
academic quality evaluation. The graduates prove better skills than the minimum internationally accepted and have great national and international employability.

Multiple field visits (farms, clinics) and dividing students into small groups makes the program to be very busy during the day/week, but generally it is specific to veterinary education. In recent years, there are multiple difficulties encountered for setting schedule. Optimization was passed to computer software that performs optimally schedule for study groups according to field trips, the availability of space and resources. Draft schedule is elaborated early, according to the activities provided in the curriculum, and opinions came from teachers and from students.

Although there is not a special time for lunch for students and teachers, in general timetable is drawn up so as to provide a minimum of 1 hour lunch break/day between the hours 12 to 15, for all students.

### 5.3 Suggestions

- Increasing the number of external collaborators or outsourcing of some of the clinical activities in order to increase involvement and integration of education in the reality of the business environment;
- Permanent adaptation of curricular content in accordance to market and professional requirements;
- Increasing the motivation for excellence in education (better evaluation and rewarding the quality of education and research);
- Increasing the involvement of students in faculty management;
- Construction of new accommodation facilities for students;
6 Facilities and equipment

6.1 Factual information

USAMVCN buildings are situated mostly in the western part of Cluj-Napoca, about 1 Km from the city center, and have the most beautiful campus in the city. The campus provides all the facilities for students, such as teaching and research buildings, library, sport hall, fields and a cafeteria. The housing facilities are at walking distance from the campus, and there is also a restaurant, a cultural club, a pub and a medical practice.

Besides the central campus, the university has an external campus dedicated to the Faculty of Food Science and Technology and also, didactic and experimental farms, outside of the city.

Map showing the site of USAMVCN and main buildings

6.1.1 Premises in general

Please give a general description of the site and buildings occupied by the Faculty and include a map

The Faculty of Veterinary Medicine of Cluj-Napoca (FMVCN) owns a complex of buildings located within the central campus of USAMVCN, on Mănăștur Str. no. 3-5, on the Western side of the city center.

Educational facilities include:
- lecture rooms (the biggest are located in Rectorate building - A4, A3, A2, A1; in building VII- Blue hall; in Life Sciences Institut - Navy blue hall and Green hall)
- clinics (buildings VI and VII),
- laboratories (building VI and VII),
- hospital and the emergency unit (building VI).

The two buildings are functionally related, (buildings VI and VII), according to the attached situation plan (see photo from Google Maps).
The entire building complex is located in a very representative dendrological park and the access roads for the reception of all types of patients to the clinic and the hospital of the Faculty are very easy to follow (multiple traffic signs installed in the area).

6.1.2 Premises used for clinics and hospitalisation
These facilities are located mainly in the area of building VI (A, B and C) and VII (see photo) but other facilities and classrooms are situated in other near-by buildings.
- Emergency unit (VI C)
- Clinics (consultation rooms)
  - Reproduction (VI B)
  - Surgery (VI B)
  - Internal Medicine (VI B)
  - Radiology (VI B)
  - Parasitology (VII B)
  - Infectious Disease and Isolatory (VII A)
  - Breeding and Pathology of New Pet Species (VI B)
  - Dermatology (VII B)
- Hospitalisation premises
  - main hospital /species - VI C
  - hospital annexes - small building behind VI C
  - infectious diseases hospital (isolation)- VII A
Altogether, the facilities of FMV, on location, can accommodate the following number of animals:

<table>
<thead>
<tr>
<th>regular hospitalisation</th>
<th>species</th>
<th>no of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>cattle</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>horses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>small ruminants</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>pigs</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>dogs</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>cats</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>isolation facilities</th>
<th>species</th>
<th>no of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>farm animals and horses</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>small animals</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>other (small animals, exotics etc)</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

**6.1.2 Premises for animals**

Apart from the spaces for animals used for clinical and hospitalization purposes, the University has a Didactic and Experimental Farm, used for breeding animals for teaching and research purposes (Animal Breeding and Animal production Systems). This farm has subsidiaries, located as follows:

**Hoia Farm** - situated at the outskirts of the town, within a 30 minutes walk from the University (the approximate distance is 3 km from the University Campus). Here is a sheep farm that shelters approximately 1070 sheep (merino, various crossbreeds) onto approximately 83 ha of land (38 arable land and 45 pasture) where many of the visits for
Animal Production subject occurs. Also, all of the farm veterinary actions are taken as educational activities (student & teachers).

**Cojocna Teaching and Experimental Farm** (609 ha) located at approximately 35 km away from Cluj, sheltering 313 bovines (milk, meat, mixed breeds, primitive breeds), swine (approx 520 individuals - reproductive stock), 16,000 fowl (laying hens and broilers in 2 production halls) and horses (usually 10-15 individuals). The facility is endowed with a dairy-products didactic unit as well. The practical stage (intramural) for the students of the first year is organised mainly in this farm, as the unit owns facilities for accommodation of the students (ensured by the Faculty along with catering services for the period of 1 week for each group of maximum 5 students from veterinary medicine together with other 3-4 from the other faculties.)

**Jucu Farm** (a private - University partnership) has 1390 ha land unit that holds a dairy cow farm and a horse farm. The number of animals sheltered is 410 bovines, in total of which 230 dairy cows, 60 heifers and 120 calves) and 16 horses. Our students have free access to this facility that is situated approx. 25 km away from the city.

The University has in administration a **hunting area** (11,000 ha) in the region of **Somesu Rece village** - approx. 40 Km from the city.

In central campus, in the hospital building, the faculty has a **biobase for health farm animals** (6 cattle, 15 sheep, 4 horses); these animals are used for non clinical practical work.

Also, in the campus there is a **biobase for laboratory animals** with two sections - ordinary one and another for experiments using transmissible microorganisms. The biobase is used for the students (but not only) research.

### 6.1.3 Premises used for theoretical, practical and supervised teaching

Our Faculty structured its teaching plan to follow five main training directions, linked to one another and with its own infrastructure each:
- fundamental training direction;
- preclinical training direction;
- clinical training direction;
- animal production, hygiene, animal welfare
- food safety.

**List of surgical suites and their location**

<table>
<thead>
<tr>
<th>Hall</th>
<th>A1*</th>
<th>A3</th>
<th>A2</th>
<th>Blue hall</th>
<th>Council room</th>
<th>Aula Magna*</th>
<th>A4*</th>
<th>Navy blue Hall*</th>
<th>Green Hall*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Rectorate building</td>
<td>Rectorate building</td>
<td>Rectorate building</td>
<td>VII C</td>
<td>VII C</td>
<td>Aula Magna</td>
<td>Rectorate building</td>
<td>Life Sciences</td>
<td>Life Sciences</td>
</tr>
<tr>
<td>Places</td>
<td>120</td>
<td>180</td>
<td>180</td>
<td>130</td>
<td>30</td>
<td>300</td>
<td>180</td>
<td>130</td>
<td>80</td>
</tr>
</tbody>
</table>

**Total number of places in lecture halls**: 1330
For each of these directions, the Faculty has its own facilities that ensure the theoretical training in lecture rooms. It also has specialized laboratories, clinics and hospitals for learning the practical skills. The better correlation of the two educational components is completed on the experimental farm of university, in private farms and clinics, and in units processing animal origin foods (the last based on collaboration contract).

<table>
<thead>
<tr>
<th>Department</th>
<th>Location</th>
<th>Number of places</th>
<th>Total number of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>VI A - W ground floor</td>
<td>30</td>
<td>640</td>
</tr>
<tr>
<td></td>
<td>VI A - W ground floor</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VI A W 1-st floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Histology</td>
<td>VI A W- 2-nd floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Hygiene</td>
<td>VI A W- 2-nd floor</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td>VI A E-ground floor</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>VI A E ground floor</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Animal production systems</td>
<td>VI A E- 2nd floor</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Food Hygiene</td>
<td>VI A E- 2nd floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td>VI A E- 1-st floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Pathophysiology</td>
<td>VI A E- 1-st floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Reproduction</td>
<td>VI B ground floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>VI B ground floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VI B 1-st floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VI B attic</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>VI B- 1-st floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Propaedeutics</td>
<td>VI B ground floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Biochemistry/Chemistry</td>
<td>Aula Magna- ground floor</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VI B 1-st floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Biophysics</td>
<td>Aula Magna- 4-th floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Informatics</td>
<td>VI B. attic</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Genetics</td>
<td>VI A E 2-nd floor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Parasitology</td>
<td>VI B ground floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Legislation</td>
<td>VI A ground floor</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>VII B first floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td>VII B 2-nd floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Immunology/Epidemiology</td>
<td>VII B 2-nd floor</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Pathological anatomy</td>
<td>VII C ground floor (microscopy)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VII C ground floor (necropsy room)</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Blue hall- multipurpose room</td>
<td>VII C 1-st floor</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

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.

The Faculty follows the strict safety procedures and regulations required by national legislation.

The safety measures that are in place in all relevant areas (eg. laboratories, dissection and necropsy halls and isolation facilities) are in accordance with Romanian and European safety regulations. For safety and educational purposes all relevant safety sets of rules (sheets) are posted in the respective facilities, and students receive instruction in the safety procedures prior to working in such areas. There is a dedicated introductory lesson on specific topics related to biosafety, general safety and precaution measures or labour safety rules held at the beginning of each semester, in each lab the students activate in, that is finalized with a written and signed report on the issues discussed and the list of students that were present.
The procedures were developed with the help of an external service that deals (see previous chapter) at the level of the entire University with all legal issues related to work-related hazards/risks (both for employees and students).

6.1.4 Diagnostic laboratories and clinical support services

6.1.4.1 Diagnostic laboratories

Briefly describe the facilities available for clinical diagnostic work

**Laboratory for mammary gland pathology and blood biochemistry**

Is a facility associated with the Obstetrics and Reproduction Department (located in building VI B, attic, room nr 5) and deals with the following types of analysis:

- Milk analysis:
  - Determination of the biochemical and physical characteristics (fat, protein, carbohydrate, dry matter, fatty acids, sterols), freezing point, added water, pH, etc.);
  - Counting of somatic cells;
  - The changes of electrical conductivity of milk.
- Blood analysis: hormones, hepatic enzymes, amylase, urea, calcium, potassium, sodium, phosphorus, total protein, albumin, globulin, glucose, creatinine, bilirubin, cholesterol, bile acids, etc).
- Tissue analysis: Hormonal, biochemical analysis.

**Semen laboratory**

- Sperm density, concentration, resistance, viability, motility, metabolic capacity;
- Dilution, preservation and storage of semen.

**Laboratory for animal productions and food safety**

The lab has facilities located into the main building of FMVCN (building VI) but also a brand-new lab placed into the Life Sciences Building. The facility is in charge with the following types of tests:

- Measurements to assess the integrity and hygienic quality of milk and milk products, meat and meat products;
- Identification of pathogens, sanitary indicators of animal food products health and antibiotic resistance testing;
- Identifying fakes in foods of animal origin by molecular techniques;
- Examination for trichinosis;

**Laboratory of microbiology**

The laboratory is associated with the Microbiology Department (Building VII):

- Bacterioscopy,
- Bacteriology and mycology ;
- Biochemical tests for bacteria and fungi identification;
- Serological tests - Reactions of agglutination, precipitation, hemagglutination tests, Immunofluorescence Assay (DFA and IFA), enzyme immunoassay (ELISA) and other
immunological reactions to identify antigens and antibodies in bacterial, fungal and viral diseases

- Sensitivity of bacteria (aerobic and anaerobic) and fungi to antibiotics, chemotherapics and herbal extracts by disc diffusion method
- Determination of MIC, MBC.
- Pathogenic tests for bacteria (fimbriae, coagulase, lecininase, somatic antigens, flagella);
- Determination of antibiotics in serum and fluids;
- Investigation of humoral and cellular effectors of nonspecific resistance (white blood cells, leukocytes, phagocytosis index, lysozyme, properdin, complement);
- The obtaining of microbial antigens by ultrasonication techniques the preparation of auto vaccines;
- The preparation of hyperimmune sera;
- Sensitivity tests to bacterial antigens;
- Characterization of biological products by electrophoresis and immunoelectrophoresis;
- Statistical processing of biological parameters in GraphPad InStat and Excel programs;
- In the field consultancy of microbiology, immunology and epidemiology.

Laboratory of pathology and forensic medicine

The main services offered by the Department of Pathology, Necropsy and Forensic Veterinary Medicine include:

- Animal necropsy/diagnostic in farm animals, pets, birds and exotic animals;
- Veterinary forensic examination, including illegal shooting, cruel acts, or intentional poisoning as well as malpractice;
- Histopathology and cytology diagnostic of biopsies or tissue samples collected postmortem;
- Histopathological grading of tumors, histometry;
- Immunocytochemical, immunohistochemical and immunofluorescence examination;
- Classical optical or special microscopy (laser scanning confocal microscopy, phase contrast, dark field);
- Incineration of biological samples in our own crematorium.

Laboratory for fodder quality

Located in building VI - A and C (Nutrition Department), the laboratories provide routine analysis for the determination of the raw chemical composition of the feeding stuffs:

- Determination of the water and dry matter content, the raw protein content from the feeding stuffs, the raw fat content from the feeding stuffs, the raw cellulose content from the feeding stuffs.
- Determination of the raw ashes content and of the N-free Extract (NFE) from the feeding stuffs.
- Expressing and evaluation of the analysis.
- The technical quality control of the different feeding stuffs: fibrous, juicy, roughage feeding stuffs, concentrate feeding stuffs (cultivated concentrate, industrial concentrate, vegetal and animal proteic meals and of micro-organic origin,
energetically substances, mineral substances, additives and feeding stuffs preparations).

- Quality chemical determination of the feeding stuff: protein freshness (the content in easy hydrolysable bases or free ammonia), lipid freshness (acidity value of the fats), chlorides from the feeding stuff, carbonates contents, urease index, urease added in the feeding stuff.
- Bacteriological and mycotoxicological examination of the feeding stuff (TGN, mycetes per gram product, toxicological bio samples on mice)
- Mycotoxins determination through ELISA method for: Total Aflatoxins, Aflatoxin B1, DON, T2 Toxin, Zearalenone.
- Ratio preparation for cattle and sheep, swine (boars and sows), meat-reared pigs and breeding pigs, combined fodder in fowl.

**Laboratory for environmental hygiene and animal welfare**

A laboratory associated to the Hygiene department, located in Building VI A, eastern wing.

It performs the following types of analysis:

- Monitoring the microclimate factors (temperature, humidity, pressure, air velocity, lighting, noise, noxious gases, dust and microorganisms).
- Monitoring air quality;
- Complete control of water quality;
- Examination of wastewater from slaughterhouses and slaughter points;
- Effective control of air disinfection, surfaces;
- Assessment of sheltered animal welfare.

**6.1.4.2 Central clinical support services**

*Indicate the nature of these services and how they are organised*

There are laboratories affiliated to one department (clinical or not) in a tight relationship with the clinic.

**Diagnostic laboratory for infectious disease**

Diagnostic laboratory is within the Infectious Diseases Department:

- Bacterioscopy, including special stains for bacteria
- Microscopic Digital Imaging
- Bacteriology
- Biochemical tests on API systems
- Full antibiograms

**Diagnostic laboratory for wild and exotic animals**

- Diseases diagnosis of new companion animals
- Consulting in breeding and fish pathology

**Diagnostic laboratory for parasitology and vector borne diseases**

- Fecal examination: flotation, sedimentation and larvoscopic methods.
- Skin exam: scraping, fungal cultures for identification of dermatophytes.
- Blood parasitological examination.
- Trichinellascopic examinations and artificial digestion.
Serological diagnosis of parasitic diseases in animals.
Morphological identification of parasites.
Diagnosis by molecular biology methods (eg. Neospora spp., Toxoplasma gondii, Trichinella spp., Echinococcus spp., Borrelia spp., Dirofilaria spp.).

Clinical laboratory
- blood analyses for glucidic, lipidic, mineral and oligomineral, proteic and non-proteic and enzymatic metabolism status (metabolic profile) in animals
- cerebrospinal fluid analyses in different disturbances
- hematological analyses
- urinary tests
- blood gas analysis for determination of metabolic acid-base disturbances
- clinical endocrinology: eg. serum cortisol, thyroxine (T4), triiodothyronine (T3), canine and feline TSH

Diagnostic laboratory in the Emergency Hospital
In the Emergency Hospital, the following devices are used by students:
- OPTI CCA - TS Blood Gas Analyser, which measure the following parameters:
  - Acid-base balance parameters (pH, tCO₂, HCO₃, standard HCO₃, base deficit);
  - Blood gases (PO₂, PCO₂);
  - Hemoglobin, hemoglobin oxygen saturation (SO2%);
  - Electrolytes (K⁺, Na⁺, Ca²⁺, Cl⁻);
  - Blood biochemical constituents (BUN, glucose, lactate)
- ABAXIS VET blood biochemistry automatic analyzer doses following constituents:
  - Glucose, BUN, creatinine, ALT, GGT, ALP, amylase, total bilirubin, total protein, albumin, globulin, K, Ca, P

Diagnostic laboratory of the pathophysiology department
- Complete Blood Count (CBC) Abacus Junior Vet automatic analyser
- Routine and special blood smears staining and morphological evaluation
- Transfusion compatibility tests (major and minor crossmatch)
- Blood transfusion

Radiology
- Classical Radiology, Computer Tomography

Laboratory of toxicology
Carries out determinations with an atomic absorption spectrophotometer
- isolation and dosing of volatile toxins, organic and mineral toxic substances and biological samples from different aqueous solutions, food products and pharmaceuticals, and other matrices that relate to public health, safety and consumer protection and the environment.
- common clinical laboratory tests.
6.1.5 Slaughterhouse facilities

To ensure first day skills, in accordance with the EAEVE suggestions, namely Directive 35/2005, an important part of practical activities of the 5th year students are integrated into units that slaughter meat animals.

These activities are conducted on the basis of cooperation agreements that FVM has with the following veterinary approved slaughterhouses for intra-community trade (EU approved).

- **SC Roxmont Trading SRL**, located in Iara, Cluj county, 37 km away, authorized for the slaughter of 60 cattle, 30 horses, 600 sheep and 750 pigs/week.
- **SC CIA Aboliv SRL** located in Mihai Viteazu, Cluj county, 35 km away, authorized for the slaughter of 48 cattle, 300 sheep and 150 pigs/week. Also, this unit is authorized to process meat products, which allows students to perform specific activities in an integrated unit.
- **SC Amareto Impex SRL**, located in Florești, Cluj county, 8 km away, authorized for the slaughter of 1,000 birds/hour.
- **SC Puiul Regal SRL**, located in Gilău, Cluj county 12 km away, licensed for the slaughter of 1,600 birds/hour.
- **SC Agro Ardeal SRL.**, located in Orheiul Bistriței, Bistrita-Nasaud county, 131 km away, authorized for the slaughter of 100 cattle, 50 horses, 300 sheep and 500 pigs/week. Also, this unit is also authorized to process meat products, which allows students to carry out practical work in this unit.
- **SC Agro Invest SRL.**, located in Sieu Magherus, Bistrita-Nasaud county, 102 km away, licensed for slaughtering of 100 cattle, 300 sheep and 500 pigs/week.

The students of the 6th FVM year, in the frame of the course of Veterinary Public Health, perform visits to see the integrated meat and milk chains - farm, slaughterhouse, processing unit, storage unit, sales unit - in Cluj county and neighboring counties:

- Alba (SC Mercado, 100 km away),
- Mures (SC Tordai Impex SRL 100 km away)
- Maramures (SC Cetina SRL SC Ferma Zootechnica, 146 km away).

Transport to the above mentioned units is done either by minibuses of FVM, in groups of 12-15 students or with the USAMVCN coach bus, with 36 students, accompanied by three teachers. We mention that the slaughterhouses that the students visit do not slaughter animals according to religious ritual (e.g. halal, shehita), all animals are properly stunned before slaughter.

6.1.6 Foodstuff processing units

A part of the practical activities aimed at veterinarian responsibilities (official control, the code of good working practices (GMP), of good hygiene practices (GHP), the HACCP plan) is done in the units processing food of animal origin (milk and milk products, meat and meat products, eggs) food storage units as well as selling units located in the municipality of Cluj Napoca.

Initially, 4th year VM students perform 1-2 practical activities integrated into the pilot units for processing meat and milk from the Faculty of Food Science and Technology from USAMVCN (within second campus of university) to become familiar with the equipment and flow of the manufacturing technology.
These units are adequately equipped with specific equipment for the manufacture of meat products (sausages, salami, smoked dry meat products) and dairy (milk, yogurt, sour cream, cottage cheese).

The study visits are conducted in private units that are veterinary authorized.

### 6.1.6.1 Meat processing units
- SC Elso SRL, Str. Maresal Ion Antonescu 11 A, Cluj-Napoca;
- SC Everest Prodserf SRL, Str. Donath 132, Cluj Napoca;
- SC Cina Carmangerie SRL, str Calea Baciului nr 81-83, Cluj-Napoca;
- SC Xamus SRL, Str. Noua 702 Baciu (8 km);
- SC Cosmfan SRL, Str. 1 Mai nr. 40, village Sannicoara, Apahida, Cluj county (11 km).

### 6.1.6.2 Milk processing units
- SC Friesland Campina SA, Calea Baciului 2-4, Cluj-apoca;
- SC Bonas Impex SRL, Strada Crișeni, nr. 5, Dezmir (12 km);
- SC Comlact SRL, loc. Coruşu, nr.5, jud. Cluj (13 km);
- SC SC Super Lactis SRL, loc. Vâlcele nr. 8A (11 km);
- Experimental and didactic farm USAMV, loc. Cojocna (30 km).

### 6.1.6.3 Egg collection centres
- SC Oncos Impex S.R.L., Str Abatorului Nr 2, Floresti, Jud CLUJ

### 6.1.6.4 Animal foods warehouses
- Cristim warehouse, Str. Orastiei, Nr.10, warehouse nr.26, Centrul Logistic Transilvania, Cluj Napoca;
- Caroli warehouse, Str. Orastiei, Nr.10, warehouse nr.26, Centrul Logistic Transilvania, Cluj Napoca.

### 6.1.7 Waste management
- **cutting and sharp waste**
  - separate collection in the yellow box behind the Emergency Hospital
  - faculty has established a contract with a specialized company for destruction/neutralization (IF Technologies SRL Cluj-Napoca - fixed price about 6 RON / kg = 1.3 euro / kg) with monthly collection, depending on the amounts collected.
  - There is designated officer at each clinic that collects and carries the amount of accumulated waste at collection. Delivery and receipt of the waste material is done in the presence of representatives of the company and our unity under a handover protocol under which the payment is made later according the delivered quantity;

- **chemical waste**
  - separate collection and destruction/neutralization - in the Chemistry Department area and clearly designated containers in the laboratories using such substances
  - collection and disposal is made by the specialized company - Chemical Company SRL Iasi. The contract is for the entire institution. The approximate value of the contract is approximately 10,000 RON/ month (2200 Euro/ month) and consists of disposing waste at a monthly frequency from the various departments/disciplines/laboratories.
at the Faculty level there is an officer appointed to manage the relationship with the company responsible for neutralization (Prof. Dr. Pintea Adela-Faculty of Veterinary Medicine / Chemistry Department)

- **animal tissues waste (from anatomy, necropsy, surgery, samples)**
  - there is an internal faculty’s management within the collection and destruction of this kind of waste in the the incinerator located in the Pathology department
  - the incinerator (Derwent II, England - 500 Kg capacity of charge, 50 Kg/h incinerated);
  - the incinerator and incineration activities (amount of waste, risk, number and type of bodies, operation graphic, temperature dynamic) are authorized and monthly monitored by the regional (county) veterinary authority.

- **domestic waste**
  - managed through contracts with the local waste disposal company; of note is the introduction of selective waste collection (paper, glass, metal, normal household waste).

- **waste water management**
  - separate sewer for buildings VI and VII (the anatomy area and veterinary clinics, large animal hospital, buildings A, B, C and VII A, B, C) - all discharge is done in a tank of over 50 cubic meters that collects water. This tank is placed below ground level (located at the eastern side of pavilion VI, installed in 2009); in accordance with legal requirements, it is equipped with a grease separator and a separate enclosure which functions as an ecological septic tank. Premises are provided with pumps which after required period, discharge the decontaminated water into the main town system.
  - sewage diverted from the Pathology building (building VII) - water passes through the two chambers of about 5 m3 (placed in the courtyard between the buildings for Pathology and Infectious Disease) serving as a settling tank for large particles and grease. Under general contract maintenance, these enclosures are emptied/ cleaned/ disinfected on request

- **manure**
  - separate collection through specific USAMVCN equipment (where there is an unloading and storage platform), and then used as fertilizer in the orchard, vineyard (in close proximity).

### 6.1.8 Future changes

- Building Nutrition and Pathology of Large Animals Institute - clinics and hospitals, sports medicine, equine reproduction, nutrition, necropsy, quarantine isolation, and human-animal interaction center - technical project is done and will endeavor to obtain funds.
- The existing hospital for large animals into the campus will be transformed in clinics / hospital for small animals, thus expanding the existing infrastructure.

### 6.2 Comments

- The main advantage of the current location of the FMVCN is that on site are grouped all the facilities for learning, research and accommodation; also, the location favors pet’s clinic, including emergencies, is picturesque, and is close to the social and
cultural locations/opportunities; thus, the campus is greatly appreciated by students, staff and visitors/clients.

- Disadvantage of the faculty’s location in downtown makes it impossible to build inside new large animal clinics; also, vehicle access to large animal clinics is challenging or even prohibitive in some cases (large vehicles/trailers, cultural and sporting events that block the streets, etc.;
- Obtaining European/national funds (approx. € 10 million) would provide building of the entire external campus (large animal clinic, equestrian club and sports medicine, biotechnology in horse reproduction, necropsy, nutrition, and human-animal interaction center). If we get less funding for the project, we will give priority to large animal clinic (especially equine). In the most pessimistic variant, faculty will build this large animal clinic, over 3-4 years, using its own funds (approx. 3 million Euro).
- In general, the faculty possessed sufficient buildings, facilities and equipments dedicated to education, some state of the art, providing veterinary education accepted European standards. equipment
- Some of the research laboratories of the Life Sciences Institute are used for specific teaching laboratory demonstrations, and also used by students for research. This research will substantiate their graduation thesis.
- At present, in USAMVCN the access tracks for disabled persons exists only in Rectorate building (main access of the students to the lecture halls); all of the clinical areas are located at ground floor.

6.3 Suggestions

- Continued effort to obtain funding (European, national, own) to build external clinical campus dedicated to farm animals and horses.
- USAMV is ranked in the top five universities, and first among the universities of the same category, in the country. FMVCN is ranked first among veterinary faculties in the country. Therefore we should receive an additional budget allocation, more substantial, more differentiated from other faculties.
- Government/Ministry of Education should be more interested in financial support of academic performance and prestige. Such a strategy would favor increased investment in facilities and equipment in our faculty.
7 Animals and teaching material of animal origin

7.1 Factual information

Access to animal material is provided in optimal conditions for all students and all subjects of the curriculum that need such teaching material.

Sources that provide students access to live animals, healthy or diseased, and animal materials are diverse and sufficient: Didactic and Experimental farms of USAMV, internal biobase of faculty, consultation/hospital cases received inside of faculty, private veterinary clinics, animal shelters, kennels, farms, stud farms, zoos, slaughterhouses, hunting reserves, aquariums, fish farms, reptile collections, experimental biobase of other institutions, etc.

7.1.1 Anatomy

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

Main sources of material

The main source of teaching material for anatomy consists of terminal cases in the clinics. Mostly, the animals that are directed to the discipline of Anatomy are animals who were euthanized or those who die in the FMVCN hospital, and those diagnosed. The most commonly used are equine and dog cadavers.

Another important source are animals with economic/company quality compromised, donated or sold cheap by owners in the surrounding areas of Cluj (usually there is a telephone alert system of teachers by a number of local veterinarians).

### Material used in practical anatomical training

<table>
<thead>
<tr>
<th>Material used in practical anatomical training</th>
<th>dog/cat</th>
<th>ruminant</th>
<th>equine</th>
<th>poultry/other birds</th>
<th>other species</th>
</tr>
</thead>
<tbody>
<tr>
<td>live animals</td>
<td>14</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>cadavers</td>
<td>14</td>
<td>25</td>
<td>15</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>specimen- separate limbs</td>
<td>40</td>
<td>48</td>
<td>60</td>
<td>110</td>
<td>98</td>
</tr>
<tr>
<td>specimen- organs</td>
<td>20</td>
<td>40</td>
<td>70</td>
<td>95</td>
<td>100</td>
</tr>
<tr>
<td>specimen- carcasses/parts</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>110</td>
<td>10</td>
</tr>
<tr>
<td>other (head/ partly prepared bones, joints etc)</td>
<td>50</td>
<td>78</td>
<td>70</td>
<td>120</td>
<td>65</td>
</tr>
<tr>
<td>radiographs, pictures etc</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>computer assisted teaching</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

For horses, the Faculty has assigned a monetary fund, which makes it possible to settle a minimum price for an animal (about 300-400 RON = 60-80 Euro), which usually covers transportation expenses.

For small species (dogs), an important source is represented by donations from local rendering services (either corpses or animals requiring euthanasia). We also benefit from multiple other private sources (pig, sheep, bovine, avairy farms).

Students are encouraged to contribute to the collection/preparation of anatomic specimens (especially bones) in the anatomy laboratories;
The parts of bodies from Pathology/Necropsy are a significant source for anatomy materials (after evaluation by our specialists in pathology who give their approval for use in the anatomy laboratories).

Another source of organs/viscera is represented by the purchased or received as donation from slaughterhouses.

Storage, handling

- For practical training of students in subjects as anatomy, pathology, and food inspection, there are used fresh organs / bodies, preserved by refrigeration/freezing; for some rare or delicate materials it is use conservation in diluted formalin solution.
- The anatomy department owns several pools of approximately 300 liters, where larger specimens are stored for longer periods of time (eg. gastrointestinal mass horse, cow) or dissected segments that need to be preserved for a longer period of time. Conservation is done in diluted formaldehyde solution (approximately 5-10%).
  The smaller specimens are stored in plastic containers of 50-60 liters;
- Entire cadaver or parts of them that need to be kept longer are frozen in our own discipline freezer. Of note is that in 2010, an old freezer was replaced with a new one, obtaining a space of about 30-35 m3 where specimens are frozen at -12-16C. When deciding to use a specimen, it is thawed slowly and then dissected
- For other types of materials (eg. bones, joints, mummies), the discipline uses the museum space on the first floor (approx 100 sqm) and the ossuary located on the ground floor where we have stored more than 10,000 bone specimens.
- the transport of carcasses is done using its own means depending on size (cart), if needed, the hoist and pulley systems belonging to the discipline (located in the room for the preparation of teaching materials) or metal frames suspensions (for large specimens or dissections performed on an animal trunk) can be used.
- the waste remaining in teaching activities with students or research, is incinerated in the crematorium of the department of pathology.

7.1.2 Pathology

The casuistry in the Necropsy discipline is presented in the table below:

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of necropsies</th>
<th>2013-2014</th>
<th>2012-2013</th>
<th>2011-2012</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food producing animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
<td>30</td>
<td>41</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Small ruminants</td>
<td></td>
<td>52</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
<td>106</td>
<td>47</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>other farm animals</td>
<td></td>
<td>0</td>
<td>209</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Equine</td>
<td></td>
<td>20</td>
<td>14</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td></td>
<td>133</td>
<td>155</td>
<td>470</td>
<td>288.00</td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
<td>49</td>
<td>30</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Companion animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dogs</td>
<td></td>
<td>224</td>
<td>285</td>
<td>331</td>
<td>268.67</td>
</tr>
<tr>
<td>cats</td>
<td></td>
<td>59</td>
<td>55</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td>53</td>
<td>63</td>
<td>71</td>
<td>400.33</td>
</tr>
</tbody>
</table>

Number of necropsies over the past 3 years
Sources of material

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

The sources of the teaching material used for pathology/necropsy are diverse and are presented below in order of their importance/share:

- Private veterinary clinics and university clinics;
- Pet breeders, kennels, animal shelters;
- Farm for food producing animals, studs and equine clubs;
- Zoos, collections/exhibitions for reptiles, hunting reserves, reserves for wildlife protection;
- Slaughterhouses, fish farms, aquariums, biobases, etc.

In addition to these, the discipline manages an estimated 1000 histopathology/cytopathology samples annually, making diagnosis in its own laboratories.

The transport of bodies from field/clinics is made by the owners, the veterinarians or by the department/faculty using suitable vehicles. The Faculty has a refrigerated trailer dedicated for bodies transport.

Handling of corps is made by using regular transportation means, depending on the size. For small carcasses, a regular wheelbarrow or a small adapted cart is used. The large carcasses are handled by means of a newly installed hoisting system (electric) with pulleys that helps the technician to guide the specimens from/towards the freezing room (approx 20 m³).

All animal tissues waste resulting from teaching diagnostic and research activities of pathology department, as well as those resulting in other departments of university, are destroyed in the faculty’s crematorium, authorized by the local/national veterinary and environment protection authorities.

Ratios

The corresponding indicators for Pathology/ Necropsy show:

\[
R18 = \frac{\text{no of students graduating annually}}{\text{no of necropsies food producing animals and equines}} = \frac{102}{268} = \frac{1}{0.380} = 2.63
\]

\[
R19 = \frac{\text{no of students graduating annually}}{\text{no. poultry rabbits}} = \frac{102}{288} = \frac{1}{0.354} = 2.82
\]

\[
R20 = \frac{\text{no of students graduating annually}}{\text{no of necropsies companion animals}} = \frac{102}{400.33} = \frac{1}{0.254} = 3.93
\]

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

The curricular subjects for livestock breeding and livestock production systems provide a series of practical integrated activities with animals. During the development/implementation of the curricular plan practical the activities are carried out in the following units:
<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Activities</th>
<th>Evaluation</th>
<th>Location description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biobase Veterinary Medicine Faculty</td>
<td>Str. Calea Mănăștur nr. 3-5, Cluj-Napoca</td>
<td>Approach, restraint, BCS evaluation, color and particular signs appreciation</td>
<td>Based on individual charts</td>
<td>on site of institution</td>
</tr>
<tr>
<td>County center for Animal Reproduction and Selection</td>
<td>Str. A. Iancu, nr. 255, Florești</td>
<td>To know and create genealogical registers, individual evaluation of breeders based on evaluation charts</td>
<td>Completion of hypothetical models, interpretation of the amelioration value and hierarchy of breeders</td>
<td>3 km from town</td>
</tr>
<tr>
<td>Independent laboratory C.O.P.</td>
<td>Str. A. Iancu nr. 255, Florești</td>
<td>Milk quality control, determination of milk hygiene indicators</td>
<td>Registration of periodic values in individual charts, establishing if these fit the consumption standard</td>
<td>3 km from town</td>
</tr>
<tr>
<td>Independent laboratory C.C.F.</td>
<td>Str. A. Iancu nr. 255, Florești</td>
<td>Physical-chemical determination of nutritive content of feed and water</td>
<td>Comparing sample results with the standard</td>
<td>3 km from town</td>
</tr>
<tr>
<td>NOVA-FERM Farm</td>
<td>Str. Griviței nr. 15, Câmpia Turzii, Copăceni</td>
<td>Phenotypic recognition of bovine breeds. Individual determination of age by teeth, exploitation technology, milking management, transition period management</td>
<td>Individual charts and research papers</td>
<td>approx 40 km from town</td>
</tr>
<tr>
<td>Experimental didactic station</td>
<td>Cojocna, jud. Cluj</td>
<td>Phenotypic recognition of bovine breeds, appreciation of morpho-productive type. Individual determination of age by teeth, exploitation technology, milking management, transition period management, different fattening systems, collection of breeds</td>
<td>Individual charts and research papers</td>
<td>30 km from town</td>
</tr>
<tr>
<td>Experimental didactic station</td>
<td>Hoia / Cojocna jud. Cluj</td>
<td>Identification ovine breeds, rase de ovine, appreciation of morpho-productive type, individual determination of age by teeth, farm management</td>
<td>Individual charts and research papers</td>
<td>on the site of institution/ 30 km from town</td>
</tr>
<tr>
<td>Experimental didactic station</td>
<td>Cojocna, jud. Cluj</td>
<td>Identification of swine breeds, exploitation technology, farm management</td>
<td>Individual charts and research papers</td>
<td>30 km from town</td>
</tr>
<tr>
<td>Beclean stud-farm</td>
<td>1 Decembrie 1918, nr. 117 Bistrița</td>
<td>Identification of horse breeds, individual determination of age by teeth, color appreciation, specific stud farm unit types, stud farm management, evaluation of horses for breeding, knowing and creating genealogical registers</td>
<td>Individual charts and research papers</td>
<td>15 km from town</td>
</tr>
<tr>
<td>Experimental didactic station</td>
<td>Cojocna, jud. Cluj</td>
<td>Identification of poultry breeds, appreciation of the morpho-productive type, exploitation technology, farm management</td>
<td>Individual charts and research papers</td>
<td>30 km from town</td>
</tr>
<tr>
<td>Veterinary Agricultural shows</td>
<td>Agraria</td>
<td>Different breeds of different species, specific machines used in the exploiting system, feedstuff</td>
<td>Individual charts and research papers</td>
<td>in town</td>
</tr>
<tr>
<td>Biobase USAMVCN</td>
<td>Apiculturie, Sericulture laboratory</td>
<td>Evolution of the biological cycle and breeding technology of silk worms. Evolution of bee families during the year.</td>
<td>Individual charts and research papers</td>
<td>on site of the institution</td>
</tr>
</tbody>
</table>
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.

Food hygiene, quality and technology course I

Teaching materials are represented by samples of meat (cattle, pigs, sheep and poultry), meat products (salami, sausage, dry sausage products) which are partly purchased from the own resources of the discipline or are received free from some supermarkets of Cluj-Napoca (which withdraw them from the shelf on the last day of validity) based on cooperation agreements. Since the number of samples is large, each student has the opportunity to examine 3-4 units from each product.

Food hygiene, quality and technology course II/ Food inspection and control II

Teaching materials is represented by milk (cow and sheep), various dairy products (acid milk products, cream, cheese, butter), eggs provided by the USAMVCN Didactic Experimental Station, Faculty Biobase and Hospital for farm animals, and milk processing units mentioned in chapter 6.1.7. (eg. SC Comlact SRL, Montana CAD, SC Friesland Campina SA). Also, some foods of animal origin (milk, eggs, honey) for practical activities for sensorial, physicochemical and microbiological exams are bought in the retail network of stores in Cluj-Napoca. Since the number of samples is large, each student has the opportunity to examine 3-4 units of each assortment.

Food inspection and control I

Organs of cattle, swine, sheep and horses are provided free of charge by slaughterhouses mentioned in chapter 6.1.6 with whom FMVCN Cluj-Napoca has a collaboration agreement. Carcasses of sheep and pigs were provided free of charge by SC SERADRIA SRL, respectively are purchased from the retail network of hypermarkets in Cluj-Napoca. During every practical work, each student examines 3-4 sets of organs (head, tongue, lungs, heart, spleen, liver, kidney, gastrointestinal mass) of the species mentioned above. Each student examines one half-carcass of sheep and pigs, while during subsequent visits to slaughterhouses, the students examine more carcasses, including cattle and horses.

Slaughterhouse examination of poultry - the carcasses and organs of broilers are provided without charge by the two poultry slaughterhouses referred in chapter 6.1.6.; the examined carcasses and organs are generally withdrawn from the line because of anatomic-pathologic changes. Each student has the opportunity to examine 8-15 pluck organs and the afferent carcasses.

Samples for examination in order to identify Trichinella spp. are provided by individuals who bring samples for this exam. Positive samples with Trichinella spp. are provided by the regional Veterinary and Food Safety Laboratory (DSVSA Cluj).
7.1.5 Consultation and Patient Flow Service

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.

Ensuring a steady flow of casuistry in the FMVCN clinics requires adaptation to a program to meet the increased demands of the owners of these species. In this respect, the consultation and treatment activity is planned during a calendar year on two major time periods: teaching and the extra-teaching period that corresponds to sessions, holidays and leaves (vacation). It should be noted at the outset that the specialized veterinary services program offered to this category of animals is not influenced by the cyclical succession of the two periods. The didactic period is expanding over two semesters accumulating 28 weeks during which clinical work is conducted in the presence and with the direct involvement of students in the 4th, 5th and 6th year.

In the extra period extended over 24 weeks, Pet Clinic consultations and treatments are provided by current teachers rotate on a schedule established at each clinical discipline. During teaching periods, consultations take place 5 days per week between the hours 8:00-20:00 and during the weekend; consultations are provided by the Emergency Hospital staff (permanent physicians and interns).

At the request of the Emergency Hospital, the staff of specialty clinics offer special consultations/intervention during the weekend at any time by teachers according to an own rotation program. This also applies during the 5 working days between 20:00-08:00.

7.1.5.2 Patient Flow

The total number of animals (cases) for all clinics (combined) during daily consultations hours are listed in the following table

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of cases</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food producing</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>bovine</td>
<td>73</td>
<td>7</td>
</tr>
<tr>
<td>ovicaprine</td>
<td>84</td>
<td>15</td>
</tr>
<tr>
<td>porcine</td>
<td>49</td>
<td>7</td>
</tr>
<tr>
<td>Other farm animals</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Poultry</td>
<td>42</td>
<td>2</td>
</tr>
<tr>
<td>Rabbits</td>
<td>57</td>
<td>13</td>
</tr>
<tr>
<td>Equine</td>
<td>266</td>
<td>19</td>
</tr>
<tr>
<td>Companion/exotics</td>
<td>Canine</td>
<td>4378</td>
</tr>
<tr>
<td></td>
<td>Feline</td>
<td>1083</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>254</td>
</tr>
</tbody>
</table>

Patient flow. Number of cases: a) received for consultation b) hospitalized in the faculty clinic in the past three years

Under the category “other species” we mention: chinchillas, ferrets, exotic birds-parrots, turtles, rabbits, iguanas, lizards, camels, llamas, exotic fish, etc

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.

The transport of sick animals to the University Clinics may be requested by owners of sick animals, by veterinarians or by administrator of animal protection units. This service is
being paid for according to the fees in force. Sometimes, the transport is free of charge, according to the special situation/convention.

Currently, the Faculty of Veterinary Medicine Cluj Napoca has three transport vehicles dedicated to sick animals:
- Two standard trailers for large animals (horses, cattle), 2 places each;
- One veterinary ambulance available for pets, properly equipped for this purpose. The veterinary ambulance may be used, if necessary, for transport of other types of livestock (sheep, goats, swine, leporidae, birds)

### 7.1.7 On-call emergency service

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

FMV offers emergency veterinary assistance through the Emergency Veterinary Hospital on a non-stop basis, for all animal species.

The Emergency Veterinary Hospital has its own staff (director and 3 vets, 5 interns and students). It provides different services according to the teaching program:
- when the specialty clinics are open:
  - registration of the patients;
  - provides vital support to patients in critical condition;
  - directing the patients to the specific clinics;
- when the specialty clinics are closed (these clinics provides on call service):
  - registration of the patients;
  - oversees and treats hospitalised animals according to the indications of the veterinarian that is responsible for the case;
  - provides vital support to patients in critical condition;
  - requests specialised (team) intervention if necessary (on call service provided by specialised clinics).

The students register each clinical case and are directly involved in all stages of its management - consultation / treatment / hospitalization.

The Emergency Hospital provides vital support to patients in critical condition for the following species listed in order of frequency: dog, cat, equines, wild animals and birds, exotic animals, sheep, goats, poultry and pigs.

The information about Emergency Hospital are accessible to the general public and customers on the web page (internet).

The Emergency Hospital is working very effectively with the clinicians belonging to the specialized clinics. So, in the case of the complex cases that require a rapid interclinic consult, a team of specialists meet and manage the patient at the Emergency Hospital.

### 7.1.8 On farm teaching and outside patient care

#### 7.1.8.1 Ambulatory clinic

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)?

The mobile clinic is functional on a non-stop basis. The purpose of the mobile clinic is to provide emergency services and other on-farm services for animals (bovine, ovine, pigs
and horses), and also provides opportunities for teaching/learning. The mobile clinic has an 8 seat capacity and special space for equipment.

The mobile clinic activity is based on the direct requests of small farmers or large farms with whom the Faculty of Veterinary Medicine has signed contracts of collaboration. During the consultations provided by mobile clinic activities, there are routine clinical surveillance and emergency clinical activities.

Routine clinical surveillance activities are planned operations that enter the clinical training program dedicated especially for student study years following clinics rotation. Each species has a given number of hours according to the teaching plan adopted by the Faculty Council.

In the equine clinic, students of 5th and 6th years can perform field visits with the mobile clinic for routine clinical surveillance in state/private stud farms and horse clubs. The frequency is required by the teacher coordinator but no less than one field visit per clinical stage.

The mobile clinic reacts to the emergency calls and moves on site with teachers and students during training periods (28 weeks) or in the extra-didactic period (24 weeks). Emergencies for this species usually require transport of sick animals in the Faculty clinics. In these cases, student involvement requires active participation in consultations, biological sampling, implementation and monitoring of patient care protocols. These operations take place both during the teaching program and outside of it.

Involving students in managing emergencies outside the teaching program is done by telephone group call of the group that is programmed for clinic rotation in the equine clinic. Students who overtake the case are totally involved in its management (under the coordination of the teachers) until it is solved (cured or the animal has died).

In the case of death, the group of students is responsible for actively participating in necropsy.

In the ruminant clinic routine clinical surveillance is done through periodic visits to farms with students of the 5th and 6th year, on a schedule set by clinics rotation.

Emergencies (eg. dystocia, abomasum displacement) are solved in farms, and difficult cases that require investigation, monitoring and complex treatments (eg. pregnancy toxemia, fat mobilization syndrome, neonatal diarrhea syndrome) are transported to the clinic by Faculty transport means or by the farmer means. Emergency cases driven to the Faculty and received by the Emergency Hospital are distributed towards the specialist clinics for consultation, diagnosis and treatment. In these cases, 5th and 6th year students are involved in consultations, laboratory tests, diagnosis, monitoring and therapy both during the teaching program and outside of the working hours, respecting the same the protocol set out for horses.

In the clinic for pigs, poultry and rabbits, the majority of casework, including emergencies, is handled on farms.

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

Transport of students with the mobile clinic is achieved using two minibuses, each with 15 seats, which are Faculty property or if needed, 15 seats minibuses rented from private companies.
There are also two minibuses dedicated to the mobile clinic with a capacity of 8 +1 seats (one added with permanent veterinary equipments and materials). These are used for the transport of students and coordinator teacher who drives the microbus.

For field visits to large farms situated at distances over 100 km, is made with a 50-seat bus that is the property of USAMVCN. Several groups of students and many teachers are moving toward one or, usually, more farms.

Portable medical equipment (eg. ultrasound, surgical kits, obstetric kits, probes, catheters, restraining devices, etc.) drugs, supplies and other specific technical features, accompany each field visit, facilitating medical maneuvers for routine surgical interventions (eg. rumenotomy, abomasum displacement surgeries, orchidectomy, spaying, cesarean, podiatry, current treatments, screening for contagious diseases, sampling for metabolic surveillance of cattle, collection of samples for parasitological examinations, etc.).

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Seats</th>
<th>Type</th>
<th>Location/Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus</td>
<td>55</td>
<td>Mercedes</td>
<td>USAMV</td>
</tr>
<tr>
<td>Mobile clinic 1</td>
<td>8+1</td>
<td>Mercedes</td>
<td>FMV</td>
</tr>
<tr>
<td>Mobile clinic 2</td>
<td>8+1</td>
<td>Hyundai</td>
<td>FMV</td>
</tr>
<tr>
<td>Mobile clinic 3</td>
<td>15</td>
<td>Renault</td>
<td>FMV</td>
</tr>
<tr>
<td>Autolaboratory</td>
<td>5</td>
<td>Toyota Hilux</td>
<td>FMV Parasitology</td>
</tr>
<tr>
<td>Autolaboratory</td>
<td>5</td>
<td>VW</td>
<td>FMV Parasitology</td>
</tr>
<tr>
<td>Autolaboratory</td>
<td>5</td>
<td>Toyota Hilux</td>
<td>FMV Pathology/Forensic medicine</td>
</tr>
<tr>
<td>Autolaboratory</td>
<td>5</td>
<td>Renault scenic</td>
<td>FMV Reproduction</td>
</tr>
<tr>
<td>Contractual arrangement</td>
<td>15-20</td>
<td>Different srl</td>
<td>Private</td>
</tr>
</tbody>
</table>

In the case of horses and farm animals, each clinical stage includes at least one routine visit to farms located within a radius of 50-100 km around the city of Cluj-Napoca.

The minimum number of visits is frequency completed by the appearance of surgical or obstetrical emergencies where, according to contracts between the Universities and the farms, require movement outside the program of teams of clinics teachers and students. These sessions will be conducted as extra-program and will be recorded as hours actually performed on the clinics rotation.

Students record all the required maneuvers in special notebooks during mobile clinic visits and an accompanying teacher and species responsible as a supervisor sign these activities.

It is necessary to mention the fact that in FMVCN there are four auto-labs that, in addition to space for equipments, also possess a number of seats for persons (3-4). These cars are commonly used in on-site interventions, and in the most cases the teachers are accompanied by students.
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>
<thead>
<tr>
<th>Species</th>
<th>Number of patients</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food producing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bovine</td>
<td>1522</td>
<td>1575</td>
</tr>
<tr>
<td>small ruminants</td>
<td>188</td>
<td>990</td>
</tr>
<tr>
<td>swine</td>
<td>150</td>
<td>77</td>
</tr>
<tr>
<td>Other farm animals</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poultry</td>
<td>5397</td>
<td>55</td>
</tr>
<tr>
<td>Rabbits</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Equine</td>
<td>180</td>
<td>216</td>
</tr>
<tr>
<td>Companion/exotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canine</td>
<td>83</td>
<td>102</td>
</tr>
<tr>
<td>Feline</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Poultry (flocks)</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Rabbits (production units)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Herd visits (overall)</td>
<td>138</td>
<td>163</td>
</tr>
</tbody>
</table>

Number of cases seen by the Ambulatory clinic in the past three years

Poultry (flocks)- the number is to be extracted from the list of economical units that collaborate with FMV CN (ch 7.1.8.2)
Rabbits (production units)- idem
Herd visits- based on the excerpts of the Mobile Clinic Registry (evidence of visits)- see chapter 7.1

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

- Each clinic is organised at least one field trip on farm activities for all of the major species including horses, and for each group of student. According to the specialty the students activities include: handling, consultation of the patients, sampling, preventive medicine (vaccination, deworming), small surgery, gynecological investigation, ultrasound evaluation and others.
- As an average number of field clinical mobilities, the Faculty provides more more than 100 planified visits every year (an average of 3-4 visits every week during the teaching periods) to economic units for animal breeding (horses, cattle, sheep, swine, poultry etc) or local livestock. The evidence of visits is kept into a “Registry sheet for external visits” where all the visits made by the Faculty’s students and teachers are recorded. An overview of the movement of student groups can be seen here.
- In the field mobilities to solve urgent problems achieved by mobile clinic and auto laboratories are more than 100 per year.

7.1.8.2 Other farm services and outside teaching

Apart from the mobile clinic, the Faculty offers a series of services to small and medium sized animal production units.

One specialist in fish breeding runs a series of contracts for the startup and maintenance of small fish farms (exotic and productive species) in several locations.

Another type of consultancy is a complex and integrative one, dealing with the management covering nutrition, welfare, pathology and prevention, generally all aspects of
intensive animal exploitation (e.g. SC Horticola International Seviș, in the area of Sibiu County - see list of economical units).

### 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.**

Other sources of material for clinical training are represented by:

- **Animal protection associations** - usually deal with stray dog and cats and bring cases to our clinics that are treated mainly pro-bono;
- **Hunting and flaying of stray dogs** - the pound - usually provides cases for sterilisation of stray dogs collected from the streets of the city;
- **Private donations** - stud farms (for horses).

**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.**

In the pet, equine and farm animal domain, the FMVCN is notable among other veterinary services/clinics, public or private in the Transylvania region, but not only, by the following valid arguments:

- a highly qualified human resources, trained and specialized on species oriented clinics, clinical laboratory, imagistics, and pathology;
- nonstop veterinary medical assistance (through the existence of the Emergency Clinic, Hospital, and permanent work program in the specialised clinics);
- better equipped than other private veterinary clinics in the region; the existence of **state of the art** clinical and laboratory equipment (anesthesia, blood gas analyzers, hematology and blood chemistry equipment machine, radiology, CT, ultrasound portable and stationary high performance video endoscopes, laparoscope, arthroscope, etc.).

Regarding human resources responsible for the clinical activity there are two major categories of medical personnel:

- Teachers with a clinical experience of over 10 years of veterinary medical practice in pets, equines, ruminants, pigs and poultry;
- Young teachers with up to 10 years post-graduation. These young people work alongside experienced clinicians mentioned above and the current leadership of the Faculty are supported to apply for specialized residential programs at various European colleges.

**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.**

Faculty policy is to have close collaboration with free practice veterinarians, both those in rural areas and those in pet clinics. Thus, veterinarians receive support for their
veterinary action plans (accepting students in extramural traineeships) and for mass actions in households or farms, accepting groups of students accompanied by teachers for clinical training for farm animals. Professional collaboration includes consultations of complex clinical cases, either by consultations in the field or sending cases to the university clinics, respecting the code of ethics and deontology. Providing assistance through the mobile clinic is also a practice for animals which for various reasons cannot be moved.

In the case of pets, the Faculty collaborates with local clinics in a similar way, many students who are passionate about these activities find places to practice and/or volunteer in these private practices (about 40 in Cluj-Napoca).

The Faculty’s facilities and qualified personnel provide support for pet physicians by consulting, further investigation, treatment or hospital admission in difficult cases.

The types of cases received for consultation in FMVCN vary as far as primary cases and referrals are concerned. For example, it is obvious that the Emergency Unit has more than 95% of its cases as primary cases, while the rest of 5% might be special cases that only require brief evaluations or treatments.

The classical clinics have more referral cases than primary ones. Referrals represent an average of 60-70%. It is quite difficult to extract some clear raw figures as owners from the urban area have, generally speaking, a favorite or known doctor that they request and visit directly, when in the FMVCN Clinics. The cases seen by the mobile clinic are usually evaluated by 2 specialists (usually those available for the field visit - scheduling issues as well) and are mainly referred cases from the local doctor (or they are at least briefly evaluated by a local doctor).

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.).

Teachers cover many of clinical specialties. The clinical services and education are species oriented, provided by teachers with experience in different specialties (internal medicine, reproduction, obstetrics, surgery). In addition, there are narrow specializations of teachers (eg. dermatology, cardiology, imaging, orthopedics, dentistry, reptile’s pathology, wild animal pathology, fish pathology, intensive care, anesthesia, physiotherapy, etc.).

As a basic rule, program of consultation/treatment on various clinical specialties overlaps teaching program. The teacher who teaches a particular clinic will provide consultations, along with the students. When there are not didactic activities in a specific clinic, clinical activity is provided by a specific program. In general, during the five days a week, between 8.00 and 20.00, faculty has working program on all clinical services. During weekends and holiday periods, clinical activity is provided by emergency services personnel and teachers scheduled to be present, or to come to phone call.

Indicate the relationship the Faculty has with outside practitioners (in small companions 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).
Being a reference center in veterinary medicine, the FMVCN maintains relationships with practicing veterinarians around the country.

The high level of training of teachers coupled with the existence of a modern infrastructure and high-performance equipment provides a generous service offer for practitioners in many fields: continuous training programs, workshops, farm advisory, solving complex cases, imagistics, cardiology, and laboratory diagnosis (feed quality analysis, blood biochemistry, hematology, necropsy, histopathology, bacteriology, virology, mycology, parasitology, etc.).

The associated teaching staff is selected among practicing veterinarians who have completed doctoral studies in the FMVCN and conduct clinical activities in private practices or clinics. This category of teachers is offering students outstanding opportunities for clinical training in general and species-oriented training. This extramural clinical activity takes place in selected veterinary medical units for groups of 3-4 students, guided by the associated teaching staff. In these circumstances, students actively participate in making routine consultations or mass veterinary actions (blood sampling, vaccinations, deworming, etc.).

The results of clinical examination and laboratory exams (usually performed on samples brought at the Faculty), and the diagnosis and treatments are recorded in the clinical observation sheets submitted to the supervising teacher. Commonly, clinical cases that cannot be solved in private practices or clinics, or require hospitalization are sent to FMVCN clinics accompanied by all medical history recorded in observation sheets prepared by students under the supervision of the associated teacher. Therefore, in the species clinics, the students have an overview of this type of casuistry, and careful monitoring is possible under conditions of hospitalization and access to modern equipment for diagnosis and treatment.

Traditionally, FMVCN cooperates with the official veterinary authorities and with regional veterinary diagnostic laboratories in the Transylvania region. Some veterinarians employed at the institutions mentioned above are also associated faculty teachers facilitating the extension of student practical activity in these institutions.

Of great importance is the close collaboration of FMVCN with a rather large number of practicing physicians, which help make arrangements for extramural practice periods for students. Students are encouraged to use the recommended lists of doctors and units. (page dedicated to practice on the FMVCN site) (see chapter extramural work).

A noteworthy aspect is the close collaboration between faculty and other outside bodies involved in veterinary forensic medicine. In the department of Pathology operates a core of teachers (and students in their final years) whose work is nationally recognized and requested for forensic services by the police, control bodies of the Forestry Department, hunting associations and association for animal welfare.

A good collaboration is the relationship with the local, regional and national Sanitary Veterinary and Food Safety Authorities (eg. DSVSA Cluj, DSVSA Satu Mare, DSVSA Maramures etc), where most of the students in the final years are involved, together with the teachers of FMVCN in performing a part of practical activities in the laboratories and control units of these units. Also, some DSVSA employees are associated teachers in FMV, and are involved both as practice supervisors of extramural activities and tutors of students for the same activities.

Another category of collaboration with practitioners is having "invited speakers". They are invited to present their experience on some specific situation related to a specific territory area or interest area. Of note is the case of physicians in the field (see list of AVER
activities) or even some practitioners in the city (eg. Dr. Timen Andrei, former teacher in FMV CN, and President of RoSAVA, regularly invited to various activities, and tutor for many students of the English line).

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.

- Older system of paper records through the clinical cases registers in every clinic and in the Emergency Hospital;
- Necessity to shift towards a centralized system, with electronic register control, while maintaining a dual record system: clinical/electronic
- Electronic case record system:
  - network of 15 PC terminals placed in all FMV CN clinics, Emergency Hospital and clinical laboratories (including pathology), that have installed a specific application for veterinary management (MARAVET Soft) (sponsorship by Alumni);
  - complex system that manages the routes of cases, diagnoses, treating physicians, clinical referrals to other clinics, treatments, laboratory work etc
  - the system shows and stores casuistry since 2011 (partially) and increases as percentage in 2012-2013.
- The rallying action for a register for owned dogs - RECS (national system under the control of ANSVSA and the CMVR) - user licensing;

\[ R_{11} = \frac{\text{no of students graduating annually}}{\text{no. of food producing animals seen at the faculty}} = \frac{102}{184} = 0.554 = 1.80 \]

\[ R_{12} = \frac{\text{no of students graduating annually}}{\text{no. of individual food animal consultations outside the Faculty}} = \frac{102}{1802} = 0.056 = 17.8 \]

\[ R_{13} = \frac{\text{no of students graduating annually}}{\text{no. herd visits}} = \frac{102}{121} = 0.842 = 1.187 \]

\[ R_{14} = \frac{\text{no of students graduating annually}}{\text{no. of equine cases}} = \frac{102}{258} = 0.395 = 2.53 \]

\[ R_{15} = \frac{\text{no of students graduating annually}}{\text{no. of poultry, rabbit cases}} = \frac{102}{91.6} = 1.113 = 0.898 \]

\[ R_{16} = \frac{\text{no of students graduating annually}}{\text{no. of companion animals seen at Faculty}} = \frac{102}{4968} = \frac{1}{0.0205} = 48.78 \]

\[ R_{17} = \frac{\text{no of students graduating annually}}{\text{Poltry (flocks)rabbis (production units seen)}} = \frac{102}{4.67} = \frac{1}{21.84} = 0.045 \]

7.1.11 Other species

- NAC clinic (exotic species)- permanent program
- Physiotherapy - providing services based on a previous appointment
7.2 Comments

- Large number of farm animals seen outside of the Faculty, as a strategy, used to accustom students to the realities of rural veterinary clinics and to complete casuistry for large animals;
- A increasing mobility with students with the mobile clinic/in field visitation due to the purchasing vehicles, auto labs, equipment for mobile clinics, and hiring minibuses;
- Smaller number of cases of horses presented at the faculty clinics is due mainly to the fact that the most horses in the region are working horses, whose economic value is low and the owners do not afford complex therapeutic evaluation or sometimes even transport. These disadvantages were overcome by field visits with groups of students, especially at Beclean stud farm and private breeders, for procedures that ensure acquisition of first day skills.
- In order to increase the number of cases of equine, the faculty currently supports transport for more complex cases which require laborious investigation and medical procedures. Also, new facilities and equipments (eg. for anesthesia, endoscopy, and surgery) will increase the number of consulted/hospitalized horses inside of faculty.

7.3 Suggestions

- The increasing specialization of staff and clinics, and strengthen the faculty as reference veterinary clinics.
- Increasing the number of the field interventions with the mobile clinic;
- Strengthening relationships with private practices;
- Increasing the number of farms/herds for which the faculty provide full/integrated services (nutrition, welfare, diagnosis, treatment, productions control);
8 Library and learning resources

8.1 Factual information

8.1.1 Main Library

- is this specific to the veterinary training establishment?
- is this common to two or more establishments?

The library of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca is a central service provider, it is a university organizational unit carrying out educational-, service- and scientific tasks.

This establishment is not specific to veterinary training; it is common to all the faculties from USAMV Cluj-Napoca. Equipped with access to online and print media, learning facilities and modern computers and staffed with specialised personnel, the library is an attraction for students and researchers.

The University main library consists of a reading room with free access to books and journals, a room for individual learning and access to 19 computers with internet connection, working areas for librarians and storage rooms for books and journals. Wireless internet connection is provided in all the main library areas.

The library system consists of the main library and 67 satellite libraries located at different units and departments of the University, all these small library units are managed by the main library. The University library holds a variety of mandatory textbooks and documentation materials on all the different faculties’ subjects, including veterinary profession. University library offers help and guided tours for new users. To gain access to University library, students have to identify themselves and they receive a free of charge library card. Also non-students can gain access by paying a fee.

- Full time equivalents of part time employees
- Number of full-time employees

The Research Vice-Rector is responsible for the direct supervision of the University Library. It is managed by a head librarian who submits an objective and financial project plan of the library and is responsible for its completion after the validation.

The library currently employs 10 full-time staff members. These are professional librarians with academic degrees (4 with Horticulture degrees, 2 with Agriculture degrees, 2 with Biology degrees, 1 with degrees in Philology and 1 with degrees in Automation and Computer Sciences). All staff members contribute to user services at the information desk and in the lending department.

- Number of journals received each year as hard copies,
- Numbers of full access electronic journals
- Availabilities for online literature search
- Availability of textbooks

In 2013 the library received 907 hard copy journals and periodicals and the number of full access electronic journals is 8000.
The online resources and databases for Veterinary Medicine are Science Direct, Springer Link, Wiley Online Library, PROQUEST Academic Research Library, Cambridge Journals Online, Thomson ISI - Web of Science.

It is important to mention the contribution of former FMVCN graduates that sponsored access to a number of over 30 books and textbooks that are “golden standards” in veterinary medicine.

Since 2000 the main library of USAMVCN is using the integrated library automation system LIBERTY3. Liberty3 is an Internet/Intranet application that includes the latest concepts for acquisitions, cataloging, MARC interface, thesaurus, inventory, serials, circulation, borrowers, and selective dissemination of information, inter-library loan, online catalog, system administration, reports and statistics. It also has special facilities for interconnection system libraries or branches of the same institution, and for cataloging and accessing remote electronic resources. Besides the current operations of the library (cataloging the collection, loans, refunds, reservations, inventory, etc.), by Liberty3 system the users can access the library’s website, the online catalog of library, information about services and the latest news in a high quality design, without requiring the knowledge of web graphic. The main features of Liberty3 are:

- can be managed and used by a browser from any computer with Internet access, based on an individual account;
- can catalog the various categories of resources, from classic printed materials to materials ' unconventional ' (as computer files, web sites);
- allow online access based on individual rights to the resources cataloged
- includes a full text search engine;
- has facilities for simultaneous interrogation of multiple library catalogs (regardless of information system owned by them) via Z39.50 client module;
- own rules of safety for operators and readers access;
- allows library members to manage their individual account (reservations, extensions, profiles of interest).

In 2013 the textbook collection of the library contained 10127 books for Veterinary Medicine.

As of December 31, 2013, the library collection comprises 124110 books (in volumes), 42957 periodicals (in volumes), 6 databases (in titles), 8000 e-periodicals (in titles) and 186 e-books and 7 on-line Encyclopaedies.

- Number of student reading places
- Library opening hours: weekdays, weekends during term-time /during vacations

Currently the library of the USAMVCN offers 118 reading places - a reading room with free access to books on shelves (20 seats) and a room for individual learning with 98 seats and access to 19 computers with internet connection.

The library is open from Monday to Friday from 8 am until 8 pm during the semesters. During the exam sessions from Monday to Friday from 8 am until 10 pm and Saturday from 8 am until 2 pm. During vacations from Monday to Friday from 8 am until 3.30 pm.

Benchmarks 2013:

- Number of library visits (physically) - 42359
- Number of library visits (virtually) - 56494
Self Evaluation Report 2014

- Number of current borrowers - 5378
- Number of loans (volumes) - 59104

Indicate how the facilities are used by students

The Library collections are registered in library catalogues which include bibliographic data of stored documents, information about items owned by the library (resources) and about the place of making them available to users (location). The library catalogue is created in an automatic way – a computer catalogue. The catalogue of the USAMVCN Library is created and displayed with the use of integrated library system Liberty3.

Students can borrow from the loan department 20 textbooks and 10 books for 30 days or one semester (depending on the status of the item) with possibility to extension of lending period. The students can use the on-line catalogue library via Internet by connecting with the servers outside the library.

They can also use scientific literature and journals in the reading rooms of the library, and can access the databases from the computer network (19 work-stations) or using the wireless connection on their own laptops.

At the beginning of the academic career, every new student receives library training. Photocopying and printing options are available for students and teachers.

8.1.2 Subsidiary libraries

- 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.

The main library manages the 67 small departmental libraries based at different units and departments of the University.

Departmental libraries concentrate on certain departmental or clinical subjects and are open and accessible for students and staff during University working hours.

These subsidiary libraries are not connected by a network, but the main library holds information on the book stocks of each subsidiary library.

The departmental and main University libraries together hold reading copies and copies for loaning of all the mandatory textbooks determined in the course syllabi. Interlibrary loans and transfers are possible but relatively laborious and are not used by the students.

8.2 Comments

It is planned for our University to change the present location of the library into a newly constructed building. The inauguration of the new library is set to late 2014, but it depends a lot on some final fundings and approvals. The new building is finished 95% and it requires some elevator facilities and some of the fire prevention facilities.

The new Library which is going to be opened soon will have generous spaces for both individual and group work.

8.3 Suggestion

RFID system would be useful to be implemented in the new building.
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.

| Total number of undergraduate students | 1049 |
| Total number of female students       | 695  |
| Foreign students                     | 168  |
| from EU countries                    | 101  |
| from non-EU countries                | 67   |

Undergraduate student composition in year prior to visitation

- According to EC 36/2005, the minimum number of years for Veterinary Medicine studies is at least 5;
- According to the law 1/2011 (National Law of Education), in Romania a minimum of 6 years are required, with a minimum of 5500 curriculum hours;
- FMVCN stipulates a minimum of six years as a period of preparation for Veterinary undergraduate training (MNY = 6);
- We confirm the general trend of feminization of the profession; each year the share of women among students of veterinary medicine increases (66% in 2013)

9.1.2 Student admission

- According to Law 1/20011 the general framework is established, which is stated in a number of annual specific methodological norms released by the Education Ministry;
- Order no. 3544/2013 on the general organization and admission for undergraduate, master's and doctoral studies for the academic year 2013-2014 includes the elements necessary to establish own methodologies for students admission;
- The USAMVCN Charter comes with specific details on how the admission is conducted through a series of USAMVCN own decisions (data, conducting tests, displaying results, etc). In order to disseminate information, all data is displayed on the websites of the Faculties and a brochure with all the details on the admission procedure is published. In addition, for students in different language sections, there is an international relations service that manages the entire procedure under the supervision of the Vice-Rector.
State the minimum admission requirements

In Conformity to the law, only high school graduates with promoted baccalaureate may apply for higher education.

Indicate whether there is a limit to the number of students admitted each year

- The teaching council proposes a maximal number of students who can be trained in the Faculty; these proposals are voted on by the USAMVCN Senate;
- Every 5 years, the Romanian Agency for Quality Assurance in Higher Education (ARACIS) evaluates the Faculty and sets the maximum number of students that can be admitted annually.
- The maximum number of students approved by ARACIS for the Romanian language line of study in FMVCN is 235. Despite this allocation, in the last 3 years, FMVCN has decided not to make full use of this allocation but gradually decrease the number of students admitted in the first year. In this year we have reached a total of 180 students.
- For each English and French language study programs, the approved capacity (maximum number of students) is 30.

Describe how the number of government-funded student places is determined.

- The number of students studying veterinary medicine in Romanian language financed from the state budget is set by the University, according to the proposal of the Faculty and of the total places awarded by the Ministry of Education.
- USAMV generally benefits of 850-900 annual budgeted positions (for 2014, there were 860 positions)
- The Administration Council and Senate decide the distribution of positions for each Faculty. The criteria for making this distribution take account of:
  o tradition of a particular program of study;
  o maximum number approved by ARACIS;
  o level of employability of graduates/insertion in the labor market;
  o faculty facilities, educational facilities;
  o attractiveness of the study program.

Outline any selection process (or criteria) used in addition to the minimum admission requirements.

Until 2013 the criterion for admission to studies in FMVCN was the average grade of the baccalaureate with an additional criterion to tie identical grades (grade in the Romanian language exam). In 2012 the Faculty Council of FMVCN decided that we need to insert an additional criterion.

FMVCN is the first of the veterinary faculties in the country who decided in 2013 to re-introduce special examination for students selection.

The FMVCN student’s admission/selection procedures for the Romanian language line consist in corroborating two grades:
- Baccalaureate grade (85% share);
Biology examination grade (15% share): examination in Biology (Anatomy and physiology of humans, a subject mandatory in all high schools in Romania) consists of a "multiple choice" test required at the application’s time; an electronic review system (Quizz WordPress module) is used.

For students in the foreign languages study lines, an equivalence of the Baccalaureate is required (made by the committee of the Ministry of Education). Then, baccalaureate grade (85% share), a motivation letter/essay about the option for the veterinary profession and FMVCN (10%) and volunteering work in veterinary medicine or related activities (eg. animal husbandry and welfare) are considered.

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.

The range of students presenting for admission is very diverse. We can identify candidates who come from areas unrelated to the biomedical field.

The data presented are those relating to students admitted to FMVCN in 2013-2014.

- Vocational education high schools (2%) - relatively small number of graduates (music, art)
- Human sciences pathway (16%) - generally, there is a small fraction of candidates from such schools
- Theoretical high schools (61%) - prevailing students from "Natural Sciences" high schools, but there is a significant proportion of students coming from “Mathematics” high schools;
- High schools with a technology pathway (11%). Due to the reduced number of these high schools (eg. veterinary/livestock pathway), the number of candidates coming from such schools is smaller every year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number applying for admission</th>
<th>Number admitted</th>
<th>Standard intake</th>
<th>Other entry method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>N* (2013-2014)</td>
<td>448</td>
<td>253</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>N-1 (2012-2013)</td>
<td>570</td>
<td>203</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>N-2 (2011-2012)</td>
<td>502</td>
<td>264</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>N-3 (2010-2011)</td>
<td>400</td>
<td>295</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>N-4 (2009-2010)</td>
<td>352</td>
<td>261</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>454.4</strong></td>
<td><strong>255.2</strong></td>
<td><strong>4.4</strong></td>
<td></td>
</tr>
</tbody>
</table>

Describe any circumstances under which extra students may be admitted to the undergraduate veterinary course

- Students transfer from other veterinary faculties, because of various reasons (eg. family, financial), according to study credits obtained, only after the first year of study;
- Completion of veterinary undergraduate discontinued studies in Romania or other countries.
- The winners of national or international scientific competitions (selected by the Ministry) are admitted by simple application, without an entrance exam;
Disadvantaged categories candidates on dedicated places (the number of places is established by the Ministry - eg. Roma citizens, Romanian ethnicity citizens from neighboring countries, Republic of Moldova, Hungary, Bulgaria, Serbia, etc.)

Outline any changes foreseen in the number of students admitted annually. If applicable, describe how the Faculty plans to adjust to these changes.

We expect a slight decrease in the number of candidates admitted to the Romanian section.

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 has elapsed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of students present after admitted year 1</th>
<th>Number of students graduated</th>
<th>Number of additionally admitted students*</th>
<th>Total number of students registered in the corresponding academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-st year (2008-2009)</td>
<td>RO: 153 EN: 6 Total: 159</td>
<td>0</td>
<td>0</td>
<td>159</td>
</tr>
<tr>
<td>2-nd year (2009-2010)</td>
<td>RO: 113 EN: 6 Total: 119</td>
<td>0</td>
<td>4</td>
<td>123</td>
</tr>
<tr>
<td>3-rd year (2010-2011)</td>
<td>RO: 109 EN: 5 Total: 114</td>
<td>0</td>
<td>11</td>
<td>125</td>
</tr>
<tr>
<td>4-th year (2011-2012)</td>
<td>RO: 90 EN: 5 Total: 95</td>
<td>0</td>
<td>35</td>
<td>130</td>
</tr>
<tr>
<td>5-th year (2012-2013)</td>
<td>RO: 88 EN: 4 Total: 92</td>
<td>0</td>
<td>16</td>
<td>108</td>
</tr>
<tr>
<td>6-th year (2013-2014)</td>
<td>RO: 82 EN: 4 Total: 86</td>
<td>0</td>
<td>9</td>
<td>95</td>
</tr>
<tr>
<td>over 6 years</td>
<td>RO: 0 EN: 0 Total: 0</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>90.71</td>
<td>110.83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student flow and total number of undergraduate veterinary students (* students re-doing years due to the non-fulfilment of credits or from medical reasons, transferred)

The table tracks the number of students admitted in the first year of study in the Romanian section in 2008-2009 and how many of them remained in the initial nucleus (column A);
The English language study section started in 2008 (column B);
The additionally admitted category refers to those who have joined the original nucleus (column A) due to repetition (medical cases or failure of completion of criteria for the minimum number of credits corresponding to the year of study) or transfer from other faculties;
The last column summarizes the number of students from the two sections (Romanian and English).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number graduating</th>
</tr>
</thead>
<tbody>
<tr>
<td>N° (2013-2014)</td>
<td>95</td>
</tr>
<tr>
<td>N-1 (2012-2013)</td>
<td>112</td>
</tr>
<tr>
<td>N-2 (2011-2012)</td>
<td>100</td>
</tr>
<tr>
<td>N-3 (2010-2011)</td>
<td>97</td>
</tr>
<tr>
<td>N-4 (2009-2010)</td>
<td>102</td>
</tr>
<tr>
<td>Average</td>
<td>101.2</td>
</tr>
</tbody>
</table>

Number of students graduating annually over the past six years
9.2 Comments

Comment on standard of the students starting the course

The basic knowledge of candidates is highly variable. There are a percentage of those from high schools that provide basic biological science knowledge (natural sciences), but they represent only about 24% of those admitted.

Other admitted students come from high schools that do not offer additional training in the areas of biology and chemistry, which makes the theoretical basis for students relatively poor. For this reason it was introduced an exam in biology, based on the relevant manual, announced the year before. For the next admission (2015), we expect to introduce an additional exam in organic chemistry.

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

- Due to dependence on government funding which in turn depends on the number of students, it is quite difficult to determine an optimal proportion of accepted students. Relatively high dropout rates and the studies extension of more than six years, in individual cases, are also a limiting factor;
- The slight decrease of candidates number accepted in the first year (Romanian section) leads to reductions in the number of groups and decrease in the number of hours of teaching basic subjects;
- Even if national and university regulations allow the Faculty to accept a greater number of candidates (235 in the Romanian section) the FMVCN decided to occupy only 3/4 of the maximum number allocated by ARACIS and MEN. This decision was taken based on the desire to increase the quality of teaching-learning activities.
- In the coming years, when we will have an external clinic for large animals, we suggest having a relatively small number of enrolled students.

Comment on the adequacy of the facilities and teaching programme to train the existing number of students

- The existing faculty’s facilities provide good conditions for the veterinary profession preparation of current enrolled students; building new educational spaces (eg. external clinic) and constant upgrading of equipment will ensure continued growth of quality education.
Comment on the progress made by students in their studies, and the Faculty’s ability to ensure that satisfactory progress is maintained

- It is suggestive to mention the significant percentage of students who withdraw after the first year (a rate of about 15% this year but higher in the past) in the Romanian language section of studies. For them it is possible to re-register in the first year, but only by a new admission process/examination (in accordance with national and USAMVCN regulations); this type of second application happens in a very small number of students.

- The rate of loss of students after the first year in the foreign languages sections is much smaller (about 1/year), the percentage of those with strong motivation being high in this section.

- Explanations for the loss of a large number of students in the first year are many. Some students realize that the veterinary profession/study program is too demanding or is not appropriate for their expectations. Other students decide to attend the Faculty of human medicine. A major cause is nevertheless the failure to pass many exams.

- The definitive loss rate (studies cessation) of students in higher years of study is small (max. 2% during 2-6 years) but there is a high percentage (about 10%) of failure of promoting of the academic year. Therefore, some students repeat one or more years of study.

- We have changed to a more lax system of promoting an academic year by acceptance of a greater number of remaining credits (see chapter on criteria for promotion of students);

Comment on the percentage of students that will eventually graduate

- The number of students who complete entire study program and graduate after 6 years is around 60%. When calculating the total number of graduated students (including those who completed their studies after more than six years, or in other faculties) graduation rate is around 70%.

9.3 Suggestions

- Increased selectivity in the admission of students and diversifying the selection criteria (ie. growing importance in biology exam and introducing a chemistry exam, evaluating students’ motivation in Romanian language, similar to those in foreign language);

- Decreasing number of students accepted (we must note that for 2014-2015 there will be admitted a maximum of 240 students in the Romanian, English and French sections, which makes the intake for this year to be reduced by approximately 6%);

- Maintaining and even increasing exigencies both in terms of staff teaching but also of students learning/evaluation;

- Further improvement in student-centered and problem solving education system
10 Academic and support staff

10.1 Factual information

Calculations for the quantification of FTE’s were made in relation to a number of documents from the Department for Personnel of USAMV:
- The calculation sources for academic staff (full-time, associate and PhD students) were so called “the title list” (list of teaching position including part A dedicated to full time professors and part B dedicated to the academic positions filled by associate professors and PhD students - every position have an amount of teaching, research and administrative activities allocated) approved by the University Senate for all of the departments and the doctoral school. Title lists are drawn under the national law (Law 1/2011) and under the specific USAMVCN regulations.

<table>
<thead>
<tr>
<th>Budgeted posts</th>
<th>Non budgeted posts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VS</th>
<th>NVS</th>
<th>VS</th>
<th>NVS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department name</th>
<th>Academic teaching staff</th>
<th>Support staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full professor</td>
<td>Associate prof/Conf</td>
</tr>
<tr>
<td>Dep Preclinics</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Dep Paraclinics</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Dep Animal productions and veterinary safety</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dep Clinics</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Emergency Unit</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

The calculation of FTEs:
1. Each teacher listed in the title list Part A is actually a full time teacher - (table 10.2) = 1FTE;
2. Teaching activities specified in the title list Part B were quantified and converted into FTEs, by reference to the teaching load of teachers full time (an assistant professor has a conventional load 15 hours / week x 28 weeks = 375 hours; all FTE completed doctoral associates and assistants were calculated by reference to the
figure, no. FTEs = x/375); another method of calculation that may be used is by reference to the total of 1640 hours per year and per teacher (here entering all activities, including the ones teaching), but the result is the same.

3. To quantify FTEs of research we considered only researchers engaged exclusively in research (= 1 FTE) staff and part time paid research contract (number of contracted hours/1640 hours per year = no. FTEs) and PhD students (number of hours in research /1640 hours per year = no. FTE).

PhD students are assimilated as academic assistants or researchers or have both qualities; depending on the type of workload they have contributed with subunits of FTEs.

- **support staff**
  The FVM has 25 employees in its own support staff (laboratory assistants, technicians, caretakers) = 25 FTEs.
  Since most of the support staff is directed directly by the University, we present the share of 25% of the administrative full time staff, library, social, human resources, etc. - share of the 180 (45 FTEs). Also, consider a share of 25% of didactical farms workers (Cojocna, Hoia) - share of the 28 (7 FTEs).

**Outline how the allocation of staff to the Faculty is determined**

- The main element that the University relies on is the Labor legislation ([law no 40/2013 and 53/2003](#)).
- Several other elements, referring directly to teaching are mentioned in the [Law of Education 1/2011](#), chapter II. This law states the terms for didactical positions in higher educational system, the conditions for several categories of employees for functioning into the system, the model for the system of establishing the teacher workload according to teaching position within a department, the setup of a title list (and the mechanisms that govern this activity) and the position/duties description. Another national document (ministerial orders) stipulates all the requirements for the different positions in the academic system ([Order CNADTCU 35/27.12.2012](#), Order 4204/15.07.2013).
- Other internal documents, in accordance with the national law, are clearly stating the conditions and the requirements for academic staff, depending on didactic position.
- The teaching positions are to be referred as follows, according to their Romanian name. According to the last legislative regulations, all teachers must have a PhD title.
- The equivalents of the titles in Romanian language are listed below
  - Profesor = Full professor
  - Conferențiar = Associate professor
  - Şef lucrări/Lector = Senior lecturer/Assistant professor
  - Asistent= Assistant/Junior lecturer
- All associated teachers must have the title of PhD or they must be PhD students.
- PhD students are also part of the teaching activity in each department, most of them have a teaching duty (small parts of FTE-s, usually 20-30% of a FTE). Depending on the availability on teaching positions, especially in the recent national conditions of limitations employing staff, PhD students may perform, with extra payment, supplementary teaching activities.
Outline how the allocation of staff to the departments (or other units) within the Faculty is determined

- The allocation of staff within the Faculty is determined mainly by the charge of teaching hours (dependant on number of students, working groups, curricula etc). These are in fact the main drivers for the setup of a position description within a chair unit or a department.
- According to scientific and didactical acknowledgements, a person from a department may apply for a higher position.
- All teaching positions can be occupied only by a competition organised by the University, accepted and published by the National Education Ministry (MEN).
- The setup for opening new positions into the title list of a department is approved by the Faculty Council based on the proposal of the Departments. Then, the Administration Council and Senate finally approve the competition.

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

- Even if the salaries are not very tempting in higher education, the perspective of an academic career in FMVCN is attractive for doctoral school graduates.
- Also, FMVCN and USAMVCN extend activity of teaching staff over the legal retirement age (65 years) up to the maximum of 70 years. This extension is made under the law, at the request of teachers, on the basis of quality, by the decision of the Senate.
- In the recent years there have been various restrictions on filled vacancies imposed by MEN. There were times when filling of vacancies was stopped completely, during which openings were allowed depending on the number of vacated positions by retirement/resignation/dismissal (1:1 or 1:7) as well as periods in which they could deal easier vacancies.
- In the past two years we have used the recent legal possibility to hire teachers on a limited period (1-3 years).
- Permanent teaching and support positions can be filled by competition, just as their vacancy and approval by MEN (which frequently change the rules).
- Associate teaching staff positions are determined annually by faculty and university, based on demand. Selection is made on legal basis, based on proven performance.

Indicate whether it is easy to employ additional staff from service income (e.g. from revenues of clinical or diagnostic work)

- The Faculty can use external personnel based on time limited service contracts with freelancers or companies. Payment of these services is based on the financial resources of the faculty (eg. charges, clinical services);
Describe the regulations governing outside work, including consultation and private practice, by staff working at the establishment.

- Teaching work out is accepted but must be approved by the University.
- Outside work in private veterinary practice is accepted/tolerated by the university, as a legal right of employees.
- Often, outside work provides benefits for the University/Faculty. For example, permanent teachers who are part time associates in other institutions help to establish collaborative relationships. Two of the Faculty’s teachers are employed in the regional veterinary authority (DSVSA Cluj). Another positive example is represented by some teachers who work in private veterinary practice and teach students in their own clinics.
- On the other hand, it is true that the strategy the Faculty provides to strengthen the loyalty of their employees through stricter monitoring of clinical services provided for students training, and the financial reward of each teacher/veterinarian, depending on the services/financial revenues achieved.

Describe the possibilities and financial provisions for the academic staff to:

a) attend scientific meetings;

b) go on a sabbatical leave.

The Faculty grants financial support for teachers, partly or wholly, to attend international scientific events, if they have accepted oral presentations. The Faculty also supports publishing articles in prestigious journals, specialization courses, and especially residency programs (three young Assistant Professor).

The sabbatical leave is mentioned by labor regulations in Romania (National Law of Education 1/2011, article 288), but it has never been solicited mainly due to imposed limitations (it is restricted to full professors and associate professors that, continuously for a period of 6 years, were listed as scientific grant directors with exceptional scientific results, and only with the approval of the University’s Senate).

Ratios

\[
R_1 = \frac{\text{no total academic FTE in veterinary training}}{\text{no. undergraduate veterinary students}} = \frac{159.5}{1049} = 0.152 = 6.57
\]

\[
R_2 = \frac{\text{no of total FTE at Faculty}}{\text{no. undergraduate students at faculty}} = \frac{159.5}{1200} = 0.132 = 7.57
\]

\[
R_3 = \frac{\text{no total VS FTE in veterinary training}}{\text{no. of undergraduate veterinary students}} = \frac{136.35}{1049} = 0.129 = 7.75
\]

\[
R_4 = \frac{\text{no total VS in veterinary training}}{\text{no students graduating annually}} = \frac{159.5}{102} = 1.563 = 0.63
\]

\[
R_5 = \frac{\text{no total FTE academic staff in veterinary training}}{\text{no. total FTE support staff in veterinary training}} = \frac{159.5}{66.5} = \frac{1}{2.39} = 0.42
\]
10.2 Comments

- In recent years, the faculty has managed to increase the number of full time teachers (from 68 in 2012 to 80 in 2014), although there have been numerous legislative limitations.
- The impossibility to hire sufficient full time support staff (just 4 new persons in the last years) led to the outsourcing of services (eg. drivers, animal caretakers, translator, technician, computer scientist);
- Due to insufficient support staff, necessary workload to support teaching and services is complemented by students (volunteering, internal practice) and interns involvement, as well as veterinary technicians practical training through the current activities of the Faculty.
- The support staff was encouraged by Faculty leadership to pursue lifelong learning courses, and also to pursue bachelor courses in related fields of veterinary medicine (animal breeding, biotechnology, agriculture, biology)

10.3 Suggestions

- Increasing number of full time teaching and support staff;
- Continuous strengthening of skills/ specialization of teachers and technicians;
- Reinforcement of teacher fidelity in general, and especially clinicians, and stimulation of work within the Faculty by salary awards.
11 Continuing education

11.1 Factual information

The professional continuing education is stated between the educational objectives of the FMVCN and represents an essential aspect to ensure the quality of veterinary medical teaching and lifelong learning.

Continuing education for veterinary practitioners in Romania is very well organized since many years ago, under the auspices of the General Association of Veterinarians from Romania (AGMVR), and the College of Veterinarians in Romania (CMVR), in collaboration with the five Faculties of Veterinary Medicine from Cluj-Napoca, Bucharest (2), Timisoara and Iasi.

The continuing education in Romania is organized as a National Program of Continuing Education (NPCE) and is performed in the framework of four annually and mandatory seminars. Each seminar is credited with 15 credits and thus provides to the practitioners the possibility to gain a number of 60 credits per year. Because all veterinary practitioners are obliged by the CVR to accumulate a total number of 60 credits per year, at their demand, FMVCN organizes 3 to 4 supplementary seminars on different clinical domains.

Also, the practitioners have the possibility to gain a significant number of credits from symposiums, conferences and workshops organized by the FMVCN, or by other professional associations, like the REVA and RoSAVA.

FMVCN provides each year several subjects/topics for the NPCE seminars, according to some interest areas specified by the practitioner participants in previous meetings. The FMVCN coordinates the NPCE at regional level, which means the eleven counties from Transylvania.

The four seminars programmed in the framework of NPCE are done annually. Each seminar consists of minimum 2 theoretical presentations of 50 minutes each, performed by the academic staff of FMVCN, mainly by the specialists in different clinical and paraclinical subjects (e.g: Internal Medicine, Parasitic diseases, Infectious diseases, Reproductive disorders in animals, Surgery, Anesthesiology, Pathology, Animal Welfare and Hygiene, Pathophysiology, Pharmacology and Pharmacy, Food safety, Veterinary oncology and Hematology).

Usually, the topics of the seminars are published at the beginning of each year in Veterinary Medical Journal, edited by the AGMVR, or in Veterinaria, a journal published by the CMVR from Romania. Thus, all the veterinary practitioners have the possibility to organize and schedule their participation in these seminars at the beginning of each new year. Also, the veterinarians have several opportunities to gain credits by filling in some online questionnaires, provided by CMVR.

11.2 Comments

Comment on the quality of the continuing education programs in which the Faculty is involved. Comment on the degree of participation of veterinarians in the continuing education programs in which the Faculty is involved.

Because of so many professional decisional institutions involved in NPCE (CMVR, AGMVR, FMVs), the teaching and learning quality of the performed seminars is difficult to be evaluated. On the other hand, these seminars raise a lot of problems related to the...
topics of the lectures, which are not in all the cases concordant with a high level of interest of the veterinary practitioners. Many of them participate in this program only to gain the number of annual credits required by the CMVR.

In addition, the practical demonstrations during seminars outside of faculty are not performed very easily, due to both the high number of participants (more than 85 in each seminar) and the clinical infrastructure which is not always adequate in the some counties from Transylvania.

Due to the above mentioned NPCE weaknesses, many practicing veterinarians prefers to accumulate obligatory points by participating in demonstrations, workshops, conferences, and other scientific events organized by the FMVCN (own staff and invited teachers / specialists) or in collaboration with faculty professional associations (AVER, RoSAVA, etc.)

Annually, more and more veterinary practitioners participate in continuing education provided inside of FMVCN, and the level of their interest is increasing from one seminar to another, as well as the quality of presentations and practical demonstration. From our evidences result that during the last two year a total number of 200 veterinarians have been trained in faculty. The offered topics (eg. ophthalmology, imaging, orthopedics, intensive care, anesthesia, etc.), the state of the art facilities and equipments, and the professional level of own and invited specialists, it makes the attractiveness of training modules/stages to be increasing.

### 11.3 Suggestions

- To make the National Program of Continuing Education (NPCE) more competitive and valuable by promoting a high quality of theoretical/practical presentations/demonstrations.
- Both the academic staff and the participants (veterinary practitioners) involved in the NPCE must be better evaluated.
- Increasing the number and variety of opportunities for continuing professional education inside of FMVCN’s clinics and laboratories.
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”.

Overview of the postgraduate education programs offered in the Faculty of Veterinary Medicine Cluj-Napoca (FMVCN):

- Internship;
- PhD programs;
- PostDoc programs

12.1.1 Clinical speciality training (interns and residents)

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.

Internship

Since 2012, FMVCN runs a postgraduate internship training program. The legal basis for his implementation is found in the Law of Education 1/2011, art. 174 (2), and the EU Directive 36/2005. The initiated and developed Internship program (see announcement on FMVCN's website), is still an absolute national novelty, carried on with the consent and cooperation of the College of Veterinarians of Romania (CMVR).

The field covered by this program is veterinary emergency medicine and intensive care. The practical training of Interns runs in the Emergency Hospital of FMVCN.

<table>
<thead>
<tr>
<th>Clinical discipline</th>
<th>No interns</th>
<th>No residents</th>
<th>Diploma or title anticipated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Emergency Medicine and Intensive Care</td>
<td>2</td>
<td>6</td>
<td>Post Graduate Certificate</td>
</tr>
</tbody>
</table>

The selection of interns is by examination; the number of intern positions is approved by the FMVCN Council. The duration of a training program is 12 months. The students receive a scholarship worth 900 RON/month (about 230 Euro) offered by FMVCN from own resources. The intern’s clinical activity amounts to a total of 40 hours per week at the Emergency Hospital of the Faculty. The curriculum includes courses, workshops, case studies, and bibliography based presentations. The advantage of this program is the acquisition of additional professional skills which complement knowledge gained in the undergraduate period.

At the end of the program, interns are evaluated by a panel of experts about the competences and skills acquired. Graduates who pass the test receive a certificate of studies issued by FMVCN and CMVR.

So far two interns have completed the program and the other six are enrolled.
Residency

Unfortunately, until today FMVCN has no residency program certified by the European Board of Veterinary Specializations (EBVS). Also, in the Faculty there are no residency programs that are nationally recognized as there is no national legislation in this field.

FMVCN wants to implement EBVS recognized residency programs. The management of the Faculty stimulates the formation of specialists/diplomates by (1) inviting EBVS diplomates (Prof. Michael Day, Prof. Stefano Romagnoli) to give lectures on personal and institutional benefits related to this form of training and by (2) institutional support offered for their staff enrolled in residency programs in recognized centers.

An associate professor of FMVCN is an EBVS diplomate, European College of Zoological Medicine, specialization Wildlife Population Health - the first diplomate in Romania.

The Faculty supports this diplomate's intention to open a center and a residency program inside of the faculty.

12.1.2 Research education programmes

Postgraduate education programmes with emphasis on research predominantly include PhD programmes and Postdoctoral programmes.

PhD Programs

Doctoral studies represent the 3rd cycle of university studies, allowing students to obtain a PhD title, equivalent to skill level 8 of the European Qualifications Framework (EQF) and the National Qualifications Framework (NQF).

<table>
<thead>
<tr>
<th>Type of degree</th>
<th>Fulltime</th>
<th>Part time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD 2008</td>
<td>14</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>PhD 2009</td>
<td>14</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PhD 2010</td>
<td>14</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>PhD 2011</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD 2012</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD 2013</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD 2014</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USAMVCN/FMVCN conduct only scientific PhD programs centered on learning through research whose purpose is to develop competent human resources in research and innovation. PhD diploma is a prerequisite for careers in higher education and research.

USAMVCN is accredited as Organizing Institution for Doctoral Studies (IOSUD) with two doctoral schools. Areas in which a doctorate is offered, are: Agriculture, Horticulture, Animal Husbandry, Biotechnology and Veterinary Medicine. The PhD studies of veterinary medicine are performed in a specific doctoral school.

Doctoral studies are organized into full-time and part time form. These forms hold annually selections, under the law, for both funded places and those on tuition or funded from other sources. Doctoral schools are organized and operate within the IOSUD with PhD supervisors who have acquired this right by law.

In 2014, the doctoral school of veterinary medicine was allocated with 22 new positions (11 full time and 11 part time), all open to competition and financed by the
The Doctoral School of Veterinary Medicine has 112 students, of which 82 are in the ordinary course and 30 are those who interrupted or have extended PhD studies.

Doctoral School of Veterinary Medicine organizes doctoral studies in 13 majors fields under the guidance of 30 doctoral supervisors: Normal and Pathological Morphology, Infectious Diseases, Semiology and Internal Medicine, Veterinary Obstetrics and Andrology, Zoo-hygiene, Parasitic Diseases, Microbiology and Immunology, Surgery, Food Technology and Safety, Animal husbandry, Pharmacology and Toxicology, Normal and Pathological Physiology, Anesthesiology.

Each program offers specific training to the student cohort. The training is individually tailored for each PhD student and has a regular duration of 4 years.

The full time PhD students have a workload of 6 hours per day. This consists of the activities required by the doctoral program curriculum, teaching practical activities for undergraduate students (4-6 hours/ week), and scientific research.

Part time PhD students do not receive scholarships and they do not have a daily workload in the faculty, but they can tutor the student’s extramural practice.

To complete the doctoral studies, PhD students must present their research progress by periodic research reports. The first report called "research project" is largely bibliographic. The following two research reports contain research findings.

The final defense of the PhD thesis can only be done after publication of minimum 2 articles as first-author in journals indexed in international databases. From 2013, students are obliged to publish at least an article in an ISI Web of Science journal with impact factor (see the regulations from USAMV’Carta referring to doctoral studies RC 24 - in Romanian).

In order to ensure that the PhD thesis holds up to academic expectations, all PhD thesis undergo external peer review. The final examination is a public thesis defense in front of an official commission approved by USAMVCN Rector. Such commissions generally assemble the PhD coordinator, Faculty professors and external professors (from other universities, including foreign universities sometimes).

PostDoc Programs
The postdoctoral programs are organized by the University, in collaboration with other universities and economic entities. The postdoctoral programs are funded by research projects/ grants or by sectorial/ social European funds. The programs are designed to increase the attractiveness for research careers of young PhD awarded people, and finally, to develop human resources in research.

USAMVCN has implemented many poststdoctoral programs in the recent years but those who involve FMVCN are three:

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellular and molecular biotechnology with medical applications* POSDRU/89/1.5/S/60746</td>
</tr>
<tr>
<td>Postdoctoral School in Agriculture and Veterinary Medicine (p)</td>
</tr>
<tr>
<td>Strategic partnership to improve the quality of medical research in universities through doctoral and postdoctoral scholarships, DocMed.net_2.0*</td>
</tr>
</tbody>
</table>

Financial basis of Postgraduate Education

Please indicate when and where and whether the students require a grant or salary

Payment and doctoral student's rights is achieved according to art. 164 of Law no. 1/2011, without excluding other forms of remuneration provided for by the laws in force.
The Ministry of Education sets the level of public budget funding of PhD studies every year. Schools may finance doctoral programs, doctoral studies and research projects from other sources, public or private.

All full time PhD students in the USAMVCN/FMVCN receive grants/salaries by various sources:

- Scholarships obtained through sectorial/social European grants - 1850 RON (400 Euro)/month;
- Scholarships awarded through the budget received from MEN - 750 - 900 RON (170-200 Euro)/month;
- Scholarships from the University's own funds - 750 - 900 RON (170-200 Euro)/month;
- Salaries from research grants - depends on the load of work - approx. 1000 RON (225 Euro)/month with 2 hours /day.
- Salaries from paid teaching activities - depends on the load of work - approx. 1000 RON (225 Euro)/month with 2 hours/day.

12.2 Comments

Comment on the number of postgraduate diplomas/titles awarded annually.

In the period 2012-2014 56 PhD titles in Veterinary Medicine were awarded: 34 titles in 2012, 16 titles in 2013, and 14 titles in 2014.

Doctoral School of Veterinary Medicine FMVCN has a very good national reputation, because of excellent results in research (attracted grants, prestigious publications). This prestige is the result of the coordinators emulation and professionalism, and interdisciplinary research topics conducted in the field of comparative pathology, in collaboration with the Faculty of Medicine Cluj-Napoca.

Good scientific quality of the theses can be exemplified by the fact that no thesis of USAMVCN and FMVCN was rejected by special committees of MEN (which analyzes all theses) and a teacher of FMVCN was awarded by the European Society of Toxicologic Pathology - ESTP thesis award in 2014.

Comment on the percentage of veterinarians participating in postgraduate research training programmes.

In recent years, between 10 and 15% of veterinarians graduates follow PhD studies.

12.3 Suggestions

- FMVCN should look for any possibilities to increase the number of EBVS diplomates within staff;
- Implementation in the shortest possible time of the residency center and program - Wildlife Population Health;
- Diversification of internship programs;
- Increasing number of doctoral theses in international collaboration;
13 Research

The detail 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.

The University of Agricultural Sciences and Veterinary Sciences Cluj-Napoca (USAMVCN), as a first class advanced research and education institution, aims to secure a knowledge-based development of research, innovation and technology transfer in the field of Life Sciences, including Veterinary Medicine. The Strategic Plan for 2012-2016 of USAMVCN and, as well of the FMVCN has, as one of the main objectives, consolidation of the national leading position in the field of veterinary education and research, through the achievement of a good balance between teaching activities and advanced research.

Since 2005, there was a significant development of the research infrastructure of our Faculty, both through the effort of the University and of the Faculty, but mainly as a consequence of the implementation of numerous national and international research projects. As a result, there was a significant increase of the number of publications in international journals and also of the research grants/projects.

Most of our teachers are involved both in teaching and research activities, being able to apply and transfer the latest scientific knowledge to the students. FMVCN aims to produce veterinarians but also researchers in veterinary and connected domains. One of our goals is to develop students ability to read and analyze the scientific literature in a critical way, as well as to improve their practical (laboratory and clinical) skills.

Depending on their interest, the veterinarian students are involved in at least four different types of research related activities:

- the research project for the completion of their diploma work;
- research activities within the framework of student’s research circle/debating group affiliated to disciplines or departments;
- research activities in the frame of a research grant funded by national/European authorities and conducted by teachers; symposium, workshops and trainings.
- participation to small individual projects granted by private companies;

The most important research activity, performed by all the students, is the completion of their diploma thesis. According to the Faculty’s regulation, all diploma theses must contain an original experimental research project, which has to represent two thirds of the paper, a literature study describing the state of the art of the topic, the other third, and references. The topic of the project is established usually during the fifth year of study together with the supervisor, who must have a permanent position at the Faculty and a PhD degree. Interdisciplinary themes developed under the surveillance of two different supervisors are strongly encouraged and frequent. A form is fulfilled by the student and supervisor, containing the title of the project and the place where the experimental activities will be performed. In order to provide the fundamentals of research methodology,
the curriculum includes Biomedical statistics and Scientific documentation, techniques and documentation methods and others. Also, a set of instructions are published as a guide available on the main USAMV’s website.

The thesis must be presented before the final examination in printed and electronic form and the originality is checked using anti-plagiarism software. The final examination includes an oral presentation of the thesis and a debate, in front of a commission formed by teachers. Usually the experimental part is carried out in the research laboratories of the Faculty, in the Institute for Life Sciences, clinical hospital and experimental farm of the University. Additionally, some of the students perform at least a part of their experiments in facilities located outside the Faculty such as; commercial farms, slaughterhouses, private clinics or shelters, based on well established partnership. An average of 250-300 hours is dedicated to the research activities for the diploma thesis. These hours are not included into the core curriculum as teaching hours but for this activity a number of 10 ECTS from the total of 60 in the last academic year are allocated (for details see chapter 4).

Currently, in the Faculty, several research groups are active at different departments as seen in the next list

- **Basic and preclinical disciplines**: Comparative anatomy, Physiology, Biochemistry, Genetics and molecular genetics, Pathophysiology, Pharmacology and Pharmacy, Pathology, Microbiology and Immunology, Anesthesiology and Propedeutics (with significant contributions to experimental surgery, robotics, laparoscopic approaches etc), Veterinary toxicology, Semiology and Imaging Diagnosis.

- **Clinical disciplines**: Internal Medicine, Surgery, Parasitology, Infectious diseases, Animal Reproduction.

Students can enroll freely, depending on their own interest for a certain topic and their time availability. During the meetings, the students are asked to read, present and discuss scientific articles, getting familiar with the specific needs of research work and publications. The students also learn how to set the design of an experiment, how to present and interpret their work, in the same time developing their team-working spirit. Under the supervision of a teacher, the student can set-up his own research project which usually ends with a presentation and publication of a paper in the USAMVCN Student’s Symposium.

This event takes place every year (April) and veterinary students can present their work in two main sections: Fundamental & Preclinical Sciences, and Clinical Sciences. The University helped the Student’s Association to build their own website and offers hosting for this website on the university servers. The symposium is organised mainly by the Student’s Associations and respects all the rules of a regular scientific event. The details can be seen on this website, along with the program for all the sections.

The number of presentations of veterinary students within the frame of this symposium:

- 41 communications by 97 students in the preclinical/paraclinical section and 11 presentations by 16 students in the clinical section in 2012.
- 22 presentations by 46 students (Preclinical section) respectively 14 presentations by 28 students in the clinical section, in 2013
- 32 presentations by 66 students in the preclinical section and 16 presentations by 23 students in the clinical section, in 2014.
Students are encouraged to participate to international scientific events organized by student’s organizations such as the International Veterinary Students’ Association Symposium, by offering them financial support. They also participate to national and international scientific events such the International Congress AMVAC/RoSAVA - an important event for veterinarians in Romania.

In the last eight years there was a significant increase in the number of research grants accepted for financing by the Ministry of Research, National or European Scientific authorities in our Faculty. PhD students, but also undergraduate students of the final years are often involved in the experimental activities of these grants, such as sample collection, laboratory work or animal care. The practical experience acquired by participation in a complex project is a good prerequisite for a future research carrier and it allows the teachers to make a good selection of their PhD students. As in the case of diploma works or scientific groups, the results are presented to national and international meetings and published in scientific journals, with the student appearing as co-author.

Some private companies, like Alltech, organize contests for individual research projects for young scientist. There are students from our Faculty who applied and even won prizes at national levels.

Students are also encouraged to participate in specialized workshops organized in our Faculty, such as: workshop in Radiology 2013-2014 (three stages); workshop in Ophthalmology; Equine Pathology (AVER- in the form of a Journal Club regularly organized in our Faculty), in which specialists in the field are presenting the latest scientific achievements.

13.2 Comments

Comment on the opportunities for students to participate in active research work

Theoretically, all students can be involved in research work done by different disciplines of the Faculty. Practically, all this involvement depends on student desire and capability to adapt to the requirements of research work. It is known that the veterinary profession implies a practical approach, so many of our students start undergraduate studies for this practical approach. Along their studies, some of the students discover research work within some disciplines (the first years of study) and they feel attracted by this during the academic years. After that, they discover clinical activities and they abandon the research work. Some do continue with research work until graduation and they continue to work in the research field as PhD students. However, all the students, also those attracted by clinical work, need to prepare a final graduation thesis with research work.

The students in the last years of study can be involved in research grants.

13.3 Suggestions

Will students be given more opportunity to participate in research activities? If so, how will this be done?

- The new opportunity for students to participate in research activities was open now with the Erasmus + program (placement mobilities). Students can participate during the summer in research activities in different companies from abroad, and the Faculty encourages this.
• With the help of CMVR and AGMVR to involve more companies in financing the research activities of students, there is a good opportunity for companies to select the best students as their future employees
• The Faculty is directly interested in obtaining as many research grants as possible (both national and international) in which students of terminal year and PhD students are involved;
• FMVCN intends to encourage teachers and PhD students to present their research topics and their results to the undergraduate students, attracting them toward research as soon as they begin their studies.
• Increasing the number of seminars, workshops and presentations of invited experts in different fields of veterinary sciences.
• The Faculty can organize internal competition for research projects, elaborated by students and supervised by teachers.