



**European Association of Establishments for Veterinary Education  
& the Federation of Veterinarians of Europe**

**European System of Evaluation of Veterinary Training**

**REPORT ON THE STAGE 2 VISITATION**

**TO THE FACULTY OF VETERINARY MEDICINE OF COPENHAGEN  
ON SEPTEMBER 27<sup>th</sup>–29<sup>th</sup> 2010**

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## INTRODUCTION

Quality assessment (QA) is perceived as a strategic goal by the University of Copenhagen and the Faculty of Life Sciences (LIFE) itself. There are a vast number of thorough QA procedures in place, all of which have been operating for a minimum of 2 years. Strategy, policy and procedures have a formal status and are publicly available on the website of the Faculty. Key elements for QA are the development contracts between the University and the Ministry of Science, Technology and Innovation as well as the development contracts between the Faculty and the University and the Faculty and its Departments. All development contracts are in line with each other and are developed in a top-down-bottom-up process. The concept of performance-driven allocation of resources is strongly established, not only on Faculty but also on individual level. University and Faculty members at all levels as well as stakeholders and students are involved in all major QA processes. There is great commitment to transparency, communication and uniformity, all of which are essential components of a functioning Quality Assessment and Quality Management (QM) system.

Flow charts were provided for several, if not all assessment procedures (AP's) in SER 2. On-site, the team specifically asked for documentation and flowcharts for a

selection of other APs and found that the majority of material was present on the Faculty Website.

The team received the following documents:

1. Guidelines for students in special pathology
2. Guidelines for performance and development review
3. Summary of appraisal interviews of individuals from section head
4. Summary of appraisal interviews at department level
5. Minutes of department conferences
6. Developmental contract university-ministry
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  - Positioning of a patient for surgery
  - After surgery recovery
  - Drug disposal
  - Abdominocentesis in horse
  - Behaviour and dress code in surgery

## Practical cards for students at small animal clinic

The provided documents, exploration of the QA elements available on the Faculty website, and explanations by people responsible for QA convinced the team that QA procedures are present and – more importantly – operational as governing tools at all levels.

QA seems to be with good grounds and tradition. The overview of QA systems given in SER 2 (Table 0.1) shows that QA procedures are widely based and convinced the team that the period of two years requested by EAEVE is fully covered.

## **Chapter 1. POLICY STATEMENT**

### Findings

The awareness that independent research of the highest international quality is absolutely crucial to attract the best students and to make considerable improvements to study programmes is clearly present. As a result, in 2009, the University of Copenhagen was ranked number 51 worldwide and number 12 in Europe on the THE-QS ranking list (The World University Rankings – Thomson Reuters). Within the veterinary BSc and MSc programmes, all courses are taught by scientists included in active research projects in their areas of specialisation. Each scientific lecturer has the responsibility to include relevant research knowledge in his/her teaching. This is monitored by the Educational Council of LIFE, the Veterinary Study Board and the Departmental Teaching Committees.

The Faculty Quality Policy derives from legal rules (Danish University Act, Accreditation of University Study Programmes) and the formalized Policy Statement and Regulation of the University of Copenhagen. Within the scope of those documents, the Faculty as well as Departments and research groups define their own strategies and goals. In particular, the QA procedures in place to document the relevance of programmes offered and their ongoing development lies with the course coordinator, the Teaching Committees, the Veterinary Study Board, the Associate Dean for Education and the Study Director in accordance with the Statute of the University of Copenhagen.

In SER 2 the Faculty included a summary of strengths and weaknesses identifying its principal goals. A full SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is not present but is inferable from the report as a whole.

A rough overview of the organisation of the QA system is shown in Figure 1.1 in SER 2. Responsibilities are clearly defined either by the University Law (e.g. for the Heads of Department, Cooperation Committee, Teaching Committee), the Faculty (e.g. for section leaders) or Heads of Department (e.g. for Management Teams) and are available on the Faculty's internal website. Students are strongly involved in all QA procedures and are equally represented in all principal bodies of the Faculty. The team's meeting with the student representative confirmed that the students' voice is heard and appreciated and that students are highly satisfied with their involvement in QA.

In all major fields of the Faculty, the ways in which policy is implemented are rigorously and regularly monitored and revised. For example, LIFE reports its performance as defined in the development contract to the University annually. In addition, departments report on their compliance with the developmental goals agreed upon with the Dean regarding research, research funding, student uptake, career development of employees, communication with the public, cooperation with industry, research – based public service, human resources (employee welfare, recruitment and securing) and investments annually. These department development contracts are defined every two years and leave room for the departments' own goals and goals specific for veterinary medicine. They strongly reflect the University's and Faculty's goals and are further broken down to section level. The inclusion of employees in this process is assured by performance agreements that are closely monitored and developed in annual appraisal interviews.

Moreover, procedures will be monitored by Denmark's Accreditation Institution (ACE) in the future to ensure that LIFE complies with the European standards and guidelines of ENQA.

#### Comments

The Faculty has demonstrated a high degree of awareness for quality. There are many QA procedures in place, though an overall QA policy specific for LIFE has yet to be formulated in LIFE's strategic action plan. Performance of the Faculty as a whole as well as performance of departments, sections and individuals is closely monitored. The ways in which this is done is transparent. Responsibilities of the principal bodies and individuals are known and understood by those concerned; descriptions can be found to a large extent on the internal website. Annual (in some areas, e.g. teaching, biannual) review of policies and procedures ensure that revision and continuous improvement and development take place.

#### Suggestions

The LIFE website is very well designed and highly informative. The team suggests the page on QA be further developed to bundle up all individual QA procedures in place. The idea is to make all QA relevant procedures available at a glance: Overall quality policy of the Faculty, description of all QA procedures in place, their monitoring and revision, communication pathways, roles and responsibilities of governing bodies and individuals, SOPs etc... Since most of this information is already available on-line, many of these aspects can be covered by providing electronic links to the relevant websites.

This QA website could be used to take QA a step further toward a desirable future holistic Quality Management (QM) system that clearly explains and documents each QM procedure, illustrating it with flow charts in which responsibilities at each level are clearly defined. It could then link all flowcharts to form one overall picture that shows how single QM procedures come together, how they are revised and monitored, how they influence each other, and how their outcome is used to implement changes (if necessary) on an individual, institutional or Faculty level.

To facilitate this process, the team suggests that it may be advisable to purchase QM software. This would provide a framework for the description and documentation of

QM procedures, definition of SOPs, communication pathways, process ownerships and implementation of reporting and analyzing tools (indicators) as well as feedback mechanisms for entering flaws in the system, thereby allowing learning effects to take place. The establishment of a “central coordination body for Quality Management” on Faculty level is strongly recommended.

## Chapter 2. ASSESSMENT OF STUDENTS, POST GRADUATE EDUCATION AND STUDENT WELFARE

### 2.1 UNDERGRADUATE EDUCATION

#### Findings

The application procedure for the veterinary BSc Programme is identical to the general BSc application procedure at all other Danish Universities. The general and specific requirements applicants must fulfil in order to be accepted are regulated by Danish legislation. Admission is based on a national university entrance exam, diplomas and certificates considered as valid qualifications for admission are clearly defined. In addition, all applicants must document a specific level of competences in Danish, English, mathematics, physics and chemistry or biotechnology. Foreign applicants must include information and transcripts about the levels in relevant subjects.

Since the number of study places available is limited to 180 students per year, students are selected by quota. Applicants are considered for admission 50% via ‘quota I’ (exclusively on the basis of their qualifying exams) and 50% via ‘quota II’ (a stepwise procedure that includes a grade point average of 6 or above from the entrance exam, multiple choice test (weighted 1/3) and a 20 min. structured interview (weighted 2/3)).

Documents for and information on admission to BSc and MSc programmes are made available to applicants on the websites of LIFE and the University of Copenhagen whereby all students with a Danish veterinary BSc degree are guaranteed admission into the MSc Programme.

<b>Table1a: Assessment admission of students</b>	<b>Year</b>	<b>Year</b>	
<b>Number of students admitted</b>	<b>2009</b>	<b>2008</b>	
Number of students admitted based on Quota I	99	93	
% foreign students	25	27	
Number of students admitted based on Quota II	92	93	
% foreign students	25	28	
	Good	X	X
Assessment of selection criteria	Acceptable		
	need improvement		

All students obtaining a Danish veterinary BSc degree are guaranteed admission into the MSc programme. Foreign students may be admitted only if there are vacant slots.

From 2012, the MSc programme in Veterinary Medicine will be taught in English. All applicants must show proficiency in English.

**Table1b: Assessment admission of students to MSc**

Number of students admitted		Year 2008	Year 2009
Number of students admitted based on criterion		141	91
% foreign students		23	45
Assessment of selection criteria	Good	X	X
	Acceptable		
	need improvement		

The assessment of student performance is defined by Danish legislation. External examiners, approved by the Ministry of Science, Technology and Innovation, are present in at least one third of exams as well as in BSc and MSc theses assessment. Exams can be written, oral or practical. Students have a minimum of 3 exam attempts. Grading can be either pass/fail or based in a 7-point grading system equivalent to ECTS 7-point letter scale. BSc must pass all first year exams within 2 years. Both BSc and MSc students must complete their studies within 5 years. All students must show a study progress equivalent to 30 ECTS in a 2 year period. Students' progress is automatically registered by the on-line student services system (STADS). Students failing to meet the requirements are informed and must apply to the Veterinary Study Board for an exemption in order to continue their studies.

At the beginning of each course, students are informed about course syllabus, learning objectives and outcome as well as exam methods. This information is also made available on the Faculty website. The assessment of students' progress varies from course to course and can be weekly or monthly. Ordinary exams are scheduled for the last week of the block in which a course ends. Re-takes take place in predetermined teaching-free interim weeks. Exam results are available for students within 3 weeks after the week of the exam and are published electronically via STADS.

If problems in the student assessment system (complaints about exam procedures and grades) arise, they must be forwarded in writing to the Study and Student's Affairs within 2 weeks of the publication of the exam results. This is regulated by the Ministerial Order in University Examinations. Where academic matters are concerned, the course coordinator, appropriate lecturer(s) and internal / external examiners are always involved and must carry out an exam reassessment within 2 weeks. Should the student wish to do so, he/she may turn to the Board of Appeal,

consisting of 2 external examiners approved by the Ministry of Science, Technology and Innovation, the course coordinator or lecturer and a veterinary student. The Board of Appeal must reach its final decision within 2 months.

The team found on-site, however, that ways are found to solve most problems by means of direct contact with students.

Each course is appointed a course coordinator whose task it is to review course syllabus and organisation, including exam procedures and content, annually, while taking into consideration the results of the students' evaluation and the exam results. In addition, each Department has its Teaching Committee, one member of which is the Department's representative in the Veterinary Study Board. In both the Teaching Committee and the Veterinary Study Board, students and staff are equally represented.

The Study Director is an associate member of the Veterinary Study Board. It is his responsibility to coordinate the curriculum and operationalize the decisions of the Veterinary Study Board. He relates directly to the Dean of Education.

The Director of Studies is responsible for administrative support, QA procedures and assistance of study director, Veterinary Study Board and Associate Dean of Education and is a member of the Faculty's Educational Council.

The Faculty's Educational Council is the chief governing body. It lays down all QA procedures for the whole Faculty and is chaired by the Associate Dean for Education.

Twice a year, the Departmental Teaching Committee discusses course evaluations performed by students and exam results relevant to the department. The courses are categorised according to their need for improvement from A (no / minor improvements needed) to C (critical / major improvements needed). If a course is graded "C", the course coordinator must define an action plan for improvement. This action plan is in turn evaluated by the Teaching Committee, who also advises the Head of Department. If necessary, the action plan is revised. The results of the departmental course evaluation are communicated to the head of department and the Veterinary Study Board twice a year. In addition, action plans are reviewed and released by the Veterinary Study Board. Each Department is represented in the Veterinary Study Board by one member who may also be member of its Teaching Committee.

At least every 2 years, the Veterinary Study Board assesses and revises the entire curriculum, including exam procedures. At least once a year, the Study Director holds a plenary discussion on educational matters and examination procedures with students representing years 1 to 5, and the Chairman of the Veterinary Student Organisation as well as members of the student counselling service..

In addition, the study director provides a report addressing student admission procedures, uptake and study progress, possibilities and visions regarding the curriculum, follow-up from previous years, critical issues from the preceding year and suggestions for future initiatives and corrections to the Veterinary Study Board and the Faculty Educational Committee every 2 years.

## Comments

It is evident that both teaching as well as exam procedures are subject to not only rigorous QA but also QM. The QM procedures in place are in operation and are considered highly adequate by the team.

The introduction of “quota II” is considered as an opportunity to improve motivational boost in study progression. Data confirm that students of quota II are not better than students of quota I in exam results but they are less inclined to drop study. At the moment conclusive data on the effect of quota II introduction are not available.

Moreover the inclusion in the enrolment interview panel of students and veterinary practitioners appointed by Danish Veterinarian Association, each with his individual score, ensure transparency of the enrolment process.

Nearly all the non Danish students enrolled in BSc and MSc are from Nordic countries.

The web site contains all the information according to ECTS rules.

## Suggestions

In order to allow a better overview of the QM procedures in place each procedure should be concisely described with the aid of flow charts, showing communication pathways, process ownerships and responsibilities as well as feedback mechanisms and how individual Committees and Councils interact.

The different structure of Department’s website may result in some difficulty in finding course outlines, a harmonization is desirable.

## **2.2 POST-GRADUATE STUDENT EDUCATION; ACADEMIC TRACK**

### Findings

The PhD Programme is the primary postgraduate education at life. Any student having completed the veterinary DVM programme or another relevant MSc programme may apply for the PhD Programme. Since PhD Students are employed and paid a normal salary, PhD positions are announced in ordinary job advertisements. PhD students financed by external funding are employed on the basis of job interviews, PhD students financed by LIFE are selected by the Associate Dean for research based on an evaluation by the PhD Board and the Head of the Graduate School. Evaluation criteria include average course grades (weighted by the course ECTS and other academic qualifications) for applicants with a Danish degree and exam results, other academic qualifications and a statement from the department of the potential supervisor for other applicants.

At the beginning of each PhD Programme, the student and supervisor sign a contract specifying the objectives and hypotheses of the PhD project, its background, schedule, plans for the project, PhD course portfolio, participation in active research, and teaching activities, agreements on intellectual property rights and a financing plan.

The assessment of PhD students is performed twice a year by the respective principal supervisors. Assessment is based on compliance with the requirements defined in the PhD plan and is forwarded to the Study and Students' Affairs by ways of the department. The PhD Student is given the opportunity to submit his / her own comments as well within 2 weeks.

The final assessment takes place after 3 years at the time of completion of the PhD thesis. This assessment is carried out by the Assessment Committee consisting of two external researchers (one preferably from abroad) and one member from the Faculty. The principal supervisor is an associate member of this Committee. If the assessment is negative, the Committee must make suggestions for improvement. If assessment is positive, a public defence is scheduled. After having passed the defence, the LIFE academic Committee awards the PhD degree.

Postgraduate master's programmes are regulated by the Ministerial Order on Master's Programmes. They are part-time programmes equalling 60 ECTS. Admission requires a relevant BSc and/or MSc degree and a minimum of 2 years of relevant professional experience. This is defined by Danish legislation. Participants pay a tuition fee; for EU participants, the Programme is subsidised by the Ministry of Science, Technology and Innovation. Assessment of participants takes place at the end of each course.

#### Comments

Though post graduate students are undoubtedly assessed, the team misses standardized QA criteria for PhD- and master student progress, PhD- and Master Theses and PhD defence. Furthermore, it is not clear how QA procedures are monitored, developed and advanced and how assessment is communicated to the students.

#### Suggestions

LIFE has a highly sophisticated QA and QM system in place for undergraduate education. The team suggests this system be extended to postgraduate studies as well.

**Tables 2: figures for post-graduate academic education**

<b>Year</b>	<b>Type of programme</b>	<b>Number students enrolled</b>	<b>Number students passed</b>	<b>Mean number paper per student</b>	<b>Mean number impact factor obtained per student</b>
2009	PhD	207	97	3.9	
2009	Master	81			
2008	PhD	129	80	4.4	
2008	Master	30			

Unfortunately, the mean impact factor obtained per student was not given. This was in part due to a misconception of the term "impact factor". "Impact factor" does not refer to the student or the number of times the article was cited, but to the impact factor of the journal the article was published in (Science Citation Index (SCI), Social

Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A&HCI) ranked journals).

No information was given on the number of students passing the Postgraduate Master's Programme. The team suggests this data be provided as well.

## 2.3 POST-GRADUATE STUDENT EDUCATION; PROFESSIONAL TRACK

### Findings

Residency Programmes in internal medicine (companion animals, small animals, equine, oncology), surgery (small- and large animals), clinical pathology, diagnostic imaging, bovine health management, veterinary public health, parasitology, pathology, reproduction and lab animal medicine are offered by LIFE, but they are in early stages of development. Admission follows the University regulations for the employment of staff. The financial basis of the Programme is secured by LIFE and, in part, through grants. Cooperation with other institutions take place within individual programmes.

**Table 3: figures postgraduate professional specialisation**

Diplomate title offered	Number of diplomates on staff	Number of interns		Number of Residents		Success rate	
		2009	2008	2009	2008	2009	2008
DECVIM-CA Diplomate European College of Veterinary Internal Medicine - Companion Animals	3	0	0	1	1	1	
DECVIM-Oncology Diplomate European College of Veterinary Internal Medicine – Speciality of Oncology	1	0	0	0	0		
DECVS-SA Diplomate European College of Veterinary Surgery - small animals	1	0	0	1	1	1 (passed 2010)	
DECVCP Diplomate European College of Veterinary Clinical Pathology	1	0	0	1	0		
DECVDI Diplomate European College of Veterinary Diagnostic Imaging	2	0	0	1	1		
DECVS-LA Diplomate European College of Veterinary Surgery - large animals	1	0	0	2	0		
DECBHM Diplomate European College of Bovine Health Management	1	0	0	1	0		
DECEIM Diplomate European College of Equine Internal Medicine	2	0	0	0	0		
DACVIM-LA Diplomate American College of Veterinary Internal Medicine - Large Animals	1	0	0	0	0		
DECVPH Diplomate European College of Veterinary Public Health	9	0	0	1	0		
DECVParasitology Diplomate European Veterinary	3	0	0	0	0		

Parasitology College							
DECVP Diplomate European College of Veterinary Pathology	1	0	0	0	0		
DECAR Diplomate European College of Animal Reproduction	4	0	0	0	0		
DECLAM Diplomate European College of Laboratory Animal Medicine	1	0	0	0	0		

#### Comments:

The residency programme is still very young and is therefore lacking the rigorous QA procedures that have been developed in all other areas regarding education and teaching. Though the curriculum and certain criteria (e.g. case loads, case logs) are defined by the relevant Boards for Veterinary Specialisation and resident progress and success is monitored by the supervising diplomate, no standardized assessment criteria for admission and resident performance seem to be in place.

#### Suggestions

As is the case for PhD students, the team suggests the implementation of a Resident Committee that defines standardized QA criteria for resident admission and progress.

As stated previously, the team suggests the extension of the sophisticated QA and QM system for undergraduate education to postgraduate studies as well.

It is further suggested that it may be worth considering the implementation of internships for small animals, large animals, ruminants, reproduction etc... The completion of such an internship programme could then be defined as one of the prerequisites for admission to the residency programme and could be a means which would help the Faculty in selecting the most talented clinicians, thereby further improving quality.

### Chapter 3. ASSESSMENT OF TEACHING STAFF

#### Findings

Each course is evaluated by students based on an electronic survey set up by the course coordinator on a Learning Management System (LMS) called Absalon at the end of the course. This includes the evaluation of lecturers, didactics, student preparedness, student workload, student's appreciation of the relevance of what has been learned and suggestions for the improvement of the course. Course evaluations are carried out prior to or after the exam, based on the decision of the course coordinator. The goal is to achieve a return rate of 75%.

- evaluation by teaching success

#### Findings

As described in Chapter 2.1 course evaluations based on student feedback and exam results are reviewed by the Departmental Teaching Committees, who categorise courses according to their need for improvement from A (no / minor improvements needed) to C (critical / major improvements needed). If a course is graded "C", the course coordinator must define an action plan for improvement. This action plan is in turn evaluated by the Teaching Committee, who also advises the Head of Department. It is the Head of Department's formal responsibility to follow up and document matters of concern with individual employees in the framework of appraisal interviews. Corrective measures taken are recorded, their fulfilment monitored and their effects measured in the next course and exam evaluation. To this avail, a competence development strategy is defined for each employee. Furthermore, LIFE has developed a Higher Education Teaching and Teaching Practice Programme. This training programme is compulsory for assistant professors, who must complete it within the first 2 years of their employment to qualify for the position.

- evaluation by scientific merit.

Evaluation of scientific merit is performed largely on the basis of bibliometric data and is monitored, documented and revised on an individual level in annual appraisal interviews.

Comments:

Rigorous QA of courses, examination procedures and teaching staff is practised at LIFE. To ensure adequate QA, processes have been standardized, each quality assessment procedure has been concisely described with the aid of flow charts and documented, communication pathways and process ownerships have been defined and reporting and analyzing tools (indicators) as well as feedback mechanisms have been installed at all levels. Teaching excellence is rewarded based on the decisions of student juries on a Faculty and University level.

The only problem LIFE is facing is the return rate of student evaluations. Though a return rate of 75% has been defined as a goal and this is also a point formalized in performance agreements with individual lecturers, evaluation rates have been low (<30%) for some courses in the past 2 years due to the change to a new internet system. The Faculty is aware of this problem and is taking corrective measures.

Suggestions

None

## **Chapter 4. ASSESSMENT OF LEARNING OPPORTUNITIES**

Findings

Though lecturers may select their own didactic methods, the Danish Accreditation Act required a constructive alignment of teaching methods, learning objectives and exam methods. Didactic methods are assessed, monitored, documented and revised on a regular basis. Course descriptions include a reference list of textbook material recommended; course notes are uploaded to the Absalon LMS system for students.

QA of these materials is provided through regular revisions, primarily by Teaching Committees and the Veterinary Study Board.

Both IT and library facilities are provided at a Faculty level and very well founded.

In addition, the team is convinced that there is an ongoing dialogue between students and the Faculty, creating an environment that provides interactions with the teaching staff beyond regularly scheduled lectures.

The assessment of learning opportunities is included in the formal and standardized procedures for the assessment of the study programme (see Chapter 2.1). In addition, a survey of the teaching environment is conducted among students at least every 3 years. The results of these surveys are implemented in an action plan aiming to improve study environment based on students' evaluations and recommendations.

Comments:

LIFE is dedicated to providing learning opportunities not only for its students, but also for its staff (as laid down in individual competence development strategies). The team found that, by means of student surveys and –evaluations and continuous quality checks of staff, courses and entire curricula, a QA system has been put in place that closely monitors the academic environment. Students are involved in all processes; revisions are based on feedback mechanisms, are well documented and regularly carried out. IT learning opportunities are constantly being expanded – of late by launching a pilot project concerning the use and sharing of e-learning and blended learning in teaching. Study facilities, too, are subject to continuous improvement: currently, study and student facilities at Taastrup Campus are being created.

Suggestions

None

## **Chapter 5. ASSESSMENT OF TRAINING PROGRAMMES AND THE AWARD OF THE TITLE OF VETERINARY SURGEON**

Findings

LIFE has only recently (2009) implemented a new veterinary curriculum, which will gradually replace the old Curriculum 2005. The structure is based on the Bologna Declaration and consists of a 3 year BSc curriculum and a 2,5 year MSc curriculum. All curricula and course syllabi are published on the LIFE website. Course descriptions include course load (in ECTS), exam procedure, course content, didactic approach, suggested text books and intended learning outcomes, including a description of the expected knowledge gained and reference to the expected Day 1 skills at the end of the curriculum, as defined by EAEVE.

Revision and development of the new curriculum was performed with utmost professionalism and involved representatives throughout the Faculty: Four working groups, responsible for either basic subjects and sciences, animal production, food

hygiene or clinical sciences were established. Each consisted of a chairman (member of the Veterinary Study Board), a student (assigned by students on veterinary study Board), a representative from each department contributing to the veterinary curriculum and a member of the Technical University staff contributing to the veterinary curriculum. The team appreciates that the set-up of these working groups promoted the transfer of information from working groups to students, teaching committees, heads of Department and the Veterinary Study Board, allowing their input in an on-going process.

In 2008, the new curricula were subjected to first an internal, then an external consultation process at the Danish Veterinary and Food Administration,, the Danish Veterinary Association, the Veterinarian Corps of external Examiners and the Faculty Advisory Board on veterinary subjects. In these stages, they were subject to constant revision and improvement, before being approved by the Dean.

QA of curricula and teaching programmes are performed by means of internal and external curriculum and course evaluations.

External curriculum evaluations include a survey among alumni (every 4 years, starting 2010), an External Advisory Panel (meetings biannually) and dialogue with stakeholders.

The results of these external evaluations are internalized by ways of the Study Director, who communicates the results to the Veterinary Study Board. At the same time, internal curriculum evaluations are carried out by surveys among BSc and MSc students in their last year every 4 years and meetings with student classes annually. Results are again bundled up by the Study Director, who plays a central role in linking external and internal curriculum evaluation and revision processes.

External course evaluations include Reports from the Board of External Examiners annually, continuous external examiners' evaluation, and the Department advisory Board (external, meetings once or twice a year)

The results of these evaluations are, in turn, internalized by the Departmental Teaching Committees, who follow up on course evaluations and reviews and formulate final action plans while taking into consideration the course evaluations performed by students at the end of each course as well as reviews of the course coordinators on course evaluations, exam results and suggested action plans. Twice a year, the Department Teaching Committees allocate a score A to C to each department course on the basis of course evaluations, exam results and evaluation reviews and report these as well as planned actions for improvement, to the Veterinary Study Board.

Based on the Study Director' Memorandum on veterinary curriculum and student welfare every second year, the reports of the Departmental Teaching Committees twice a year and the Report from the Board of External examiners once a year, the Veterinary Study Board carries out both course and curriculum revisions every second year.

Comments:

All QA procedures relevant to curricula and courses are well defined, documented and published on the Faculty's website. Responsibilities are clearly defined either by Danish legislation or by the Faculty and are published on the Faculty's website. Feedback mechanisms are well in place, allowing the continuous review and improvement of curricula and courses. Students are involved at all levels, making up 50% of the educational boards and committees. The involvement of stakeholders and graduates is highly appreciated by the team.

### Suggestions

Especially in areas such as curricula, teaching, exams and courses, where quality is not only assured but truly managed and QA and QM procedures are carried out on many different levels, the team strongly suggests to use flow charts to help visualize the organisation, communication pathways, process ownerships and responsibilities, analyzing tools and feedback mechanisms for each procedure in place. In a next step toward a desirable holistic QM, all procedures can be linked to form one overall picture that shows how single procedures come together, how they are revised and monitored, how they influence each other, and how their outcome is used to implement changes (if necessary) on an individual or Faculty level.

## **Chapter 6. ASSESSMENT OF QUALITY ASSURANCE FOR CLINICS, LABORATORIES AND FARM**

### Findings

As far as the team could grasp, Standard Operating Procedures (SOPs), Good Laboratory Practice (GLP), Good Manufacturing Practice (GMP) manuals, security guidelines etc. are present in written form in the clinical area, laboratory as well as diagnostic services and are supplied to students and staff.

To the team's knowledge, none of the clinics, but individual laboratories and diagnostic services as well as single procedures have been accredited by an external quality assurance body.

Key elements of QA in the Small Animal Veterinary Teaching Hospital are the electronic patient record system, allowing a full patient follow-up, clinical rounds and SOPs, which have been put in place for several clinical actions. Quality and performance of the Hospital is closely and continuously monitored by the Hospital Director, who also processes client complaints.

QA at the Large Animal Teaching Hospital takes place in the form of SOPs, daily rounds and monthly meetings.

### Comments:

Though single QA procedures are in place in the clinics, laboratories and diagnostic services, they are lacking a holistic approach.

Furthermore, it was not shown in SER 2 how the electronic patient record system is used to gather information on the performance of the Hospital (e.g. income of the

Hospital, number of cases etc...) and how these performance indicators are used to make revisions.

### Suggestions

The team strongly suggests that the implementation of QA in clinics, laboratories and diagnostic services be included in the Faculty's policy. International Organisation for Standardisation (ISO) certifications should be an aim for all clinics and laboratories.

It is further suggested that the electronic patient record system be used as an information and communication system – allowing both quality assessment and feedback mechanisms – in both the Small and the Large Animal Teaching Hospital.

The team was told on site that QA by means of evaluation of customer satisfaction will be carried out shortly. It is suggested that a procedure be determined for the controlled distribution of satisfaction surveys (e.g. 100 owners a year, selected at random, distribution by mail). Return rates should be noted. In addition, the consequences attached to the results of satisfaction surveys performed should be defined and procedures should be established which outline communication pathways and process ownerships as well as reporting and analyzing tools (indicators) and feedback mechanisms.

To the team's knowledge, the animal hospital of the Faculty is a referral clinic as well. Therefore, referring practitioners should be involved in the QA process. On that account it is suggested that satisfaction forms be sent to referring practitioners.

## **Chapter 7. ASSESSMENT OF CONTINUING EDUCATION**

### Findings

The Faculty offers CE in different forms, more structured Master programmes, courses offered by Departments in collaboration with the Danish Veterinary Association and the 'Fagdyrlæge' programme offered by Danish Veterinary Association in which many of the lecturers are Faculty's staff.

SER 2 clearly describes how those programmes are designed and monitored

### Comments

See also: Chapter 2.2. (Post Graduate Master Programmes)

CE is not mandatory in Denmark for practitioners, though the President of Danish Veterinary Association informed the team that, in spite of this, practitioners are very eager to participate.

Judging from table 7.3 (page 55) the total number of participants does not seem very large but the team assumes that these figures do not include the 'Fagdyrlæge' programme.

### Suggestions

See also: Chapter 2.2. (Post Graduate Master Programmes)

LIFE has a highly sophisticated QA and QM system in place for undergraduate education. The team suggests this system, where feasible, be extended to continuing education as well.

## **Chapter 8. ASSESSMENT OF RESEARCH**

### Findings

According to the University Act, the University must conduct research and offer research-based education. The tools utilized to assess research on the University and Faculty level are mainly the development contracts.

The development contract drawn up between the Ministry of Science, Technology and Innovation and the University which sets overall goals for research output:

- the number of publications (2010= 2,2 peer-reviewed publications per year for each full-time equivalent scientific researcher)
- the number of newly employed scientists who come from a country other than Denmark
- the amount of external funding
- the number of PhD students

Furthermore the University of Copenhagen strategic action plan 2008-2012 underlines the specific research goals of the University within the scope of the development contract:

- to increase the ratio of newly employed scientists who come from outside of Denmark by 10% before the end of 2010
- to have more women in research and leadership
- to allocate 10% of the University's basic research funding to excellent research areas of the faculties based on a competition
- using international criteria and assessment
- to maintain the high level of research output per full-time equivalent scientist
- to increase the number of PhD students
- to support researchers who apply for large research projects
- to benefit scientifically from the merge between the 'old' University of Copenhagen, the Royal Veterinary and Agricultural University and the Danish University of Pharmacy.

The development contract between the University of Copenhagen and the Ministry for Science, Technology and Innovation as well as the University's strategic plan is further broken down to the Faculty level. Specific goals unique to the faculty are additionally defined and those responsible for collecting data are defined. LIFE's strategic objectives for the period 2009-2010, documents how LIFE will contribute to the University strategy of maintaining and strengthening its position as one of Europe's leading university environments within food sciences, veterinary sciences

and natural resource sciences. The Faculty's strategy is then transformed into 2-year development goals for each department. The goals are decided in cooperation between the head of departments and the Faculty Board. The head of department is responsible for the fulfilment of this agreement, and the progress and results are reviewed by the Faculty Board after 1 and 2 years.

Bibliometric data is used to assess whether a scientific employee, the department, the Faculty and the University are complying with their respective agreements. Annually, the Faculty collects data on scientific publications using bibliometric methods common to the University. The numbers and impact factors of the scientific publications in the preceding 5 years are also used as a measure in the Faculty Board's decision on the size of the budget of each Department in the 2-year development planning process for each department.

In addition, the team was told that all employees have an annual appraisal interview with their immediate superior. For scientists, this appraisal interview includes assessment of the scientific production, research leadership and the amount of external funding, teaching, administration and personal issues, if necessary. The head of department receives a summary from each departmental section, and the results are discussed in the local collaboration committee. The outcome of this discussion is submitted to the Faculty's collaboration committee for further discussion, the focus, however, mainly being on development of competences for groups of employees. All employees are made aware of this, on the Faculty's and the University's websites.

Once a year, the head of department reports to the Dean on the department's research production (Joint rules on the research efforts of academic/scientific staff).

A list of publications was included in SER2 with data from 2009-2008 and 2007. The team was informed on-site how the central research database works and examples of data analysis were shown.

Grant acquisition of the Faculty seems very efficient; in particular the team appreciates the extra bonus given to groups acquiring an EU project by the University.

The extent to which lecturers include research knowledge and research methods in teaching is assessed during the course evaluations process and during the discussions with the Veterinary Study Board and Teaching Committees.

In the 'Veterinary introductory course' students obtain a better understanding of the possibilities and limitations of scientific methods and learn how to evaluate the quality of different scientific sources. Furthermore, in most practical and practical-clinical courses, the students learn how to use research methods. Students also learn how to critically evaluate scientific sources and experience research through their written BSc thesis (10 ECTS) and finally all veterinary students actively participate in research through their veterinary MSc thesis project, which includes an experimental research part (30 ECTS).

Comments

The central research strategy is well defined and the development contract is efficiently broken down and implemented reaching the departmental and even individual level. Scientific production seems to be stable in the years considered (appendix 9 SER2).

#### Suggestions

Due to the complex evaluation system in place, the team suggests that the Faculty provide an all-inclusive easy to understand flowchart of AP10 including responsibilities, communication pathways and feedback mechanisms.

### **Chapter 9. ASSESSMENT OF INTERNATIONALISATION OF EDUCATION AND RESEARCH**

#### Findings

In the last 4 years, the Faculty has prioritized internationalisation, strengthening its collaboration with a few strong partners within veterinary science and focussing on more mobility and cooperation with these partners. A committee was set up with the main purpose of identifying possibilities for and barriers to internationalization and several partner universities in Canada, the USA and Australia have been visited. The chosen partners ensure that mobility windows for both incoming as well as outgoing students are defined and that courses/clinical rotations are bilaterally preapproved and considered part of the education. The web pages about “study abroad” are exhaustive and supply all needed information.

The Faculty has a profound language policy. By 2012, most MSc programmes must be taught in English. The purpose is that the veterinary MSc programme will also be in English, paying attention to specific topics (clients’ communication and veterinary jurisprudence).

The team found that staff mobility aside from registered mobility programmes is not monitored centrally.

PhD programs are, on the contrary, very international due to the world wide pattern of research links of the Faculty. The personal PhD student educational journey is about the national and international networks they build. Supervisors are committed to the use of their networks for the benefit of their PhD students making sure their students visit a recognised university abroad.

#### Comments

The proposed arrangements in language policy together with the linguistic competence of students and staff will increase the number of international student exchanges. The scientific network into which the Faculty is included seems adequate to assure PhD student programs internationalization.

#### Suggestions

An immediate and quantitative central database for monitoring incoming and outgoing students and staff could be an easy way to check the results of the Faculty internationalisation policy.

## **Chapter 10. ASSESSMENT OF COOPERATION WITH STAKEHOLDERS AND SOCIETY**

### Findings

The Faculty states in SER 2 that the main communicative tool between Faculty and stakeholders and society is the website. The team did appreciate that the website contains information about the curricula, teaching, exams, descriptions of the Faculty's programmes, and admission requirements.

Unfortunately most of the information about quantitative data on the website is in Danish.

LIFE does not have a tradition of directly assessing graduating seniors or alumni. During a meeting with stakeholders and alumni, however, the team had the opportunity to ascertain the very close collaboration between the Faculty and the practitioners as well as the Veterinary Organisations in Denmark.

In 2008, the University of Copenhagen established an alumni association for existing and former students of the university.

In 2009, LIFE established a procedure for evaluating Faculty's programmes, including a graduate survey. In 2010, the first graduate survey will be conducted among the graduates from the Veterinary Medicine programme.

The annual report from the external examiners as well as the employer panel's comments may also be considered a survey on curriculum quality by the stakeholders

### Comments

Altogether the team is convinced that the cooperation between the Faculty and stakeholders is wider than described in SER2.

### Suggestions

None

## **Executive Summary**

The Faculty has demonstrated a high degree of awareness for quality. There are a large number of thorough QA procedures, all of which have been in place for a minimum of 2 years. Strategy, policy and procedures have a formal status and are

publically available on the website of the Faculty. Students and stakeholders are also involved in QA procedures at various levels. The strategic plans of the University and Faculty, the development contract of the University with the Ministry of Science, Technology and Innovation as well as the development contracts between Faculty and departments are key elements of QA of the Faculty. The Faculty is strongly committed to assessment of teaching staff (Assessment Procedure (AP) 5 of Standard Operating Procedure (SOP) for Stage 2), training programmes (AP 7), research (AP 10) and employee performance and development (part of AP 6).

In order to take Quality Assessment a step further toward a desirable future holistic Quality Management, the team suggests the Faculty to develop comprehensive flowcharts including responsibilities, communication pathways and feedback mechanisms for each of the 12 EAEVE QA procedures in place and show how single QA procedures interact. The establishment of a “central coordination body for Quality Management” on Faculty level is strongly recommended.

Based on the SER for Stage 2 and the on-site visit, the team classifies the QA procedures as “satisfactory” according to “EAEVE Guidelines and Requirements for Stage 2 Accreditation” and suggests full accreditation of the Veterinary Faculty of Copenhagen.

**Decision by ECOVE: ECOVE follows the proposal of the experts and awards full Accreditation.**