

**European Association
of Establishments for Veterinary Education**

**Association Européenne
des Etablissements d'Enseignement
Vétérinaire**



**REPORT ON THE STAGE 2 VISITATION TO THE FACULTY OF VETERINARY
MEDICINE OF UTRECHT, THE NETHERLANDS**

22 - 26 September 2014

by the EXPERT GROUP

Giovanni Re, University of Turin, Italy, *Expert Visitor*

Hans Henrik Dietz, Copenhagen, Denmark, *Coordinator*

CONTENTS

Introduction	
Chapter 1.	Policy statement (AP1)3
Chapter 2.	Assessment of students (AP 2), post-graduate education (AP 3) student welfare (AP 4).....6
Chapter 3.	Assessment of teaching staff (AP 5).....14
Chapter 4.	Assessment of learning opportunities (AP 6).....15
Chapter 5.	Assessment of training programme and the award of the title of Veterinary Surgeon (AP 7).....16
Chapter 6.	Assessment of quality for clinics, laboratories and farm (AP 8).....19
Chapter 7.	Assessment of continuing education (AP 9).....19
Chapter 8.	Assessment of research (AP 10).....20
Chapter 9.	Assessment of internationalisation of education and research (AP 11)....23
Chapter 10.	Assessment of cooperation with stakeholders and society (AP 12).....24
Executive Summary25
Annex 1 Decision of ECOVE29

INTRODUCTION

The Faculty of Veterinary Medicine of Utrecht (FVMU) of the Utrecht University (UU) has a privileged and unique position in the Netherlands as it is the only establishment in the country where veterinarians are trained and graduated. Nevertheless, research performed at the FVMU is characteristic as well, as veterinarians and researchers work together on advanced and innovative basic and applied research. FVMU also provide the highest level of referral and specialist clinical care available in the country.

The FVMU does not have any external quality accreditation (e.g. ISO, GLP, GCP etc.), but internal quality protocols with responsibility for quality assurance, together with appropriate protocols and check lists are already in use.

All the documentation received shows that the process of assessing quality has been in place for more than two years; in fact, the FVMU has faced several visits for accreditation starting from 1973 by different bodies, National, American and European. The present status is full accreditation by AVMA, approval by ESEVT, and accreditation by NVAO. For that reason, a quality approach to veterinary education has existed at FVMU from a long time. However, the current accreditation visit (Stage 2) by ESEVT is performed for the first time, as it has been recently introduced.

Full documentation of the assessment procedures together with figures explaining the procedures were available from the start of the visit and missing documentation was quickly supplied on demand. People responsible for quality assurance were always available and very helpful; the communication with students, teachers and support staff interviewed (or occasionally met) was pleasant and useful.

Safety and biosecurity are primary objectives of the FVMU as well as animal health and animal welfare. A lot of effort is currently done by the staff of the faculty to reach and maintain a high standard of quality in these issues and to involve and make students aware of these important issues.

It was impossible to evaluate any cross reference between SER 1 and SER 2, as no SER was produced by the FVMU. Information was obtained by the Self Study Report prepared for AVMA site visit, but additional documents or website were supplied on demand.

Chapter 1. Policy Statement

Findings

In the Netherlands, each university system of internal quality assurance is evaluated and accredited by the Dutch Flemish Accreditation Organization. Utrecht University was accredited through this system in 2012 and received the quality mark “Accredited University Quality Assurance”.

The FVMU has clearly stated and defined its objectives and quality measures to evaluate the progress of its success in several documents provided for previous accreditation; but these are renewed and reinforced in the new Strategic Plan 2013-2017 presented by the Dean to the UU last year <https://intranet.uu.nl/strategie-en-beleid/facultair-strategisch-plan-dgk>.

Although findings should be picked up by the Self Study Report prepared by the FVMU according to the AVMA guidelines, and no SER for the Stage 2 was prepared by the FVMU according to the ESEVT’s SOP, the team can state that the objectives and the measures to evaluate their progress are clearly defined and well expressed.

The major goals and objectives of the FVMU are well defined and address the details of the education of a Doctor in Veterinary Medicine, trained through high quality evidence based education, using high quality clinical services (veterinary hospital, 24h emergency service, experimental farm and several external accredited structures). Students are also trained in the field of animal welfare and responsible animal care, public health and respect for the environment.

In the FVMU the organization of all structures is transparent and the Dean is centrally and strongly supported by the mandate of the University Board.

Quality of all activities is evaluated by means of described procedures and they are evaluated on a regular basis: in fact, education, research and clinical activities and services are evaluated yearly at Department level in the Quality Assessment Cycle. The results are discussed on a yearly basis with the competent Boards (course and programme coordinators, Department, Faculty and University Boards) during the so called “Performance & Development” (P&C) interview. The procedures are described in standardised protocols.

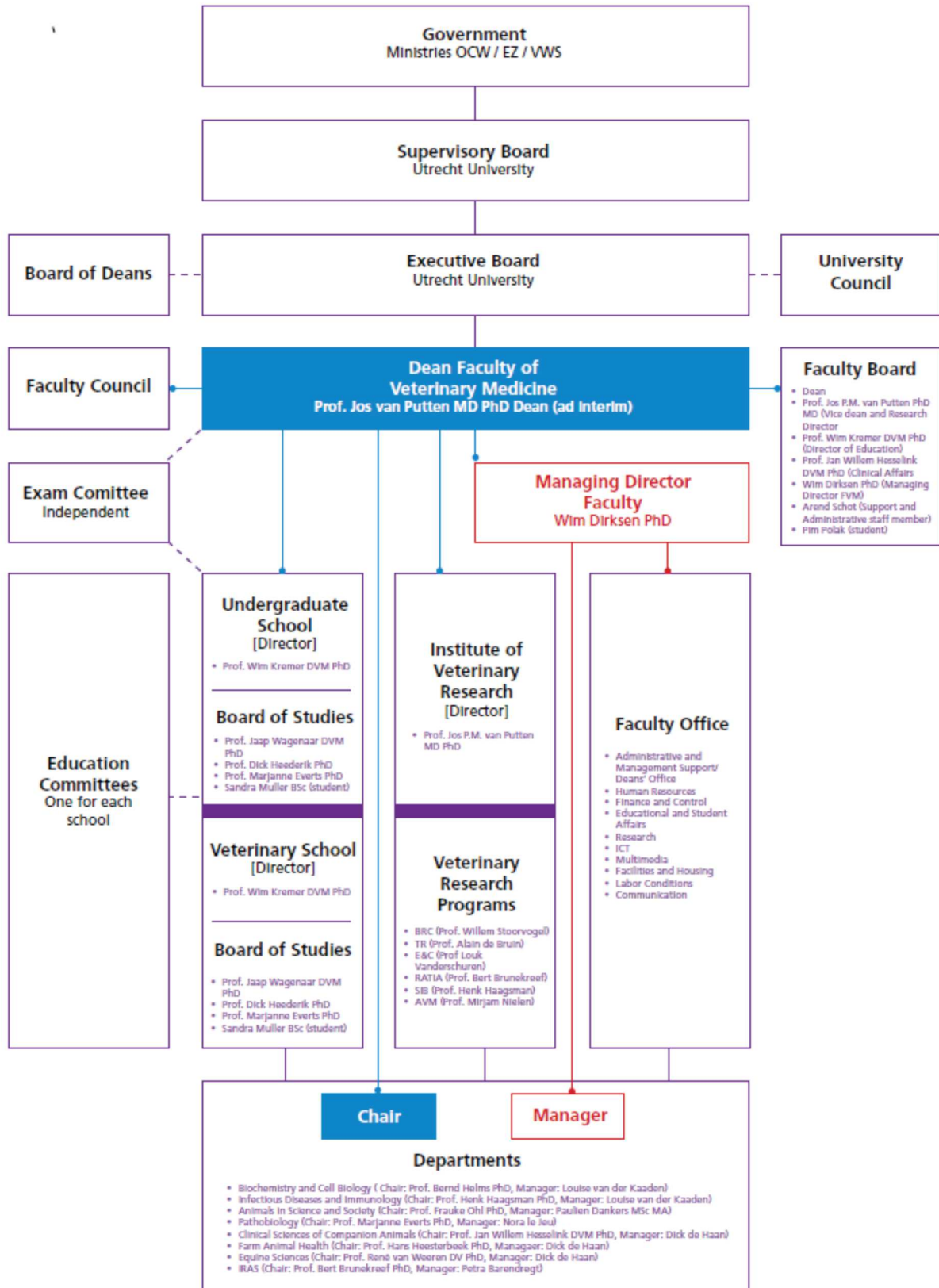


Fig . 1 Flow chart of the organization of the FVMU Boards and Responsible for activities and services in the UU and FVMU.

This system instructs that actions should be taken if there is no progress towards the quality standards or when a non conformity is found.

The quality assurance system focuses on:

- i) education (at bachelor, master and post-graduate level)
- ii) research (basic and applied)
- iii) scientific and public services.

For each item, a series of procedures, standards and objectives have been defined, partly by their Strategic Plan and partly negotiated with the UU and the Government.

The strategic objectives defined in the Strategic Plan are applied in a cascade process from the University Board through University Council, Faculty, Departments, and Teaching Staff to a Departmental level and finally to individual level for each staff member and students.

The procedure is evaluated at least yearly as already mentioned above.

Research education, research quality and involvement of student in research are clearly defined as they have their own quality procedures and measures.

Students are aware of quality policy and strategy adopted by the FVMU at the level of Student Council and they are represented in the FVMU boards and bodies.

Comments

The system of Quality and Quality assurance procedures is clearly understood by FVMU, usually adopted within FVMU and a dedicated and scientific approach is certainly clear.

From this point of view, the FVMU has undertaken new measures to develop leadership among talented future, and present leaders, by assisting young researchers, students committed (honor students) to be introduced to research and development of new initiatives. Such measures improve career opportunities and mobility for staff, PhD and post-docs. Moreover, it should be emphasized that FVMU pays a strong attention to equal opportunities and disabilities.

Suggestions

None

Chapter 2. Assessment of Students, Postgraduate Education and Student Welfare

2.1 UNDERGRADUATE EDUCATION

The FVMU has a standardised admission procedure and standardised procedures for evaluating its students. However, the selection procedure depends on State Law and is linked to this national approach.

Findings

FVMU is allowed to admit 225 students each year. The admission system, introduced in 2001, based on national legislation, generates three groups of candidates:

- i) Candidates admitted by weighted lottery (at least 50%);
- ii) Candidates admitted automatically due to a high score obtained in high school national examination (mean > 8.0);
- iii) Candidates admitted by selection by FVMU (max. 50%, minus the number of those candidates automatically admitted under point ii).

FVMU has no influence at all on the selection procedure of groups i) and ii). The weighted lottery is performed by the Education Executive Agency, the organization that regulates education on national level (in Dutch: *Dienst Uitvoering Onderwijs* = DUO).

At present in the Netherlands there is a shortage of veterinarians on the farm animal (FA) and veterinary public health (VPH) labor market. As a consequence, FVMU uses its own student selection to enroll students for the FA/VPH tracks by developing a validated system to select undergraduates with an aptitude for and interest in these specific fields of veterinary medicine. The group selected by FVMU accounts for approximately 30% of the available places. A candidate is allowed to participate in this selection only once. Selected candidates are predestined for the labor market FA and/or VPH. In fact, all selected students have to sign a contract in which they commit for the track FA/VPH in the Master's programme, and are not allowed to change their track programme. At the end of the Bachelor's/start of the Master's programme, all other Bachelor's students have to choose for a specific Master's Track.

The FVMU selection system, based on qualitative and quantitative findings, consists of a written test and an interview. This selection system is based on a pre-structured panel interview. The interview panel consists of a DVM lecturer, a DVM practitioner and a veterinary student. All members receive intensive training before participating in the interview. The interview focuses on elements such as motivation for, and knowledge of the working field of FA/VPH.

Table1: Assessment admission of students

	2012	2013
Number of students applying/admitted	849/225	667/225
Number of students admitted based on criterion: national lottery plus high grade on high school exams (mean > 8.0) ²⁾	164	155
Number of students applicant/admitted based on FVMU criterion ²⁾	115/61	186/70
% foreign students	Some units per year	Some units per year
Assessment of selection criteria ³⁾ :	good	
	acceptable	
	need improvement	

²⁾depending on the country and school, student-cohorts may be admitted based on different selection criteria

³⁾please specify when different criteria had been used

Comments

The admission procedures sounds quite complicated, but in light of the present situation within the veterinary profession, it allows the supply of students prepared to engage with the profession in the field of FA/VPH. The qualification of other students is guaranteed by the weighted lottery (the access is open to the best students from the final high school examination).

The admission of foreign students is limited by the fact that courses are provided in Dutch and candidates have to pass a language examination.

Suggestions

The present admission procedure, although showing positive points, could be improved to be simpler. Unfortunately, starting within the next few years the Ministry of Education, Culture and Science of the Netherlands will abolish the *numerus clausus*; so the FVMU will need to develop and validate a new method to select an appropriate number of motivated students with a high aptitude to become a veterinarian.

2.2 POSTGRADUATE STUDENT EDUCATION; ACADEMIC TRACK

Findings

The FVMU offers a large number of PhD programmes. A PhD is considered mandatory when applying for a permanent position in the FVMU. Starting from 2007, PhD programmes are coordinated by the UU Graduate School of Life Sciences. The PhD Evaluation Committee of the School makes the decision on student application and enrolment. The evaluations are based on the annual reports of the programmes and an interview with the programme director, the programme coordinator and PhD candidates. There is a great interest from international students which constitute up to about 20% of applicants. At the FVMU about 40% of PhD candidates have a DVM degree. The quality control of the programmes, procedures and examinations is under the responsibility of the Director of the Institute of Veterinary Research (IVR). All the procedures, rules and programmes are available on the School website.

The list of the PHD programmes managed by the Graduate School of Life Sciences (UU) includes:

- Cognition & Behaviour
- Clinical & Experimental Neuroscience
- Cardiovascular Research
- Drug Innovation
- Environmental Biology
- Epidemiology
- Cancer, Stem Cells & Developmental Biology
- Clinical & Translational Oncology
- Regenerative Medicine
- Infection & Immunity
- Biomembranes
- Computational Life Sciences
- Molecular Life Sciences
- Medical Imaging
- Toxicology & Environmental Health

At present the FVMU has a total number of 145 PhD students in these programmes; another 113 students are appointed by other Institutions inside and outside the Netherlands, giving a total amount of 258 PhD students over a mean of 5 years.

Table 2.1: figures for post-graduate academic education

Year	Type of programme	Number students enrolled	% of graduate students	Mean number of paper per graduated student	Mean number impact factor obtained per graduated student
2013	PhD	45	98%	4	2,3 (1 – 4,5) vet field 4 (2– 30) (biomedical)
n	Master (graduated veterinarians or other professionals) ²⁾	none			
n	other ³⁾	none			
2012	PhD	40	98%	4	2,3 (1 – 4,5) vet field 4 (2– 30) (biomedical)
n-1	Master ²⁾	none			
n-1	other ³⁾	none			

Comments

FVMU offers a great opportunity to young researcher to apply and enter into a PhD programme at a high quality level. The mean duration of a PhD programme is approximately 5 years, during which candidates are encouraged to spend a period of education and research abroad. The PhD students must publish at least 3 scientific papers in international peer reviewed journals. At the end of each year PhD students are evaluated to check on their progression. This process is described in detail in the quality assessment protocol for PhD programmes, which is available on the website of the FVMU.

Interviewed PhD students appeared highly motivated and enthusiastic for their programme as well as the way their mentor and the FVMU encourage them. They are also aware of the quality assessment procedure existing for the PhD programmes at FVMU and UU.

The FVMU does not currently have any *post-graduate* Master Programmes.

Suggestions

None

2.3 POSTGRADUATE STUDENT EDUCATION; PROFESSIONAL TRACK

Findings

The FVMU has as a priority that teaching staff are specialists in their own field. As a result, a great number of Diplomates are present in the different disciplines involved in teaching. The Table below illustrated the internships and the Diplomates per disciplines

Faculty	IRAS	Equine Health	Farm Animal Health	Companion Animals	Infectious Diseases & Immunology	Biochemistry and Cell biology	Pathobiology
Professor		4	7	5	5	4	3
Associate professor		2	13	8	4	1	1
Assistant professor		12	15	28	13	9	10
Lecturer		6	11		5	2	9
Resident		5	4	20	7		5
Intern		5					
Board certified							
Reproduction		4	3	3			
Anesthesiology		1		3			
Int. Medicine		6		9			
Surgery		6		9			
VPH	3						

FINAL REPORT AS ISSUED BY ECOVE ON 19 NOVEMBER 2015

Parasitology	1						
VPT	1						
Vet microbiol					3		
Porcine			3				
Ruminant			6				
Poultry			3				
Population Medicine			4				
Nutrition			1	2			
Dermatology				2			
Diagnostic imaging				6			
Cardiology				1			
Oncology				2			
VetEmergency & Critical care				2			
Ophthalmolog y				2			
Neurology				1			
Clinical pathology				2			
Avian				3			
Small mammals				2			
Dentistry				1			
Vet. Pathology					8		
Wildlife population management					1		

Joint appointments		2	6	4	4	1	
--------------------	--	---	---	---	---	---	--

Comments

The FVMU is actively advancing the post-graduate training with particular emphasis in clinical training. A large number of permanent staff have already obtained a Diplomate-degree and a number of the FVMU facilities are acknowledged for intern and resident training. Diplomate degree is considered a *conditio sine qua non* to apply for a permanent position in clinical FVMU staff, so young researchers and clinician are encouraged to follow an internship programme at FVMU or abroad.

Suggestions

None

2.4 STUDENT WELFARE

Findings

The FVMU has a sensible and careful approach to student needs and welfare; so, students are supported by several counselling, mentoring and *ad hoc* advisory services:

Student advisors: FVMU student advisors provide information on admission to the veterinary curriculum, possible alternatives, rules and regulations on tests and exams. They guide students in case of learning problems, retaking tests and exams, study delay due to illness or other personal problems.

Counseling (specific learning problems): In case of severe and specific learning problems or personal issues, students can be referred to the UU student psychologist (this a service provided by the UU).

Mentoring: At the start of every academic year the Educational and Student Affairs assigns first-year students to a mentor group based on the course groups (students who attend classes together). A mentor group consists of ten new and two senior students, who act as their mentors. This system aims to bring students into contact with the social structure of FVMU and the university. Mentors are assigned for one year and receive specific prior training.

Tutoring: All students are assigned to a tutor. A tutor is a teacher, who supervises the student for six years, with emphasis on the student’s personal and professional behaviour and development, so any (learning) problem will be picked up on time in order to refer the student to the faculty’s student advisor or the university’s student psychologist.

Centre for Education and Learning (COLUU): Provides study skills trainings for students. In three to eight sessions of two hours each, students learn how to make efficient use of their time, improve their reading and writing skills, design research projects, how to prepare for tests and exams, or increase their motivation. The University Board finances this service for students.

UU for U, Student Services: Provides general information and advice on topics like registration, tuition fees, financial matters, student financial assistance and university financial schemes, as well as to inform students on complaint procedures, accommodation and activities of student organizations (this a service provided by the UU).

International Office: The central UU International Office provides information on student exchanges to central partner universities. The Office of International Cooperation of FVMU provides information on faculty partner universities and other study related subjects in a foreign country and coordinates the international (exchange) programmes of FVMU.

Clubs and Organizations: FVMU veterinary students have access to a very active and wide organization with a lot of clubs and societies. The two major organizations are:

Student Council: consists of student representatives from all years. The Student Council works in close cooperation with the Educational and Student Affairs and organize information meetings and course evaluations. Every month the Student Board consults with the Educational and Student Affairs.

The Veterinary Students Society (DSK): Almost every veterinary student is a member of DSK. DSK has six board members who organize several major events throughout the year. See www.dskonline.nl. In reality, there is a range of other veterinary student clubs and organizations.

Comments

As mentioned above FVMU and UU take student welfare and safety very seriously.

The FVMU is active in addressing problems that the students face during their studies, related to health, safety and welfare, by tutoring and counseling of students.

There are possibilities for students to give feedback anonymously through different opportunities (student representative, tutor, student council etc.).

There is a responsible for the collection of complaints from student (Complaints Coordinator).

Interviewed students (Representative and occasionally met) are very happy with the system adopted by the FVMU to take care of them.

Suggestions

None

Chapter 3. Assessment of Teaching Staff

Findings

The FVMU teaching staff are assessed on a regular basis, starting from enrolment and continuing during their career.

Courses are evaluated yearly on the basis of a student questionnaire (National Student Survey) and a teacher questionnaire.

Academic staff are appointed through a standard procedures adopted by all Departments of the FVMU utilising the competence of an *ad hoc* Committee chaired by an FVMU qualified professor.

To qualify for a permanent position, teaching staff have to meet established requirements related to experience in the field of education, research and/or clinical activities and services; including the PhD title and the *Basic Teaching Qualification* for Assistant Professor and *Senior Teaching Qualification* for associate and full professor. Staff members in the clinical departments also have to possess the Qualification of a Board Certified Veterinary Specialist (diplomate). Junior staff members that apply for a permanent position are helped to obtain the necessary qualifications. Recently, FVMU decided to simplify and shorten this track that can takes many years to obtain these three qualifications. A scientific staff member has to obtain a PhD degree, an important step towards a permanent position.

To facilitate the career steps, in 2011 FVMU decided to create permanent positions also for clinicians that focused their activities predominantly on clinical services. Such staff have to obtain the Qualification of Board Certified Veterinary Specialist and the Basic Teacher Qualification.

Furthermore, a permanent position can only be obtained after documented and relevant external and/or international experience.

FVMU is particularly sensible to the opportunities should be given to young “top” talents. Outstanding researchers or clinicians are supported by the departments with personal grants or by tailored programmes addressed to academic leadership and governance operated by the UU (Assessment and Development Plan).

Comments

FVMU pays extensive attention in the recruitment and assessment of academic staff. Teaching performance is assessed regularly taking into account student evaluation (post examination questionnaire where about 40% of students per course fill in the questionnaire), by teaching effectiveness (quality of didactics), scientific merit (excellence in publications) and quality of services (clinics and farm).

The feedback of students is taken into account by the Board of Studies and the students are aware of the results for each course.

It is evident that the FVMU is addressing the need for continuous improvement of teaching and teaching staff by offering training opportunities, particularly to junior staff and talented personnel.

Suggestions

None

Chapter 4. Assessment of Learning Opportunities

Findings

Several systems (models, plastinated organs and animals, hardcopies, books, e-learning materials, e-book, virtual materials, apps etc) are in place to assess, assure and promote the quality of the learning environment, and students are introduced to both the classic and modern innovative systems right from the beginning of their studies.

Students are told to provide their own pc, tablet or other electronic device. The FVMU offers a wide range of internet material available for each course of the curriculum. In addition, a set of computers, microscopes and other devices is available in different buildings of the faculty. Dedicated staff are employed for developing and maintaining these systems. Virtual and e-learning opportunities are constantly being expanded with many projects being developed to implement new learning opportunities for students.

New skills labs (also for early clinical practice) have been set up for facilitating student learning and a practical approach.

Comments

It is evident that the FVMU devotes a lot of time and resources into developing and maintaining an impressive array of modern and virtual learning opportunities for the students. As a result, students are very enthusiastic and well satisfied by the learning methods and materials available.

Suggestions

None

Chapter 5. Assessment of Training Programmes and the Award of the Title of Veterinary Surgeon

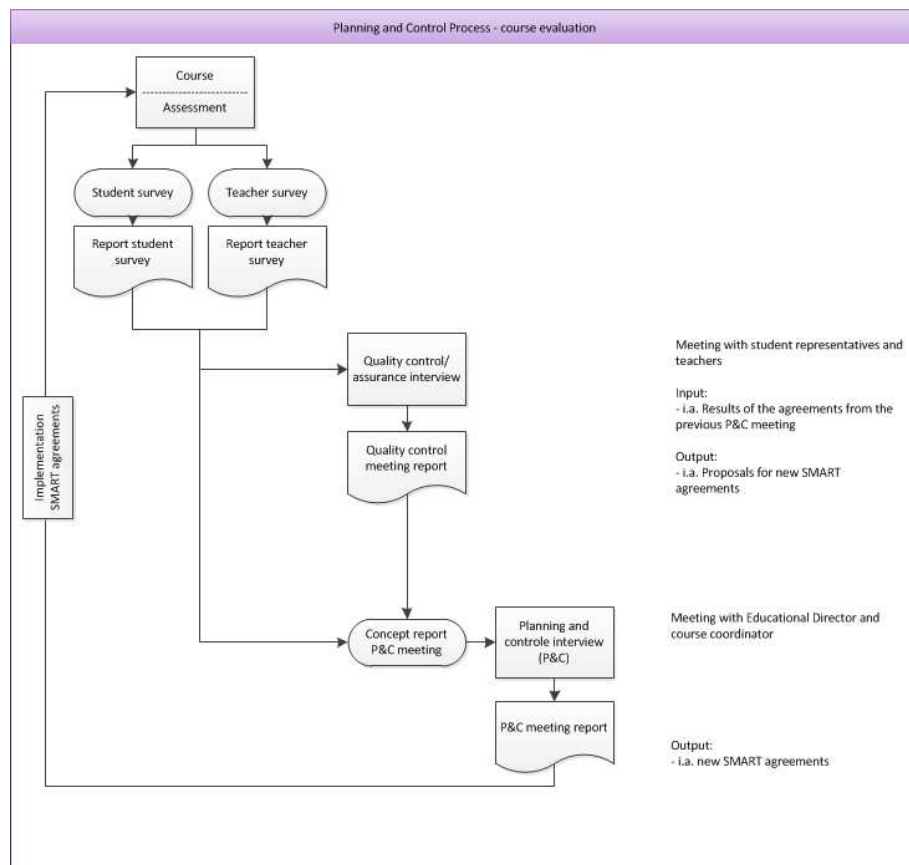
Findings

The following self-explanatory flow charts cover the protocols for monitoring the curriculum. The charts also explain the procedures for assessing the delivery of the curriculum and the teaching programme.

In addition, there are procedures in place to monitor regular feedback from stakeholders and graduates and how FVM respond to such feedback.

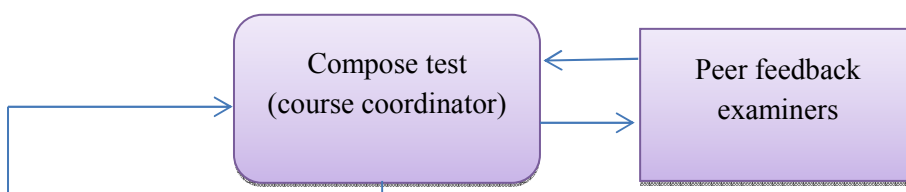
There was a clear indication of how the concept of ECTS is developed within the programme and also detailed evidence for its use.

The FVM has also established a clear description of essential competences which are required at graduation.



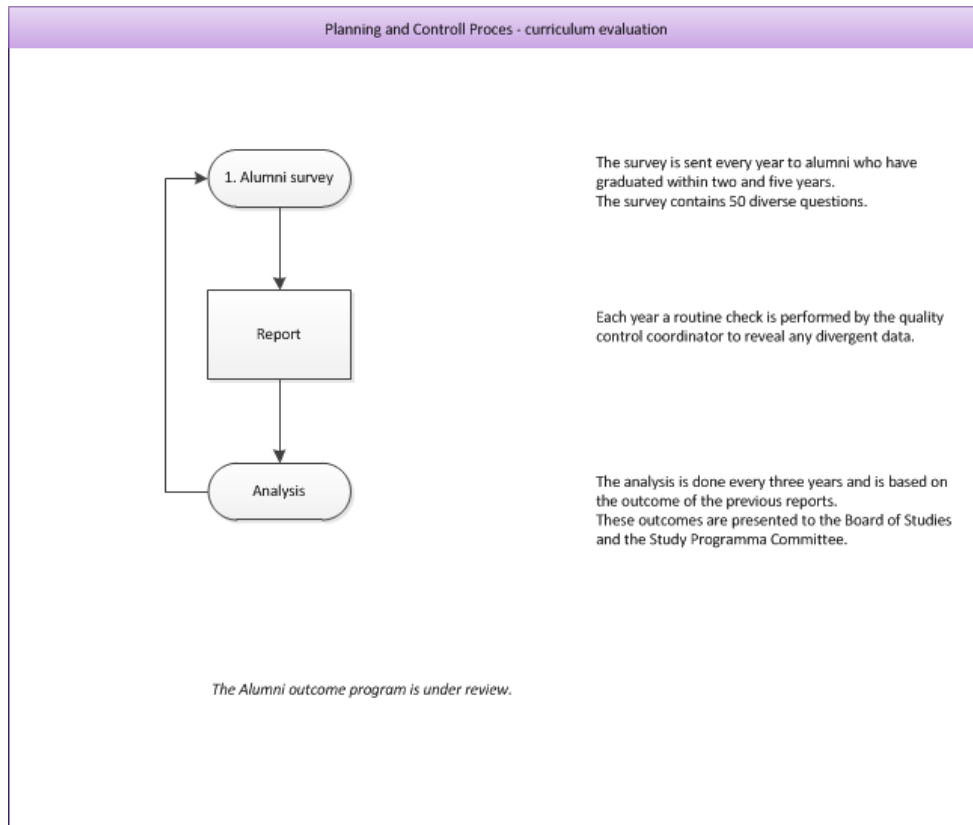
Flowchart of course assessment at FVMU

Quality assessment process of courses at FVMU





*EvaSys: Survey
Automation Software*



Flowchart of curriculum assessment at FVMU

Comments

The FVMU has established validated procedures for monitoring programme and course effectiveness and improvement.

Inputs comes from students and teachers on curriculum and are actively absorbed by competent committees and boards who can amend and optimise the programme, its courses and tracks if necessary. Students are actively involved in relevant committees and made aware of the existing quality assessment procedure.

Suggestions

None

Chapter 6. Assessment of Quality Assurance for Clinics, Laboratories and Farm

Findings

There are many instances of good practice in safety and biosecurity within both laboratory as well as animal facilities, but especially in the farm animal areas. The FVMU does not have any external quality accreditation (e.g. ISO, GLP, GCP etc.), but internal quality protocols with responsibility for quality assurance, together with appropriate protocols and check lists are already in use.

Comments

There is a lack of protocols/SOP's externally validated for quality assurance in some clinical facilities (ULP is ISO 9001 certified) (including farm) and some laboratories. The richness and complexity of these facilities make difficult to manage and control internally all quality assurance procedure.

Suggestions

Advice should be sought in order to gain recognition for quality assurance from external accreditation/certification bodies.

Chapter 7. Assessment of Continuing Education

Findings

Continuing Professional Education (CPE) is mandatory for most practitioners (this also includes veterinarians working at the University clinics), public veterinarians, specialists, large animal veterinarians, small animal veterinarians and veterinarians responsible for food and meat inspection and public health.

FVMU is deeply involved in CPE and several courses in different fields of interest within veterinary medicine are organized by the Faculty, often in collaboration with other veterinary cultural and scientific associations:

- FVMU participates in the foundation for Permanent Education Companion Animals (<https://www.kwaliteitdiergeneeskunde.nl/kwaliteit/nascholing/pegd>)
- FVMU participates in the technical committees for the accreditation of postgraduate veterinary courses:
<https://www.kwaliteitdiergeneeskunde.nl/kwaliteit/nascholing/nascholing-aanbieden>
- FVMU participates in the “authorization committee” and in the working groups that formulate guidelines for veterinarians. These guidelines are explained during post-academic training courses. Post-academic training is also a subject of these guidelines.
([https://www.kwaliteitdiergeneeskunde.nl/media/default.aspx/emma/org/10835006/Procedure s%20voor%20de%20ontwikkeling%20van%20KNMvD-richtlijnen%20voor%20veterinair%20handelen%20.pdf](https://www.kwaliteitdiergeneeskunde.nl/media/default.aspx/emma/org/10835006/Procedure%20voor%20de%20ontwikkeling%20van%20KNMvD-richtlijnen%20voor%20veterinair%20handelen%20.pdf))

FVMU staff members are actively involved in the development and teaching of veterinary continuing education courses under the auspices of the above mentioned foundations and committees.

Veterinarians who are registered in the Central Quality Register for Veterinarians, qualified equine veterinarians and recognized farm animal veterinarians (recognition per farm animal species), have to obtain post-academic training credits.

<https://www.kwaliteitdiergeneeskunde.nl/media/default.aspx/emma/org/10834991/beleidsdocument+ckrd.pdf>; <http://www.stichtingpaard.nl/Erkende-Paardendierenarts>;
<http://www.geborgdedierenarts.nl/>

Comments

Continuing education is well integrated into the activities of the FVMU. All such activities are subjected to appropriate accreditation procedures. The FVNU significantly participates in the CPE activity in the veterinary field in the Netherlands and this function is greatly appreciated by veterinarians.

Suggestions

None

Chapter 8. Assessment of Research

Findings

Within the Netherlands there is a Standard Evaluation Protocol for Public Research Organisation (2009-2015) with the purpose of producing a report on the research management and quality assurance in research. The production of this report is delegated to a Review Committee (RC) composed of local and international experts and commissioned by Quality Assurance Netherlands Universities (QANU). The RC was appointed to perform an assessment of the research in Veterinary Sciences at UU, including FVMU in 2006-2011.

All research activity at the FVMU is performed under the umbrella of the Institute of Veterinary Research (IVR) (see Chapter 1, Fig. 1). The IVR has the mission to provide the scientific foundation for innovation and research to benefit veterinary education, practice, public health, environment and economy. This objective is based on a multidisciplinary expertise and strong collaboration with stakeholders. The IVR is managed by the Director of Research (Vice Dean of Research, at present Dean *ad interim*).

The IVR promotes 5 main thematic interdisciplinary programmes:

- Biology of Reproductive Cells
- Tissue repair
- Emotion and Cognition
- Risk Assessment of Toxic and Immunomodulatory Agents
- Strategic Infection Biology

In addition the issue below was added for training veterinary residents with the stated aim of maintaining the level of veterinary specialists in fields not included in the above programmes:

- Advances in Veterinary Medicine

IVR staff produced over 3,000 scientific publications in the period 2006-2011. The number of publications in peer-reviewed scientific journals has considerably increased from around 420 in 2006-2008 to approximately 500 in 2010/2011 and 575 in 2012 and 651 in 2013 (Table B). This strong increase was accompanied by a decline in the number of publications in non peer reviewed journals. Moreover, IVR staff contributed to nearly 200 books and book chapters. The trend to prefer to publish in peer-reviewed scientific journals can be explained by a more stringent IVR publication and research assessment policy, which has increased quality awareness. The overall productivity and the associates monitoring activities are excellent.

IVR research was also relevant for a variety of stakeholders including policy makers in human and veterinary health, the environment and wildlife. Interactions with public stakeholders including animal

rights organizations, companion animals and livestock owners are well incorporated into the policy of research.

Table A: The RC assessed the following programmes of FVMU with the relative scores (5 =Excellent; 4 = Very good; 3 = Good; 2 = Satisfactory; 1 = Unsatisfactory)

IVR-programme	Quality	Productivity	Relevance	Viability
Biology of Reproductive Cells	4	5 [4]	5 [4]	4
Tissue Repair	4	5 [4]	5 [4]	4
Emotion and Cognition	4	4 [3,5]	5	4
Risk Assessment of Toxic & Immunomodulatory Agents	5	5	5	5
Strategic Infection Biology	5	5	5	5 [4]
Advances in Veterinary Medicine	4	5 [4]	5	4 [3]

From: Assessment of Research Quality – QANU Research Review Veterinary Sciences 2012 – Utrecht University.

Since 2005 FVMU has a dedicated Chair on Quality Improvement in Veterinary Education, who deals with quality in scientific research. The mission of the chair is to optimize the educational environment for both students and teacher and to bridge the gap between ‘evidence based education’ and the daily practices of FVMU.

The Chair on Quality Improvement in Veterinary Education had eight publications in 2011, four in 2012 and seven in 2013.

2013		Total number of faculty	Number of faculty involved in research	Number of faculty involved in research who teach in the professional curriculum	Total research FTE	Extramurally-sponsored research contracts		Number of original, peer-reviewed research publications
Department						Number	Value (k€)	
Biochemistry & Cell Biology		27	24	12	16,2	10	802	23
Pathobiology		38	29	15	13,7	17	772	61
Institute for Risk Assessment Sciences		110	110	11	76,6	130	6438	225
Animal, Science & Society		21	22	9	11,3	11	499	25
Infectious Diseases & Immunology		84	90	10	66,2	86	4588	158
Equine Sciences		45	35	17	8,7	7	288	67
Clinical Sciences of Companion Animals		119	50	25	21,4	31	1107	81
Farm Animal Health		70	59	24	27,9	30	1115	120
General (Faculty)						2	9	
FVM Total		514	410	123	241,9	324	15619	651
2012		Total number of faculty	Number of faculty involved in research	Number of faculty involved in research who teach in the professional curriculum	Total research FTE	Extramurally-sponsored research contracts		Number of original, peer-reviewed research publications
Department						Number	Value (k€)	
Biochemistry & Cell Biology		26	22	12	15,6	4	636	24
Pathobiology		40	27	15	13,4	11	947	34
Institute for Risk Assessment Sciences		115	115	10	84,2	116	7552	202
Animal, Science & Society		20	19	6	11,3	10	338	37
Infectious Diseases & Immunology		97	97	9	60,7	58	4755	110
Equine Sciences		49	41	19	12,6	3	313	51
Clinical Sciences of Companion Animals		113	61	33	26,3	19	767	84
Farm Animal Health		77	65	24	33,6	23	1117	114
General (Faculty)								
FVM Total		537	441	128	257,7	244	16425	575

Table B. Detailed information on FVBU research concerning the years 2012 and 2013.

FVMU considers it crucial to involve students in research and encouraging student interest in a PhD programme. All students (100%) actively participate in some way with research projects before graduation.

As an example:

- During a 7.5 ECTS (week 5) course in the Bachelor's phase, all students have to write a scientific report;
- During the Master's programme, a 12-week research internship is scheduled. During this internship, students participate in one of the many research projects of FVMU;
- Apart from the obligatory course and internship, individual students can choose to extend their research internship up to 39 weeks out of 180 weeks of the Master programme;
- Excellent (talented) students may take one additional year for performing research or participating in a research project. This programme is called the Master Honours Programme (HP).

IVR also have an important role in the training of PhD's. On average, 40 students successfully defended their PhD thesis each year in the period 2008-2013. In 2013, the total number of PhD's amounted to 273, of which approximately 100 are veterinarians, so emphasizing that graduates are engaged in research a few years after graduation.

Bachelor Students: 10% of the (talented) students may choose to participate in an honours programme; involvement in research is mandatory.

Master students: students during the optional courses in the Master programme may enlarge the research rotation from the compulsory 12 weeks up to a programme of 39 weeks of research and participation in the concept of *One Health* which includes at least 6 month of research. This innovation starts in January 2015.

Honours Programme Master: Since 1993 FVMU has an Honors Programme (HP) for excellent students (formerly known as Excellence Track). HP has the following goals:

- To recognize the most talented veterinary students;

- To allow talented students to perform research in veterinary comparative medicine;
- To create a resource for future PhD students, permanent teaching staff and veterinary researchers.

Students are selected in their third year. Students with high grades in the first two years of study (mean of > 8.00 on a scale of 1-10) are invited for an interview. HP takes one extra year and is mostly situated between the Bachelor's and Master's phase. Students have to produce a written report in English, with an oral presentation at the end.

Comments

Quality assurance procedures of research activities and research performance are active, effective and appropriate. The institution of IVR is a good approach to improve, control and develop research activity within the FVMU. Results on the research and quality of research production of the FVMU are excellent. The involvement of all students in research is an excellent policy adopted by FVMU and, when interviewed students were very happy and interested in devoting a proportion of their credits to a career in research activity. They also greatly appreciated the Honors Programme for excellent students. This reflects on the teaching staff of the FVMU as approximately 100% have the title of PhD.

PhD students and young researchers are invited to spend a significant part of their education in outstanding institutions abroad.

Suggestions

None

Chapter 9. Assessment of Internationalisation of Education and Research

Findings

The International Office of the FVMU regularly initiates and supervises international programmes, including the counseling of international PhD students and veterinary student training (incoming and outgoing).

Each academic year approximately 150 Master students of the FVMU undertake a formally recognized study programme abroad for a duration between 2 weeks and six months.

In the academic year 2013/14 a total of approximately 900 ECTS was granted to the students who went to 26 different countries.

FVM participates in the Erasmus+ programme, FP7, Horizon 2020 research programmes and has Memoranda of Understanding which include student and staff exchange and the training of PhD students with UC Davis (USA), Szent Istvan University (Hungary), the University of Pretoria (South Africa) and the five veterinary colleges of Thailand.

Several research programmes and a lot of scientific articles published in peer reviewed international journals indicate that many research units of the FVMU collaborate with public and private institutions at international and overseas level.

Comments

FVMU is recognized at international level for collaboration and cooperation with public and private bodies involved in both human and animal health. The interest and involvement of both student and staff in national and international programme and collaborations is highly appreciated.

Suggestions

The strong address to internationalisation should be maintained and possibly improved by the FVMU.

Chapter 10. Assessment of Cooperation with Stakeholders and Society

Findings

Members of the FVMU act as consultants for the World Health Organisation (WHO), the World Organisation for Animal Health (OIE) and the UN Food and Agriculture Organization (FAO) regarding global issues. Moreover, the FVNU hosts a WHO Collaborating Centre for Research on Environmental Health Risk Assessment and has been recognized as a 'WHO Collaborating Centre for Campylobacter' and as an 'OIE reference laboratory for Campylobacteriosis' in cooperation with the Central Veterinary Institute (CVI).

The researchers at the FVMU often collaborate in research programmes or in agreements with European research consortia and with multinational companies active in different fields of veterinary medicine (nutrition, pharmacology, animal health etc.).

The development of knowledge of animal welfare is another important strategic item. On one hand, the FVMU is investing in the implementation of such academic knowledge in frameworks for action for veterinarians to be a welfare consultant and, on the other hand, the faculty is developing new concepts for the ethical treatment of animals and for sustainable livestock farming.

Over the past few years, the faculty has invested considerable efforts in both remaining visible in social debate on issues concerning animal welfare and One Health, as well as acquiring extra funding from subsidies and especially research contracts. A network of current and potential partners has been built up via efforts such as Utrecht Life Sciences (<http://www.utrechtlifesciences.nl>) and Immuno Valley (<http://www.immunovalley.nl>). The FVMU is closely involved in the Utrecht Valorisation Centre to improve its position in the academic local and international scenario.

Staff members of the FVMU are participating in several committees and boards of the Royal Netherland Veterinary Organization, and other relevant society and organizations such as the National Council of Animal Affairs and Animal Welfare Organization.

Teaching in the master programme is closely related with external stakeholders such as veterinary practices (Extra Mural Studies rotation of 8 weeks), rotations within the ambulatory clinic and several other courses of the programme. A large number of Alumni cooperate with the FVMU as a referral professional centre and demonstrate the extensive connection of the FVMU with the rest of the nation. Additionally, in some cases stakeholders are involved as (guest or contract) teachers in the programme: for example the Chief Veterinary Officer participates in Communication training in Bachelor and Master and courses

Comments

Findings suggest that the FVMU is in close collaboration with national (e.g. veterinarians operating in the field of both small and large animals and wildlife, associations and societies) and international bodies and associations, public and private, involved in human and animal health and animal welfare. FVMU is demonstratively a major referral centre for the veterinary environment in the Netherlands.

Suggestions

None

Executive Summary

The system of Quality and Quality assurance procedures is clearly understood by FVMU, usually adopted within FVMU and a dedicated and scientific approach is certainly clear.

From this point of view, the FVMU has undertaken new measures to develop leadership among talented future, and present leaders, by assisting young researchers as well as students committed (honor students) to be introduced to research and development of new initiatives. Such measures improve career opportunities and mobility for staff, PhD and post-docs.

Safety and biosecurity are primary objectives of the FVMU as well as animal health and animal welfare. A lot of effort is done by the staff of the faculty to reach and maintain a high standard of quality in these issues and to involve and make students aware of these items.

Moreover, it should be emphasized that FVMU pays a strong attention to equal opportunities and disabilities.

The admission procedures sound quite complicated, but in light of the present situation within the veterinary profession, it allows the supply of students prepared to engage with the profession in the field of FA/VPH. The qualification of other students is guaranteed by the weighted lottery (the access is open to the best students from the final high school examination).

The admission of foreign students is limited by the fact that courses are provided in Dutch and candidates have to pass a language examination.

FVMU offers a great opportunity to young researchers to apply and enter into a PhD programme at a high quality level. The mean duration of a PhD programme is approximately 5 years, during which candidates are encouraged to spend a period of education and research abroad. The PhD students have to publish at least 3 scientific papers in international peer reviewed journals. At the end of each year PhD students are evaluated to check on their progression. This process is described in detail in the quality assessment protocol for PhD programmes, which is available on the website of the FVMU. Interviewed PhD students appeared highly motivated and enthusiastic for their programme as well as the way their mentor and the FVMU encourage them. They are also aware of the quality assessment procedure existing for the PhD programmes at FVMU and UU. The FVMU does not currently have any *post-graduate* Master Programmes.

The FVMU is actively advancing the post-graduate training with particular emphasis in clinical training. A large number of permanent staff have already obtained a Diplomate-qualification and a number of the FVMU facilities are acknowledged for intern and resident training. A Diplomate qualification is considered a *conditio sine qua non* to apply for a permanent position in clinical FVMU staff, so young researchers and clinician are encouraged to follow an internship programme at FVMU or abroad

The FVMU and UU take student welfare and safety very seriously.

The FVMU is active in addressing problems that the students face during their studies, related to health, safety and welfare, by tutoring and counseling of students.

There are possibilities for students to give feedback anonymously through different opportunities (student representative, tutor, student council etc.).

There is a responsible for the collection of complaints from student (Complaints Coordinator).

Interviewed students (Representative and occasionally met) are very happy with the system adopted by the FVMU to take care of them.

FVMU pays extensive attention in the recruitment and assessment of academic staff. Teaching performance is assessed regularly taking into account student evaluation (post examination questionnaire where about 40% of students per course fill in the questionnaire), by teaching effectiveness (quality of didactics), scientific merit (excellence in publications) and quality of services (clinics and farm).

The feedback of students is taken into account by the Board of Studies and the students are aware of the results for each course.

It is evident that the FVMU is addressing the need for continuous improvement of teaching and teaching staff by offering training opportunities, particularly to junior staff and talented personnel.

It is evident that the FVMU devotes a lot of time and resources into developing and maintaining an impressive array of modern and virtual learning opportunities for the students. As a result, students are very enthusiastic and well satisfied by the learning methods and materials available.

The FVMU has established validated procedures for monitoring programme and course effectiveness and improvement.

Input comes from students and teachers on curriculum and are actively absorbed by competent committees and boards who can amend and optimise the programme, its courses and tracks if necessary. Students are actively involved in relevant committees and made aware of the existing quality assessment procedure.

There is a lack of protocols/SOP's externally validated for quality assurance in both clinical (including farm) and laboratories. The richness and complexity of these facilities make it difficult to manage and control internally all quality assurance procedure.

Advice should be sought in order to gain recognition for quality assurance from external accreditation/certification bodies.

Continuing education is well integrated into the activities of the FVMU. All such activities are subjected to appropriate accreditation procedures. The FVNU significantly participates in the CPE activity in the veterinary field in the Netherlands and this function is greatly appreciated by veterinarians.

Quality assurance procedures of research activities and research performance are active, effective and appropriate. The institution of IVR is an excellent approach to improve, control and develop research activity within the FVMU. Results on the research and quality of research production of the FVMU are excellent. The involvement of all students in research is an outstanding policy adopted by FVMU and, when interviewed students are very happy and interested in devoting a proportion of their credits to a career in research activity. They also greatly appreciated the Honors Programme for excellent students. This reflects on the teaching staff of the FVMU as approximately 100% have the title of PhD.

PhD students and young researchers are invited to spend a significant part of their education in outstanding institutions abroad.

FVMU is recognized at international level for collaboration and cooperation with public and private bodies involved in both human and animal health. The interest and involvement of both student and staff in national and international programme and collaborations is highly appreciated.

The FVMU is in close collaboration with national (e.g. veterinarians operating in the field of both small and large animals and wildlife, associations and societies) and international bodies and associations, public and private, involved in human and animal health and animal welfare. FVMU is demonstratively a major referral centre for the veterinary environment in the Netherlands.

In conclusion, on the basis of the above considerations, the Stage 2 Visitation Team recommends to ECOVE the status of accreditation for the FVMU.

Annex 1 Decision of ECOVE

No Major Shortcomings had been found.

The Faculty of Veterinary Medicine, Utrecht University is classified after Stage 2 Evaluation as holding the status of: **ACCREDITATION**