

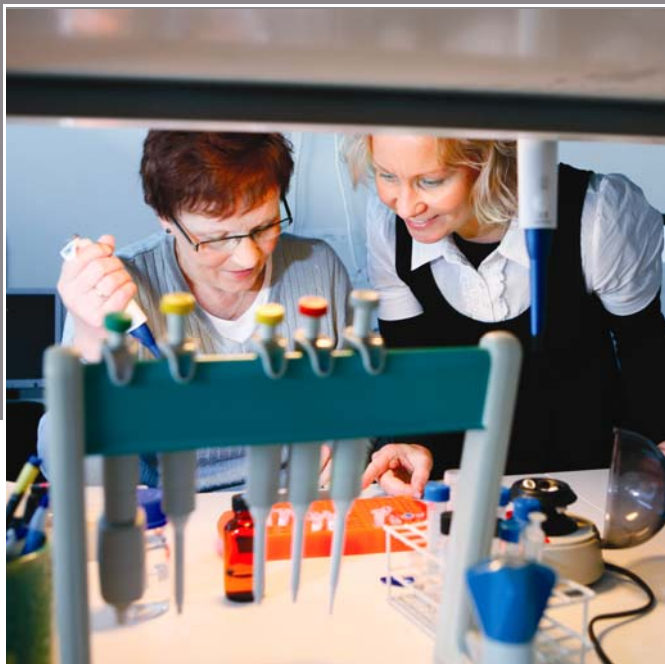


HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI



Self Evaluation Report 2:

Quality assurance and quality enhancement at the
Faculty of Veterinary Medicine, University of Helsinki, Finland



APPROPRIATE ACTIVITIES AND HIGH-QUALITY RESULTS



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SUMMARY OF ASSESSMENT PROCEDURES

The table below summarises the key tools for quality assurance and quality enhancement and the main quarters responsible for each assessment procedure (AP) at the Faculty of Veterinary Medicine. The assessment procedures are described in detail in Chapters 1-10. Several of the procedures are closely linked to the University of Helsinki, and the quality assurance system of the Faculty is an extension of that of the University.

Assessment procedure (AP)	Key tools for quality assurance and quality enhancement	Quarters responsible
1 = Policy statement; overall quality	Operations management process External evaluations and audits Operations manual Teaching evaluation matrix Student feedback system	The Dean and the Faculty Council, the vice deans and committees led by them
2a = Admission of students	Co-operation with medical faculties, external assessments of the admission procedure Entrance examination and its appeal procedure	The Faculty Council The Admissions Committee National University Admissions Committee of Medicine, the Development Committee of University Entrance Examinations, the National Committee for Entrance Examinations in Medicine
2b = Assessment of the performance of enrolled undergraduates	Regular and systematic assessment, predetermined for each academic year and published in the study guide Preset criteria for passing, use of matrices in assessing theses Appeal procedure Monitoring the failure rate and distribution of grades Etappi checkpoint system for monitoring the progress of studies	The Academic Planning Committee Departments Teachers
3a = Postgraduate student education: academic track	Operations management process Detailed instructions publicly available Examination procedures of the dissertation Teaching evaluation matrix Etappi checkpoint system	The Faculty Council Committee for Research and Postgraduate Affairs, the vice dean
3b = Postgraduate student education: professional track	Operations management process External evaluations Etappi checkpoint system	Committee for Specialisation Training, the vice dean Departments
4 = Student welfare	Etappi checkpoint system Personal study plans Student feedback Co-operation with Finnish Student Health Services and study psychologists	Academic Planning committee, the vice dean Head of academic affairs Student affair officials Teachers Other staff members Students
5 = Teaching staff	Recruitment procedure New salary system, annual personal review meetings and work assessments Staff development facilities Student feedback system	Dean Heads of departments Other superiors
6 = Learning opportunities	Student feedback system Teachers' meetings Teaching evaluating matrix	Academic Planning committee, the vice dean Departments Teachers Viikki Science Library Students

7 = Training programme and awarding of the title of Veterinary Surgeon	Operations management process and key indicators External evaluations Student feedback system Study guide	Faculty Council, the Dean Academic Planning Committee, the vice dean
8 = Clinics, laboratories and farm	Evaluations External and internal quality control of laboratory functions Manuals, written instructions Customer and student feedback	Steering Group of the Veterinary Teaching Hospital Hospital Director Head of the Central Laboratory Heads of departments and units of the Teaching Hospital
9 = Continuing education	Number of courses Feedback of participants	Consultative Committee on Continuing Education, the vice dean
10 = Research	External evaluations Review processes Operations management process Teaching evaluation matrix	Vice Dean Heads of departments and research groups
11 = Internationalisation of education and research	Operations management process External evaluations Recidency programmes and board examinations	Dean Heads of departments Planning officer Teachers, students
12 = Co-operation with stakeholders and society	Co-operation with research institutes Amount of research and study co-operation with businesses Continuing education The functioning of the Veterinary Teaching Hospital Participation in expert activities Meeting the expectations of working life	Dean, the vice deans Heads of departments Hospital director Communications officer All members of the Faculty

INTRODUCTION

The Faculty of Veterinary Medicine is introduced in brief in [Appendix 1](#). The Faculty became part of the University of Helsinki in 1995. Since then, it has followed the strategies and policies of the University. Thus, the Faculty of Veterinary Medicine is committed to the strategy for quality and standards of the University of Helsinki. At present, the Finnish University Reform is causing rapid and extensive changes affecting the administration and organisation of the entire University. The universities will operate independently of the State Budget and direct governmental steering but the core duties – research, teaching and societal interaction – will remain unchanged.

Quality can be defined in many ways. In this report, quality refers to the appropriateness (fitness for purpose) of quality assurance methods, processes and systems in relation to stated objectives or aims. Defined in this way, quality is the verified achievement of objectives. Quality assurance refers to the procedures, processes and systems that safeguard and improve the quality of the institution, its education and other activities. The Finnish term “laatumyö” (quality work) often means the same as quality assurance, but is sometimes also used to refer to the development of quality assurance systems.

National quality assurance in higher education

The Finnish Higher Education Evaluation Council (FINHEEC) plays an important role in national quality assurance. It is an independent expert body assisting universities, polytechnics, and the Ministry of Education in matters relating to evaluation, and thus contributes to improving the quality of higher education. The twelve-member Evaluation Council operates under the auspices of the Ministry of Education. The members are elected to terms and represent universities, polytechnics, students and society.

The FINHEEC’s concept of a ‘quality assurance system’ is based on a concept that has become established in European quality evaluation. The concept includes both quality management and quality enhancement. It can be used in two ways: it may refer to the quality assurance system of an individual institution of higher education or to the national system for assuring higher education quality. The institutional quality assurance system refers to the entity comprised of the quality assurance organisation, respective responsibilities, procedures, processes and resources. The national quality assurance system refers to the procedures and processes of institutions of higher education, FINHEEC and the Ministry of Education as a whole, and to legislation enacted to assure higher education quality. FINHEEC sees enhancement-led evaluation as a user-led process in which the evaluation method is tailored according to the objectives of the evaluation, its theme and the needs of the participants.

FINHEEC conducts three principal types of evaluations:

1. Audits of quality assurance systems of Higher Education Institutions (universities and polytechnics)
2. Evaluations of educational centres of excellence
3. Thematic evaluations and evaluations of educational fields.

Audits are evaluations of the quality assurance systems of the institutions of higher education; in other words, the methods, processes and mechanisms that the institution uses to maintain and develop the quality of its education and other activities.

FINHEEC carried out an audit of the University of Helsinki quality assurance system in 2007 using an international expert panel group. The University passed the audit successfully, and the audit report was published on 3 March 2008 ([Appendix 2](#)). The report issued by the auditing panel commends the University of Helsinki quality assurance system for being integrally linked with management and steering activities both on the university and faculty levels. The university also has a clear view of the development needs of the quality assurance system and has devised plans for its ongoing development. The auditing panel found that the operative handbooks and process descriptions applied constitute a viable method for making quality assurance a more transparent process.

General features of quality assurance at the University of Helsinki

Finland committed to restructuring and redesigning its university degrees to be in line with the Bologna Declaration by 2005. The ultimate goal of the Bologna Declaration is the creation of a coherent European Higher Education Area by 2010. At the University of Helsinki, the Bologna Declaration has served as a tool to further enhance learning and instruction and to assure the quality of education. However, the quality assurance system at the University has a long history ([Appendix 3](#)).

Strategic aim of the University of Helsinki

The strategic aim of the University of Helsinki is to reinforce its position among leading European universities in both research and teaching. To achieve this aim, the University regularly carries out international evaluations of both its research and education. The evaluations are part of the University's quality assurance system.

Operations management process at the University of Helsinki

The University of Helsinki follows the performance of the faculties through a range of key performance indicators specified in their target programmes. The University has several common electronic systems for the follow-up data, such as the Oodi, Etappi and Ilmi databases. The Oodi system contains data on students, degree requirements, teaching programmes, and completed credits and degrees. The Etappi checkpoint system produces faculty-specific data on students' study progress and is described in detail later in this report. The Ilmi system is a reporting service designed to provide reports from the Helsinki University databases. Data from various systems are collected into the Ilmi database for efficient information searching and reporting. The statistics are accessible from the University's webpage (<http://notes.helsinki.fi/halvi/tilastot>).

At the University of Helsinki, setting strategic objectives and translating them into concrete measures takes place through its operations management process. Operations management ensures that the University operates in accordance with its strategic plan, which governs all University activities and resources.

The University of Helsinki administers its activities according to a three-year strategic plan. The strategic plan defines, on the basis of the University's values, duties and future prospects, strategic goals for the University's core duties (i.e. research, teaching and societal interaction relevant to research and teaching) and for the development of its operational preconditions. It also defines key areas of development which need to be addressed to achieve those strategic goals. The University implements its strategy through various policy programmes which present the concrete measures to be taken, objectives, responsibilities and resources. All faculties write their own target programmes for each three-year planning period to implement the University's Strategic Plan and policy programmes. The target programme of the faculty defines concrete objectives which need monitoring and sets out a general plan for their implementation. The target programme also takes into account the performance agreement between the University and the Ministry of Education.

The faculties negotiate with the University annual target agreements covering all aspects of their activities. The agreements include analysis of the extent to which the previous year's or years' objectives have been achieved. The faculty leadership and key officials ensure the implementation of the target programme in their areas of responsibility.

The faculties report annually on their activities, especially with regard to the implementation of its target programme, and provide analyses of the reasons for and consequences of its performance. The rector of the University provides written feedback on these reports and focuses in particular on the implementation of target programmes. In connection with the reports and the rector's feedback, target and performance seminars are arranged for the deans to discuss, on the basis

of reports and key figures, the previous year's activities and the implementation of the relevant policy and target programmes, and to anticipate the success of the current year's objectives.

Ongoing development of the operations management process

The collection of quality assurance data will be more systematic thanks to the formulation of university-wide key indicators. From the beginning of 2010, the data from the faculties in their target programmes will be collected using a renewed web-based form. The form has three parts:

- 1) the strategic frame of the faculty,
- 2) the objectives of the core functions and measures for reaching them and
- 3) the resource plan.

Most of the indicators monitored will also be used by the Ministry of Education.

The leadership of the University monitors the key figures in all faculties. The list of the key figures includes 11 measures related to education (e.g. the number of completed undergraduate and postgraduate degrees, the number of exchange students), 5 measures related to research (e.g. the number of scientific publications, the amount of national and international funding) and 2 measures related to human resources (the number of teaching and research personnel and the number of temporary staff). In addition to the specified indicators, faculties may also add their own indicators.

Objectives and organisation of the Faculty of Veterinary Medicine

The Faculty of Veterinary Medicine at the University of Helsinki is responsible for education in veterinary medicine in Finland. The Faculty provides high-quality undergraduate education in veterinary medicine, offers further professional and scientific postgraduate education as well as continuing education, and develops the practice of veterinary medicine and related services so as to ensure the health and well-being of both animals and humans. The Faculty also conducts high-quality research. The Faculty aims to provide graduating students with the adequate theoretical and practical skills to be able to work independently as practitioners with all common animal species, to promote animal health, and to safeguard the quality of food. The Faculty mission is to concentrate not only on the treatment of diseases (still important), but on preventive veterinary medicine. It focuses extensively on the whole chain of food production, "from farm to table", as well as on the high-standard treatment of individual animals. Environmental hygiene is an integral part of the national veterinary public health concept.

The current internal administrative structure of the Faculty of Veterinary Medicine appears in Figure 1. The structure will undergo changes in 2010 due to the University Reform. Strategic decisions are made by the Faculty Council, which is led by the dean. The Faculty Council's duties are determined in the Finnish Universities Act and in the Administrative Regulations of the University of Helsinki. The dean and the three vice deans are responsible for the implementation of measures and the distribution of workloads in their fields as specified in the University's Strategic Plan and its policy programmes.

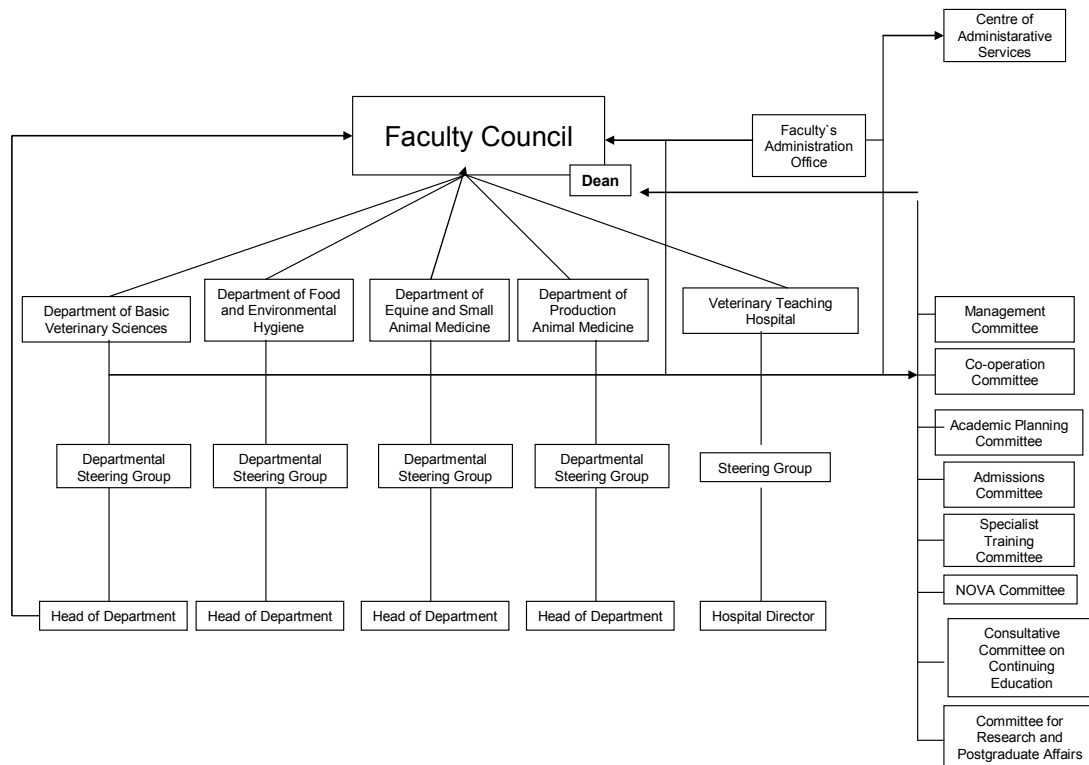


FIGURE 1. The administrative structure of the Faculty of Veterinary Medicine.

From the point of view of education and research, the most important committees include

- *the Academic Planning Committee*: the preparation and development of the undergraduate veterinary curriculum
- *the Admissions Committee*: the preparation and development of admissions criteria for undergraduate students
- *the Specialist Training Committee*: matters related to national postgraduate specialist training
- *the Committee for Research and Postgraduate Affairs*: matters related to scientific postgraduate education
- *the Consultative Committee on Continuing Education*: the interplay between the Faculty and the quarters arranging continuing education.

Chapter 1. POLICY STATEMENT (AP 1)

The quality of the University of Helsinki consists of the quality of the final results, the processes and activities that produce the results and the organisation quality, which includes the atmosphere at the University, the organisational culture and the outward image.

The policy statement of the quality assurance system in the University of Helsinki appears on the University's webpage (www.helsinki.fi/evaluation). Quality assurance is based on the strategic objectives of the University and is a part of the University's normal activity. The objective of quality work is the continuous development of the activity and making the development visible in all the units and in everyone's work. Quality work concerns all the members of the University community from teachers, researchers and other staff members to students (Figure 2).

The quality of the activity is maintained, developed and evaluated with a quality system that covers all fields and which all members of the University community use in their work.

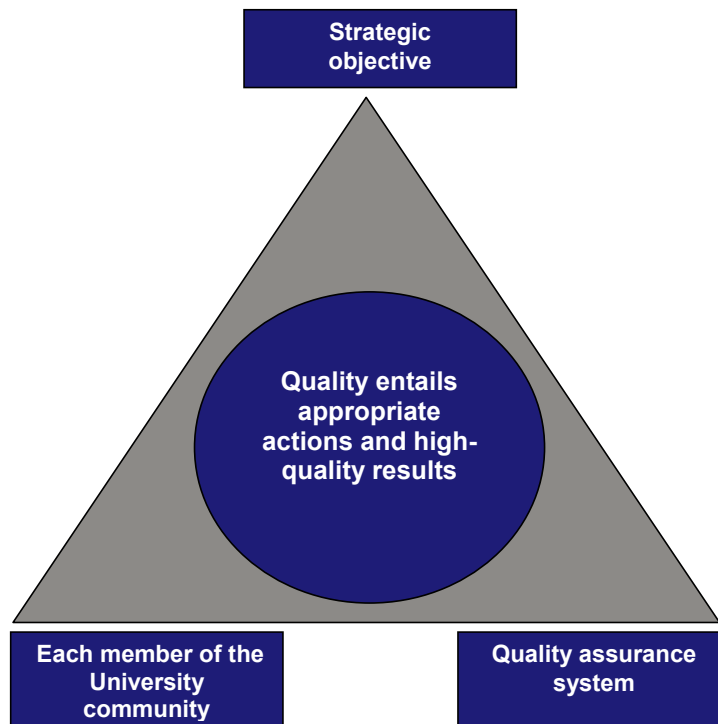


FIGURE 2. Quality policy of the University of Helsinki.

The quality assurance organisation at the University of Helsinki appears in Figure 3. The Rector is responsible for the quality of the activities of the whole University. The Quality Management Group is responsible for strategic quality management. The Group is appointed by the vice rector responsible for educational and academic affairs, library affairs, the quality assurance system and equality. The quality assurance Steering Group co-ordinates and plans the quality assurance system of the University in its entirety. It supports faculties, departments and other units in their quality work. This group has representatives for researchers, teachers, other staff members and students. Additionally, it includes experts from different University sectors.

The Quality Manager is responsible for the quality assurance system to follow the given guidelines and for the sufficiency of documentation. He also ensures that the quality assurance mechanisms are used appropriately to cover all the units and activities. The University Quality Specialist and experts from other operational sectors support the Quality Manager in the Administration Office. Similarly, the contact persons in the faculties and independent institutes see to these matters in their own organisations. The head of administration and the senior lecturer in university pedagogy serve as the Faculty's contact persons.

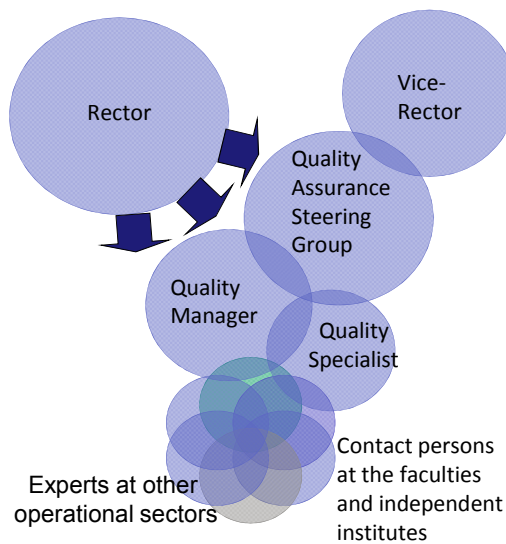


FIGURE 3. Quality assurance organisation at the University of Helsinki.

The quality assurance system

The quality assurance system is based on the University’s strategic objectives and is a part of the University’s normal activities (Figure 4). The objective of quality work is the continuous improvement of activities and making the development work visible in all the units and in everyone’s work. Quality work should be the concern of all members of the University community from teachers, researchers and other staff members to students.

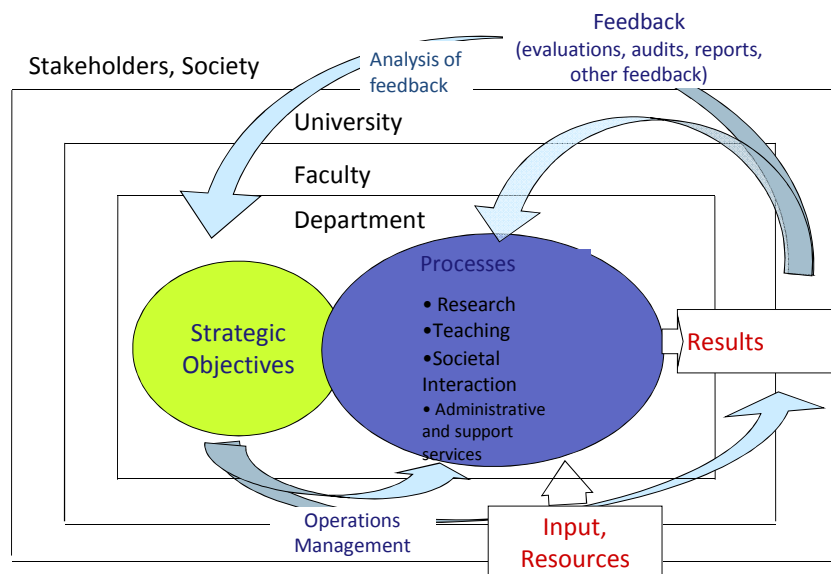


FIGURE 4. Quality assurance system at the University of Helsinki.

The relationship between teaching and research

The University has recently renewed its policy programmes for the next strategy period in five major strategic fields (research, teaching and learning, human resources, societal interaction and support services). The major goal of all research activities is for the University to be one of the leading research universities in the world. The University will support high-level research by supporting the evolvement of active research environments, directing its own financial resources on research, indicating that all units including the Faculty of Veterinary Medicine need to support

research activities and research education. One of the principles is that every teacher must be active in his or her own research and each active research person must participate in teaching. International evaluations of the quality of research and teaching will take place regularly.

According to the teaching philosophy of the University of Helsinki, teaching and studies are always based on research. The objective of studies is a student-oriented, thorough education that provides a solid basis for lifelong learning. At the core of the University's teaching philosophy are the promotion of learning based on understanding, high-quality expertise and the ability to apply knowledge to problem solving. The objective of degrees and other studies completed at the University is always profound, research-based competence and expertise in one's field (Figure 5). The curriculum is planned, and the teaching is organised to meet the challenges presented by changes taking place in society and in the labour market.

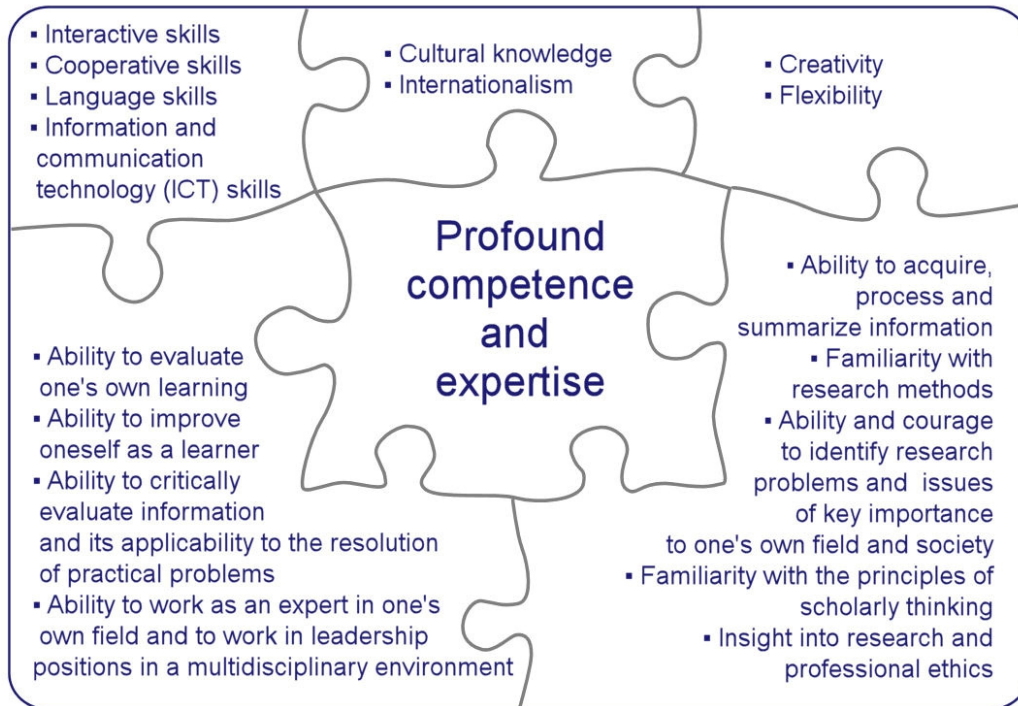


FIGURE 5: The objective of degrees completed at the University of Helsinki.

Assuring the quality of education

A significant part of measures concerned with assuring the quality of education take place in the faculties and departments in the form of procedures followed in the planning, implementation, evaluation and development of education and teaching (Figure 6).

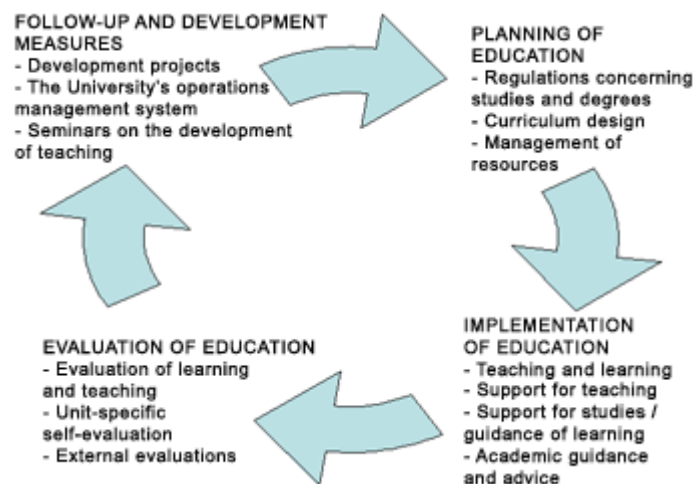


FIGURE 6. Components of the quality of education (adapted from Deming's cycle).

The University Senate decides on the most important guidelines governing educational policies, which are prepared by the University's Academic Affairs Committee. The guidelines are prepared in co-operation between various experts (including faculty heads of academic affairs, vice deans in charge of academic affairs and the Student Union).

- The provision of education is managed in the departments, faculties and the University as a whole. The University is responsible for the overall quality and resourcing of education.
- Faculties are responsible for the quality of their degrees, the attainment of agreed objectives, and for the allocation and prioritising of resources.
- Departments are responsible for the quality of teaching and completed studies in their fields. More specifically, their responsibility encompasses curriculum design, setting learning objectives and defining field-specific learning assessment criteria and methods, and ensuring the professional qualifications and competence of their teachers.
- Each teacher is responsible for the quality of his or her teaching and for the assessment of learning outcomes as part of the teaching duty.
- Each student is responsible for the progress of his or her learning and studies.

The Teaching Evaluation Matrix ([Appendix 4](#) and in the intranet) is a quality assurance tool which enables teaching quality to be examined in a comprehensive way. It investigates teaching and its planning, implementation and evaluation from the point of view of the entire faculty or department and can be used for strategic planning purposes as well as for self-evaluation. The Matrix comprises a four-level verbal definition of the central aspects of the quality of teaching – at both the undergraduate and postgraduate levels – from passable to excellent. The definitions are based on the University's Strategic Plan and the Programme for the Development of Teaching and Studies 2007-2009 ([Appendix 5](#)). The Matrix is also used in the selection of centres of excellence in teaching at the University.

Operations Manual of the University of Helsinki

The Operations Manual (also called "Quality Manual" or "Quality Handbook") is a tool for quality assurance. It describes the activities the University engages in to achieve its set goals. It also describes the activity procedures, evaluation, development and the mutually followed rules. The main points of the Operations Manual of the University of Helsinki are:

1. Starting points for activities
2. Management system
3. Core duties
4. Resources
5. Support services
6. University activities as a whole

The Operations Manual consists of compact text, links that refer to the actual documents and process descriptions, which are formulated from parts of essential operations. The processes are described using the QPR Process Guide programme. Each section of the Manual has a designated person responsible for updating and developing it. Updating is routinely performed once a year, but changes can be made at any time when deemed necessary.

The quality assurance system has been developed through internal and external feedback so that it helps as many University employees as possible in developing their work and achieving set goals.

Through internal control the University strives to ensure the achievement of goals, the legality and appropriateness of activities and to follow the right procedures. The University management

and all the bodies responsible for realising these goals are also responsible for sufficient internal controls and for conducting necessary inspections.

Quality assurance at the Faculty of Veterinary Medicine

As stated previously, the Faculty of Veterinary Medicine is committed to the strategy for quality and standards of the University of Helsinki. The Faculty's policy for quality is an extension of that of the University. The Faculty is included in the established evaluation system of the University, consisting of focused international evaluations at certain intervals.

External evaluations

In 1999, EAEVE evaluated veterinary education at the Faculty of Veterinary Medicine. During the past decade, several other external, international evaluations have been performed at the University and all its faculties. These include:

- Evaluation of the Quality of Education and the Degree Programmes of the University of Helsinki 2001-2002
- Evaluation of Research at the University of Helsinki 2005
- Evaluation of Education at the University of Helsinki 2007-2008 (Theme: Management of education). ([Appendix 6](#))

In addition, the Academy of Finland, a major science-funding organisation in Finland, evaluated the Quality and Activity of Finnish Food Sciences, including food safety and food hygiene research at the Faculty in 2006. In 2007, the Finnish Higher Education Evaluation Council (FINHEEC) carried out an audit of the University of Helsinki quality assurance system using an international expert panel group. Quality assurance in the Department of Basic Veterinary Sciences of the Faculty was one of the targets of the audit visit.

Operations Manual of the Faculty

The Faculty's Operations Manual is a tool for quality assurance at the faculty level. It describes the activities the Faculty uses to achieve its set goals as well as the activity procedures, evaluation, development and mutually followed rules. It is supported by departmental manuals and instructions. The main points of the Faculty's Operations Manual are: 1) management and leadership, 2) core functions (research, education and societal interaction, 3) resources, and 4) administration and support services. The departments have described their activities in more detail in their own operations manuals (two departments) and written guidelines.

Flow charts for several processes related to the leadership and management of the Faculty, research, education and support services are described on the intranet of the University (Alma). These are in Finnish and, along with the University Reform, should be updated in 2010 to correspond to the processes in the new administration.

The Faculty's Operations Manual has a formal status; it has been accepted by the Faculty Council and is publicly available on the webpage of the Faculty in Finnish ([Appendix 7](#)). It includes a strong role for students, as the established student feedback system is an essential part of the quality assurance system of undergraduate education. Other stakeholders have been included mainly in quality assurance through official working groups consisting of representatives of the quarters in question. The working groups nominated by the Ministry of Education for assessing undergraduate education and national specialist education are good examples of this. Seminars to which experts of the field are invited have been considered valuable (e.g. the seminar on national specialist training in December 2007). Departmental actions have included meetings with meat inspection veterinarians and enquiries to official veterinarians performing control tasks in veterinary public health. Personal contacts have also proved useful.

Table 1. Feedback system for the degree programme leading to the degree of Licentiate of Veterinary Medicine (new degree system) – Striving towards continuous development of activities

BVM = Bachelor of Veterinary Medicine
LVM = Licentiate of Veterinary Medicine

Year of studies	Courses	Course/block feedback			Feedback for larger teaching units (compulsory, with one's name)
		Who is responsible for collecting feedback?	How often?	Opportunity to provide feedback continuously (also anonymously)	
I	Orientation to University Studies	Study Affairs in the Faculty Office	Annually	Student tutors	Whole-year feedback (focus on learning)/ Senior Lecturer in University Pedagogy
	The Healthy Animal (THA) study module	Supervisors of the THA components	Every course of the module	Course Management System	
II	Animal Hygiene, Ethology and Animal Protection Animal Clinical Nutrition Farm Practice Animal Genetics Veterinary Microbiology and Immunology Veterinary Parasitology Veterinary Pathology Meat Inspection Techniques	Lecturer responsible for each course	Annually for each course	Course Management System; by email or in person directly to the (responsible) teacher	Whole-year feedback/ Study Affairs in the Faculty Office
III	Epidemiology and Statistics Veterinary Pathology Meat Inspection Veterinary Practice Veterinarian as an Officer Pharmacology and Toxicology Introduction to Clinical Work	Lecturer responsible for each course	Annually for each course		BVM feedback (strands, language and communication studies, optional studies, Bachelor's thesis, academic administration feedback and Bachelor-level studies as a whole)/Study Affairs in the Faculty Office
IV	Internal Medicine Anaesthesiology and Intensive Care Surgery Animal Reproduction Healthcare of Production Animals (includes teaching on Diagnostic Imaging and Clinical Pharmacology)	Lecturer responsible for each course	Annually for each course		Whole-year feedback/ Study Affairs in the Faculty Office
V	Health Service System, Municipal Administration and Veterinary Services	Lecturer responsible for the course	Annually	By email or in person	
	Clinical Practice	Unit Supervisors Tutoring group supervisors (Saari)	Every term		

VI	Food Hygiene and Food Supervision Environmental Hygiene and Toxicology Traineeship in Food and Environmental Hygiene Health Service System, Municipal Administration and Veterinary Services Practice Management, Veterinarian as an Entrepreneur	Teacher responsible for each course	Annually Annually Annually Every three years	Course Management System; by email or in person directly to the (responsible) lecturer	LVM feedback (optional studies, Licentiate thesis feedback, academic administration feedback and Licentiate studies as a whole)/Study Affairs in the Faculty Office
		Course/block feedback			Feedback for extensive modules
Feedback focus		Learning, teaching, functionality and workload of individual courses			The curriculum and its functionality, workload of studies, supervision
Means of collection		Mainly electronically, after the course			Electronically, as part of portfolio studies, whole-year studies at the end of May, BVM and LVM degree feedback before the awarding of the diploma
Where discussed		Departmental teachers' meetings (recorded in the proceedings) + an annual situation report in conjunction with a self-evaluation of the quality of teaching (completing the matrix)			Academic Planning Committee; Head of Committee and/or Senior Lecturer in University Pedagogy reports on the whole Faculty to the Dean at the beginning of the autumn term
"Feedback on feedback" to students		Through e-mail, the Course Management System or the Alma intranet; in feedback sessions			The Alma intranet
Other		Teachers still have the option to collect feedback at times they consider appropriate, but the feedback must be given as "feedback on feedback" and communally discussed at the subject (or higher) level or together with the Senior Lecturer in University Pedagogy.			
Graduating students, delayed students (7 th year +), practicing veterinarians					Delayed student feedback collected every 3-4 years/Study Affairs in the Faculty Office, Senior Lecturer in University Pedagogy Summary of feedback discussed at the meetings of the Academic Planning Committee Feedback on studies and work experience collected by Career Services, discussed in the meetings of the Academic Planning Committee
The entire degree programme		International and other external evaluations/Academic Planning Committee - Drawing conclusions: Deans, Faculty Council, Academic Planning Committee - Concrete measures: Academic Planning Committee			

Involvement of students in quality assurance

The base for assessing the quality of teaching and learning is the Faculty's established student feedback system (Table 1). In 2006, the Academic Planning Committee appointed a working group, chaired by the senior lecturer in university pedagogy, to create a student feedback system and, later, to monitor its functioning and to develop it. The planning officer of academic affairs was the secretary. The working group had a representative of each department (an experienced teacher) and one student representative. Additionally, the working group ascertained the opinions of teachers and students of the Faculty using an e-questionnaire to which 54 teachers and 170 students responded. Most of the student feedback is collected electronically, and thus, the e-learning planner has been a key person in the group.

As Table 1 shows, student feedback is being collected not only after individual courses, but also at the end of each academic year and before the degrees are granted. In this way the students have an opportunity to evaluate the courses and education from a longer-term perspective, rather than to be confined to immediate impressions. Additionally, this type of approach gives the students the opportunity to evaluate the courses of the whole academic year in relation to each other, which provides important information for curriculum planning (Ruohoniemi & Lindblom-Ylänne, 2009). Whole-year and degree-level feedback is compulsory for the students. In case of problems concerning these large entities (e.g. the whole study year), roundtable discussions where teachers and student representatives are collected together have proved valuable. The head of academic affairs and the senior lecturer in university pedagogy introduced these types of discussions when major changes in the curriculum had to be made in association with the Bologna Process.

The feedback collected from individual courses and modules is centred on learning, teaching, alignment of the course and its workload. On the contrary, the feedback from larger entities, such as the study year or a degree as a whole, focuses on the functioning and workload of the curriculum. The Department of Production Animal Medicine has recently introduced a new way of collecting feedback in the beginning of the sixth year, when most of the students have spent the summer as a substitute for a veterinarian.

One measure included in the student feedback system is the Experiences of Teaching and Learning Questionnaire (ETLQ; the OPPI questionnaire in Finnish). It belongs to a research project co-ordinated by the Centre for Research and Development of Higher Education at the University of Helsinki, which aims to provide information about teaching and studies in different disciplines. The OPPI questionnaire is also part of the Bachelor's portfolio, and the senior lecturer in university pedagogy is responsible for it. At present, all first- and third-year veterinary students complete it and also receive personal feedback on their approaches to learning and guidance for enhancing their learning skills. A study psychologist participates in the feedback sessions when necessary. This questionnaire has offered a valuable tool for discussion between disciplines, thus helping to define the strengths and areas to be developed as well as to learn from good practices in other fields (see [Appendix 1](#), Haarala-Muhonen et al., 2009).

Each step in the feedback system has a person responsible for it, and feedback is handled collaboratively: the course feedback in departmental teachers' meetings and feedback from larger teaching units is delivered to the disciplines concerned and is discussed in the Academic Planning Committee. One element of the feedback system is to provide students with "feedback on feedback", which is a summary of their comments and an estimate of how their feedback will be taken into consideration in the development of teaching. This may be provided as an e-mail to the students, via learning management systems, through the University's intranet, in discussions with the students or in a special feedback session where, as in epidemiology, learning diaries are also returned.

The Veterinary student society (*Eläinlääketieteen Kandidaattiyhdistys, EKY*) is a registered association, to which almost all veterinary students in the University of Helsinki belong. EKY aims to improve and to maintain student welfare, and to study circumstances and collaboration

with the Faculty, University of Helsinki and the Finnish Veterinary Association. EKY may take a stand on student and undergraduate education issues. Additionally, the Board of EKY and the dean meet once a month for discussion. The inspector and curator selected by EKY among the staff members are additional links between the Faculty and students.

Students have representatives in the Faculty Council, in Departmental Steering Groups and in all Committees of the Faculty.

Ways in which the policy is implemented, monitored and revised

The responsibilities of organisational units and individuals for the assurance of quality have been defined. The dean of the Faculty bears the main responsibility. In 2006, a steering group was nominated for quality work at the Faculty, which included the dean, the vice deans, the heads of departments and of the Veterinary Teaching Hospital, two additional professors, the head of academic affairs and the head of administration.

Another group was nominated to co-ordinate the practical work and included the senior lecturer in university pedagogy, representatives from laboratories in each department, representative of the Veterinary Teaching Hospital, the planning officer for international affairs, the planning officer for postgraduate studies and the planning officer for e-learning.

The head of administration and the senior lecturer in university pedagogy serve as the Faculty's contact persons with the University (see Figure 3).

Each section of the Operations Manual of the Faculty has a nominated person who is responsible for monitoring its implementation and updating it. These persons include the dean, the vice deans and the head of administration.

An internal audit of the Faculty's quality assurance system (regarding Administration and Education) was launched in November 2008. This one-day function revealed the extent to which the Faculty's Operations Manual was followed in the departments as well as the points to be developed. The internal audit of Education concluded that the Operations Manual and processes are rather well described and known throughout the Faculty, the collection of feedback from students works well, but the collection of systematic feedback needs to be extended to working life. One measure in this direction has been the Faculty Day arranged in May 2009, described in more detail in Chapter 5. Information on the distribution of work at the administration office of the Faculty could be more visible so that the "right person" can be more easily contacted. The equalisation of processes throughout the Faculty, when feasible, was deemed a continuous process. The head of administration bears the main responsibility for the internal audits.

The Academic Planning Committee (Fig. 7) bears overall responsibility for the quality of the degrees. The Committee annually updates the part of the Operations Manual regarding Education. The Faculty's Academic Planning Committee is responsible for the degree as a whole, the degree structure and the degree objectives. The Committee is chaired by the vice dean in charge of undergraduate education, and its secretary is the head of academic affairs. The Committee includes representatives of all the departments, the students, and, as a consulting member, a representative of the Viikki Science Library. The Faculty senior lecturer in university pedagogy is also a member. The role of the Committee has been strengthened in recent years. The committee is responsible for the development of the degree programme and for preparatory work associated with curriculum design. The Committee also prepares standing orders on degrees for the Faculty Council's decision. When necessary, the Academic Planning Committee establishes working groups comprising the best experts on each issue.

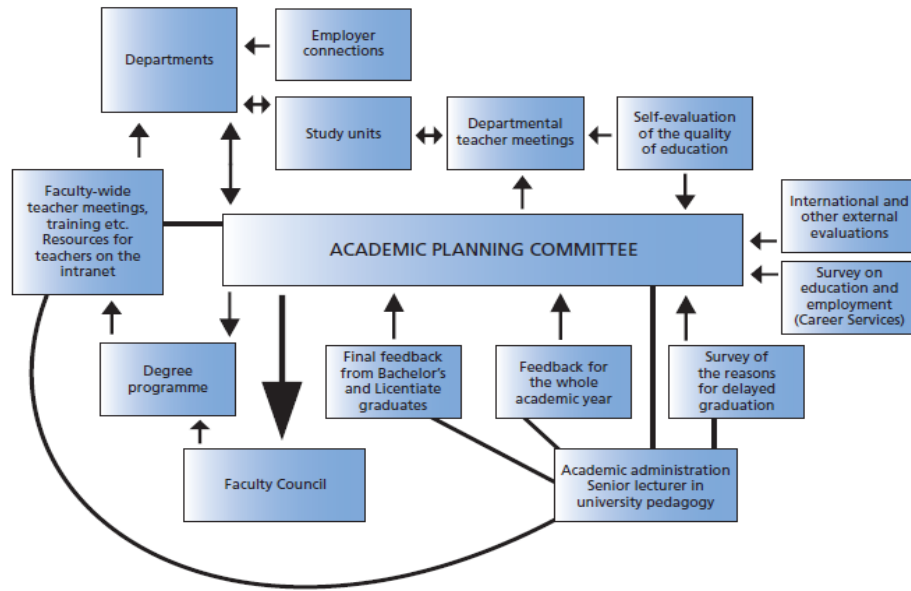


FIGURE 7. The role of the Academic Planning Committee

Chapter 2. ASSESSMENT OF STUDENTS, POSTGRADUATE EDUCATION AND STUDENT WELFARE

2.1 UNDERGRADUATE EDUCATION

Admission of students (AP 2)

A flow chart of student admission is presented in [Appendix 8](#).

Assessment of students when applying

Every applicant must take part in the entrance examination. The entrance examination is the same as that of the medical faculties in Finland. The entrance examination has integrated questions in biology, chemistry and physics. These are supported by material presented in the worksheet distributed in the examination. This material may consist e.g. of a scientific paper presented in a national journal. Half of the students are selected by their success in the entry examination, and the other half based on the entrance examination together with the student's grades in the national matriculation examination. Even though the matriculation examination is not a prerequisite for applying to the Faculty, more than 90% of the applicants have taken either the national or international (IB, RP or EB) matriculation examination. In case the applicant has not taken a matriculation examination, he or she must have completed at least a three-year professional degree. These requirements ensure that all students admitted have satisfactory knowledge in biology, chemistry and physics and are eligible for university studies. In practice, more than half of the students admitted have studied at the university level in other institutions or faculties before admission.

All applicants must pass the entrance examination in Finnish or Swedish. Thus, even though this system is basically open to foreign students, this language demand significantly limits their participation in the entrance examination. Additionally, the main teaching language at the Faculty is Finnish, and thus, no foreign students are currently pursuing an undergraduate veterinary degree at the Faculty.

Appeal procedure

After publication of the results of the entrance examination, applicants have two weeks time to appeal the assessment of their answers. The requested answers are re-checked, using the same criteria applied to all applicants' answers, and correction to the grade is made if the request is found relevant. Responses to the appeals are handled in the Faculty's Admissions Committee and verified in the Faculty Council. If the applicant is dissatisfied with the response, he or she can appeal the decision to the local administrative court.

Development of the assessment procedures and validation of the results

In harmony with the strategy of the University of Helsinki, the Faculty strives to choose the best and most motivated applicants. The Admissions Committee prepares admissions criteria, offers an opinion on the number of admitted students and is responsible for developing the admission of students to the degree programme in veterinary medicine in general. The chair of this Committee is the vice dean in charge of undergraduate education, and its secretary is the head of academic affairs. The Committee members include representatives of all the Faculty departments and the students, as well as the Faculty's senior lecturer in university pedagogy. The admissions criteria are annually validated in the Faculty Council.

The Faculty has long history of co-operation in admissions matters with other faculties of medicine in Finland. Co-operation on admissions matters is co-ordinated by the National University Admissions Committee of Medicine. The Development Committee of University Entrance Examinations in Medicine is in charge of the constant evaluation and development of the national

entrance examination. This Committee includes a group of experienced professors and lecturers who are committed to the continuous development of the entrance examination. The entrance examination and the assessment criteria are the same for veterinary medicine and all medical faculties. The National Committee for Entrance Examinations in Medicine is responsible for the administrative processes and practical preparation of the entrance examination. The Faculty of Veterinary Medicine has strong representation in all these Committees.

Table 2: Assessment of student admissions

Year	Number of students applying	Number of students admitted		Number of students appealing the assessment of their answers in the entrance examination	Successful complaints to the local administrative court
		Standard intake	Number of foreign students		
2008	635	72	0	10	1
2007	550	58	0	12	0

Assessment of selection criteria

The admissions procedures and selection criteria were extensively assessed in 2006-2007 in a project co-ordinated by the Faculty of Medicine, University of Turku. The project was supported by the Ministry of Education and included representatives of all medical faculties, including the Faculty of Veterinary Medicine. The project concluded that further harmonisation of the weight of grades in different subjects in the matriculation examination is needed between the faculties. No major changes in the entry examination were found necessary.

Approximately 90% of the applicants to the Faculty are female. The reasons for this phenomenon have been examined in a research project based on a questionnaire sent to applicants and young men preparing for their matriculation examination. The results were published in the Finnish Veterinary Journal (Ruohoniemi & Haga, 2006) and have been used in developing a brochure on veterinary education and other information directed to possible applicants. Based on this report, the multiple career and specialisation options as well as the good employment situation have been highlighted instead of the veterinarian's better known role in helping and taking care of sick animals.

According to a study by Mikkonen et al. (2009), both interest in the field of study and the future work are commonly mentioned as causes for applying to study veterinary medicine.

Procedures for assessing the performance of enrolled undergraduates

Enrolled students are assessed regularly using consistently applied, published criteria, regulations and procedures. Student assessment procedures are designed to measure the achievement of the intended learning outcomes and other programme objectives, including day-1-competencies. There is no central examination policy for the Faculty as a whole, other than the regulations provided by university legislation (e.g. Regulations concerning examinations, the grading of completed studies and the board of examination appeals at the University of Helsinki, 1999). Matters related to examinations and the assessment of students is handled in the Academic Planning Committee when necessary. This Committee has student representatives. Departments and teachers are responsible for the assessment of learning outcomes.

For every course, the assessment of student performance has been determined before each academic year. Examination dates are set in the course schedule. The results of examinations must be made available within one month. All examinations, including retakes, are scheduled at the Faculty level for the whole academic year. There are at least two retake opportunities for

each examination during every academic year. The number of retakes is unlimited. The mode of assessment is explained in the study guide and more details are provided on the e-learning system used in that course. In addition to traditional written examinations, other forms of assessment such as learning diaries, portfolios, project work, written assignments, oral presentations, are also used. Students' theses are assessed with evaluation matrices. The examination results rarely rely on the judgements of single examiners. In general, more than one teacher writes questions for each examination, and each teacher is also responsible for the assessment of his or her questions.

The grades of students who have passed the examination are published on a noticeboard and/or the e-learning system of the course by the student's number, not name. The total number of failures is also announced. The degree of each examination passed is registered in the Oodi system. Students' answers are stored in the departmental office for at least six months. Model answers can be seen at the student office of the department, and some teachers arrange feedback sessions after the examinations.

One measurement for the accuracy of the procedures includes monitoring the failure rate and the distribution of grades for all examinations. In general, the student must earn 60% of the maximum points to pass an examination. Grades 0-5 are generally used except for practical skills-oriented courses where pass/fail grading is used. The pass rate is commonly > 85%. If the failure rate exceeds 20%, clarification of the cause is recommended.

Theses

The Bachelor's thesis is evaluated using grades 0-5 and an evaluation matrix. The Licentiate's thesis is evaluated by two experts and graded on an eight-level Latin-language scale (ranging from improbatur to laudatur). The evaluation matrix of the Licentiate's thesis has recently been renewed, and there are separate criteria for the two types of theses: one is based on an extended literature review and the other includes a research project. Additionally, the student must defend his or her thesis in a seminar: after giving an oral presentation of his or her work, the opponent (a fellow student) comments on the work and poses questions. Each student has to participate in a certain number of seminars and, as an academic audience, has the opportunity to take part in the discussion.

Types and timing of assessment

There are no special periods during the year for examinations. The examination is usually in close connection with the specific course, at the end of it or at the end of some specific part of it. The number of examinations has markedly decreased in the last couple of years. Alternative ways of assessment, such as learning diaries, are also used in some courses and in all strands. In a few courses, the student may select between a traditional written examination and some other, predetermined type of assessment, such as problem-based case reports (in clinical pharmacology) or a learning diary (in clinical chemistry).

Several courses have assignments that can substitute for part of the examination or contribute points to it. The purpose of this is to encourage the students to work during the whole course and not only before the examination. In large modules, the final grade consists of a number of grades, which relieves the student's pressure from one examination.

Several forms of examinations are used. A written examination consisting of short and essay-type of questions is the most common examination type used. Multiple choice questions are also used. Oral examinations are an essential part of the first year's practical training in anatomy. An oral group examination has been tested as part of production animal training with encouraging results. This also tests the students' ability to work as a team. Project-based group presentations, followed by experts in the field, have become a permanent procedure in epidemiology. An unlimited number of materials can be taken to the final examination in reproduction, which is based on problem solving.

This examination has been thoroughly evaluated in a dissertation (Koskinen 2005), supervised by the Faculty of Veterinary Medicine and the Faculty of Behavioural Sciences.

A good example of a practical clinical examination is the dissection examination in pathology, where students need to show their hands-on skills and be able to answer oral questions presented by the examiner. Students' clinical examination skills are tested in the equine and small animal clinic when the students begin their clinical year, during which their performance is continuously assessed (case log and clinical assessment form).

In general, students need not pass the examination within a certain time. There are certain points in their studies where students cannot progress unless they have passed certain examinations (e.g. a student cannot enter the course of food and environmental hygiene and toxicology unless she/he has passed the courses in microbiology and immunology, pathology and meat hygiene). All first year courses must be passed before entering the third year. Most of our students have previous studies at the university level in other faculties, and these are taken in account when possible. Thus, students have an opportunity to follow a genuine personal study plan provided that it is accepted by the head of academic affairs and the senior lecturer in university pedagogy.

Etappi checkpoint system

In connection with the implementation of the two-tier degree system in 2005, the normative duration of studies, the duration of the right to study and extensions to this right were amended along with the Universities Act. According to the Rector's Decision (No. 133/2008), the University of Helsinki aims to ensure that as many students as possible complete their degrees within the target duration of study (in veterinary medicine, six years), or at least within the normative duration of degree study allowed by law. At the same time, the University of Helsinki introduced a system of checkpoints (the Etappi system in Finnish) to support the smooth progress of studies and, consequently, the faster completion of degrees. In this system of checkpoints, study progress is monitored by assessing the accumulation of credits.

The Faculty has determined the minimum number of credits required at each five checkpoints (Table 3). Study progress is supported through the personal study plan and intensive supervision and tutoring by specified persons at the Faculty. The University co-ordinates the system and produces faculty-specific screening of students and relevant reports. The Etappi system offers checkpoints which allow the monitoring of student progress, thereby offering support as well as the opportunity to require the acceptance of a personal study plan before studies can be continued. Personal study plans were already in use before the implementation of the Etappi system for students whose studies have been delayed (≥ 10 years).

Table 3. Number of students caught at Etappi checkpoints in 2007 and 2008.

	Number of students caught at the first <i>Etappi</i> checkpoint*)	Number of students caught at the second <i>Etappi</i> checkpoint**)	Number of students caught at the third <i>Etappi</i> checkpoint***)
Spring 2008	1	3	Not yet in use
Spring 2009	2	5	39

Criteria for checkpoints:

*) < 25 ECTS earned by end of March in the first year

***) < 120 ECTS earned by the end of March in the third year

***) Bachelor's degree incomplete at the end of December in the fourth year. The number in 2009 includes students who have changed from the old to the new two-tier degree programme in the middle of their studies.

Compared to students in other faculties at the University of Helsinki, few veterinary students get caught in Etappi checkpoints. In fact, the true numbers are even lower than those presented in Table B, as occasionally studies have been completed but not yet recorded at the time of the checkpoint. The head of academic affairs contacts the students caught at the checkpoints, makes an appointment with them if needed, and checks their personal study plans. She redirects them to further counselling, e.g. to the senior lecturer in university pedagogy or the study psychologists, if necessary. Additionally, the students have the opportunity to discuss matters with teachers any time during their studies. The Faculty has set tight criteria at the third checkpoint purposefully as this offers a valuable opportunity for assessing the functioning of the whole Bachelor's degree and for identifying critical points in the delay of studies.

Self-evaluation

The University's Teaching Evaluation Matrix is completed in each of the Faculty's departments once a year. Table 4 shows examples of its use and results.

The overall experience in the use of the matrix in self-evaluation reveals that when used for the first time, there is a tendency to assess the situation more positively than in the following years. The turnover of teachers and, on the other hand, increased pedagogical awareness acquired in courses in university pedagogy are also factors that affect self-evaluation in varying ways. Thus, these assessments do not necessarily show the development of the department in the short term.

Table 4. Examples of self-assessment using the Teaching Evaluating Matrix in course assessment, and the results of all four departments of the Faculty in 2007 and 2008.

Aspect of teaching quality	Passable quality and results	Improving quality and results	Good quality and results	Excellent quality and results
Learning assessment criteria	The department has not defined learning objectives or assessment criteria for courses. Students are not informed of the criteria used in grading.	Some teachers have made their assessment criteria available to the students and thus students have arbitrary information about assessment policies. The grading scale for papers and Master's theses is inconsistent.	The department has defined learning objectives and assessment criteria for all courses and theses very clearly and they are made available to students before the beginning of each course. Information is disseminated about grading policies. Teachers are instructed to use the grading scale in its entirety in a consistent manner.	The department has a versatile and pedagogically well-founded assessment system. The assessment criteria are compatible with learning objectives and methods. Part of the assessment is designed to form a part of teaching and learning situations. The distribution of grades is regularly monitored. The department ensures that international students understand the grading policies in use.
<ul style="list-style-type: none"> Results: 			In 2007, three departments graded their learning assessment criteria as good, one department as good - excellent. In 2008, three departments graded their learning assessment criteria as good, one department as good - excellent	
Learning assessment methods	Assessment is seen as an issue of control and surveillance. Teachers are not familiar with each other's grading policies. Examinations are based on regular routines.	Individual teachers compare grading policies and experiment with examination practices. Teachers are interested in student feedback concerning examinations and are willing to develop examination practices on the basis of this feedback.	The department recognizes that learning assessment methods strongly steer student learning. Before the beginning of studies, students become aware of the assessment methods used. The development of examinations is discussed from a pedagogical point of view and teachers are encouraged to develop their assessment methods. The department has documented information about the assessment methods in use.	The assessment methods used by the department support in parallel the objectives of learning and current teaching methods. The assessment of learning and feedback to students steer them towards thorough learning and understanding. Teachers receive training in the planning and implementation of assessment. Assessment methods and their development are continuously monitored.
<ul style="list-style-type: none"> Results: 		In 2007, one department graded their assessment methods as improving, two as improving - good, and one as good - excellent. In 2008, one department graded their assessment methods as improving and three as good.		

Summative and formative assessment

Summative assessment (i.e. assessment of student learning after the course) is the most commonly used. Formative assessment can be found in two forms: 1) the student receives constructive feedback during the course or studies (e.g. clinical assessment) or 2) the final grade consists not only of the results of the final examination, but the grades of smaller examinations throughout the course are also taken into consideration (e.g. healthy animal, pathology, reproduction).

The “life-cycle” of a course consists of various stages:

1. The teacher responsible for the course suggests the course objectives, content, methods and assessment.
2. These are discussed and developed, if needed, in an interactive workshop in the department, with representatives of the central administration of the Faculty also present (in spring).
3. The departmental steering group accepts the course (usually in May).
4. The Academic Planning Committee prepares the curriculum as a whole (in May- June).
5. The Faculty Council accepts the curriculum for the next academic year (in May-June).
6. The study guide is published both electronically and in hard copy.
7. The course is prepared, and further details are described in the e-learning system used in the course.
8. The students register for the course (in Oodi).
9. The course is arranged; formative assessment is possible during the course.
10. The learning outcomes are assessed (by examination or an alternative method of assessment; summative assessment is used only or as part of formative assessment. The teacher responsible collects feedback on the course.
11. The results of the examination are published.
12. The students receive feedback, and the course is reassessed. Return to 1.

Appeal procedure

If one or more students find problems in the student assessment system, they are advised to contact the teacher responsible for the course. Most problems are already resolved at this point but if needed, the student(s) can contact the administration office of the Faculty and/or the senior lecturer in university pedagogy. The head of academic affairs and/or the senior lecturer in university pedagogy can forward the problem to the vice dean responsible for undergraduate education to be handled in the Academic Planning Committee as needed. Such events are quite rare, occurring approximately once or twice a year. The student may also contact the University's Board of Examination Appeals. The Faculty is unaware of any cases taken to the Board in recent years. If there are problems unrelated to individual students, but in a certain examination in a wider sense (e.g. repeatedly high failure rates), the Academic Planning Committee may take an active role or the matter may be discussed in the professors' meeting (HALKE).

2.2 POSTGRADUATE STUDENT EDUCATION: ACADEMIC TRACK (AP 3a)

Postgraduate education performed: PhD programmes

The doctoral degree is the primary postgraduate degree in the University. The Faculty of Veterinary Medicine offers the following postgraduate degrees: Doctor of Veterinary Medicine and Doctor of Philosophy (Table 4). The Committee for Research and Postgraduate Affairs of the Faculty plays a major role in academic postgraduate education. It comprises professors from each of the four departments, a postgraduate student, a representative of the Finnish Food Safety Authority (Evira) and the vice dean of research as chairman. The doctoral studies are defined and supervised so that they can be completed in four years of full-time study. However, they can also be completed part-time, so there is a need to ensure and enhance the conditions of part-time doctoral students and their research opportunities.

Detailed instructions on these postgraduate studies are available on the Faculty's webpage (<http://www.vetmed.helsinki.fi/english/doctor.html>). The content of the instructions include

1. Postgraduate student admission: Research form and study plan, Forms
2. Registration at the University
3. Doctor of Veterinary Medicine degree: Objectives, Structure and content
4. Doctor of Philosophy: Objectives, Structure and content
5. Doctoral Dissertation: Writing the manuscript, Access to original research materials, Permission to publish, Public examination of dissertation, Language of the public examination, Publication and distribution of the dissertation, Dissemination of information on the dissertation, Rules and conventions of the public dissertation, Grading of the dissertation
6. Degree Diploma
7. University of Helsinki Grants for the completion and printing of the dissertation.

Admission procedures for national and international students

The admission procedures for national and international students are similar.

Admissions decisions are based on pre-determined and published criteria and systematic admissions. All doctoral students will draw up a personal study plan which consists of a research plan and a study progress plan. The personal study plan will be updated together with the supervisor throughout the doctoral studies.

The Committee for Research and Postgraduate Affairs evaluates both the personal study plan and the research plan and makes a recommendation for approving the student's admission to the Faculty Council, which will make the final decision about the student's admission. At the same time, the committee can offer feedback for the student about the personal study and research plans, if needed.

All doctoral students will be assigned a director of studies, who must be a permanent or fixed-term professor in the Faculty, and a dissertation supervisor or supervisors, one of whom must hold a professorship or docentship and all of whom must have a doctorate. Once the Faculty Council has appointed the director of studies and the supervisor(s), a separate application is needed if a new director of studies or supervisor is to be appointed.

After the Faculty Council has accepted the student's application, the student is enrolled in the student register as a postgraduate student. Subsequently, during the annual registration period, the postgraduate student must register at the University either as an attending or a non-attending student. The final registration date is 31 August. A student who fails to register for attendance or non-attendance by the deadline will lose his or her study place. If the student wishes to continue to study, he or she must apply to the Faculty for re-enrolment and pay the required fee.

Postgraduate students can join the Student Union when they register at the University. Student Union members have been entitled to use, subject to certain conditions, the services of the Finnish Student Health Service and may purchase partly subsidised meals from university cafeterias. From the beginning of August 2009, however, postgraduate students will be excluded from the health services.

Requirements and programme assessment

Academic postgraduate education has the following objectives:

- The students will become profoundly familiar with their research field and its societal significance and will acquire within that field the ability to apply scientific research methods critically and independently and to contribute to scientific knowledge.

- The students will become familiar with the historical development, fundamental issues and research methods of their field.
- The students will acquire sufficient understanding of general scientific theory and of the disciplines related to their research field so as to be able to follow future developments.

The Doctor of Veterinary Medicine degree consists of 40 ECTS of postgraduate studies (10 ECTS of general studies and 30 ECTS of field-specific studies) and a doctoral dissertation, which must be defended at a public examination. For the Doctor of Philosophy degree, the total extent of postgraduate studies is 60 ECTS (10 ECTS of general studies and 50 credits of field-specific studies).

The doctoral studies must support the dissertation and provide the knowledge and skills required for research work and other expert-level assignments. The general studies may consist of studies in the theory of science and research ethics, research planning and statistical methods, the treatment and care of laboratory animals, academic writing and reporting, university-level teaching and learning as well as personal supervision and other general studies that support the objectives of the degree programme. The field-specific studies may include the following: field-specific or project-specific training in methodology, scientific courses in the field of research, seminars in the field of study or research, international conferences and scientific meetings, personal supervision and examinations on designated literature.

The student must complete general and field-specific studies before applying for permission to publish the dissertation.

Supervision of the doctoral students

Each doctoral student is assigned one to three supervisors and a director of studies. It is recommended that supervision at the beginning of doctoral studies should receive particular attention. Each doctoral student must be provided with orientation in doctoral studies and with guidance in taking advantage of course offerings. The integration of doctoral students into the scholarly community must also be supported.

Each doctoral student must be regularly supervised both in research work and in doctoral studies. The Faculty has written general principles about the rights and responsibilities of both the student and the supervisor (http://www.vetmed.helsinki.fi/english/right_and_responsibilities.html). The supervisor(s) monitor adherence to the study plan.

Doctoral students are promoted to an advisory body (consisting of the supervisor(s) and two or three other scientists) which follows the progress of research and doctoral studies. The students funded by a Finnish Graduate School are already required to have an advisory body.

In the event of unresolved difficulties, the student and/or the supervisor are advised to contact the director of studies or the vice dean of research. Changes in supervision practices must be accepted by the Faculty Council.

Development of the procedures

The Faculty has written rules for the content of postdoctoral study as well the whole administrative process, which are publicly available on the webpage of the Faculty. These rules are regularly re-evaluated by the Committee for Research and Postgraduate Affairs, chaired by the vice dean responsible for research affairs at the Faculty. The changes are accepted by the Faculty Council.

The Teaching Evaluation Matrix includes a section on postgraduate studies. This part is systematically self-assessed once a year in conjunction with assessing the undergraduate studies in each department of the Faculty. The matrix includes the following aspects regarding postgraduate studies:

- Planning
 - Recruitment and status of postgraduate students
 - Planning of postgraduate education and curriculum
- Implementation
 - Courses offered to postgraduate students
 - Supervision of postgraduate students
 - Doctoral programmes and co-operation concerning postgraduate education
- Assessment
 - Assessment criteria
 - Feedback collected on postgraduate education.

In general, departments vary more in the self-assessment grades in postgraduate education than in undergraduate education. For example, in 2008, one department graded most aspects of their postgraduate education as “improving”, one as “improving - good”, one as “good - excellent”, and one as “excellent”. However, the collection of feedback appeared to be the weakest point in postgraduate education in all departments.

All doctoral students are included in Etappi screening. If they have not completed their postgraduate studies within seven years, they are requested to update their personal study plan for acceptance by the director of studies. In Graduate Schools, the doctoral student has an obligation to report on his or her progress once a year to the Council of the Graduate School.

Financial basis securing programmes

Most of the research at the Faculty is carried out with additional competitive funding from outside sources (e.g. from Academy of Finland, TEKES, private foundations or foundations of the University of Helsinki). Approximately 50% of the funding for Faculty’s research activities comes from outside sources on the basis of competition. The parent institution applies funding and supports research with this money (materials, doctoral student salaries, congress attendance, etc.).

The Faculty has had limited capability to support research programmes. The most important financial support is paying 50% of the salary of a research co-ordinator, who has the responsibility to organise and inform doctoral students about research training courses and to arrange courses paid by the Faculty. He or she is usually a doctoral student who simultaneously performs his or her own research and receives 50% of the salary from the parent institution’s grants.

In brief, studying at the University is free. Doctoral thesis research at the Faculty is performed in one of the Faculty’s research groups managed by senior scientists. Salaries for full-time doctoral students are paid from several sources: 1) the National Graduate School system, 2) the funds of the research group, and 3) private foundations. Part-time doctoral students can hold a teaching position at the Faculty.

The Finnish Graduate School system was established in 1995 and is funded by the Ministry of Education. It covers all fields of science including veterinary medicine. A key goal is to secure the high quality of researcher training and to shorten the time needed on a doctoral dissertation, thereby lowering the age at which the doctorate is awarded. Graduate schools are assigned the task of providing systematic teaching and supervision for the doctoral students involved. The aim is to complete the doctoral dissertation in four years. Studies at a Graduate School are full-time and salaried. As of 2008, the Graduate Schools to be funded are selected by the Academy of Finland (<http://www.aka.fi/en-gb/A/Science-in-soviety/The-researcher-career/Graduate-schools/>).

The Faculty is a member of two Graduate Schools: the Graduate School in Applied Biosciences (ABS) and the Graduate School in Animal Welfare (includes veterinary clinical research).

A Finnish Graduate School consists of supervisors, their students and a co-ordinator. These schools have an open call and select their students after evaluating the applicants. The students can be funded members of the schools (salaries paid by the School) or members paid from

other sources. The schools offer supervision and training courses for doctoral students. Most courses organised by the University of Helsinki are open and free of charge for doctoral students registered in the University.

The Faculty has had a Veterinary Research Programme since 2003. These doctoral student positions are funded by the University's own foundations for a maximum of four years. The Faculty has had a total of six positions during the period 2005-2009. The students for the Veterinary Research Programme are selected by the Committee for Research and Postgraduate Affairs. The criteria used include the scientific competence of the study plan as well as its appropriateness for the research strategy of the Faculty.

All postgraduate students writing a dissertation at the University of Helsinki may apply for a grant for the completion and printing of the dissertation together with their supervisors. The grant may be awarded for a period of one to three months and requires full-time work. The grant is available to students whose dissertations have not yet been submitted for pre-examination and who have no other funding for their research. The grant is not awarded to persons who are in full-time employment or who have received another grant. Moreover, the grant is not awarded to participants in doctoral programmes or to persons who work as researchers at the University or elsewhere.

Doctoral candidates may also apply to the University of Helsinki for a grant to cover the costs of printing the dissertation.

Assessment of postgraduate students

Pre-examination of the dissertation

Upon the proposal of the director of studies, the Faculty Council will appoint a minimum of two pre-examiners who must have the qualifications of a professor or docent or other equivalent academic qualifications. The doctoral student must have the opportunity to lodge an objection with the Faculty Council to the appointment of the pre-examiners. The pre-examiners will be asked to submit a reasoned written statement on the dissertation within two months of their appointment, either jointly or individually. There are detailed instructions for these statements.

In their statements, the pre-examiners are to recommend that the doctoral candidate be granted or denied permission to defend the dissertation at a public examination. The pre-examiners should also propose a grade for the dissertation on the scale 'approved with distinction', 'approved', 'failed'. If the work requires substantial structural changes or further research, the pre-examiner may return it, within a month, to the doctoral candidate and his or her supervisor with a statement citing the reasons for its return. If the dissertation includes an article submitted to a journal and this article has not yet been accepted for publication, the pre-examiners must assess the article as they would assess a manuscript for a scientific publication series. If the pre-examiner asks the doctoral candidate to make changes to or to conduct further research for such an article, the doctoral candidate must comply with this request in order to receive permission to publish the dissertation. If the pre-examiner does not approve the article, the doctoral candidate should not be granted permission to publish the dissertation. Moreover, the pre-examiners should not submit a final statement on an unfinished or formally deficient study.

The doctoral candidate must be given the opportunity to respond to the pre-examiners' statement(s) before the Faculty Council decides whether to grant the candidate permission to defend the dissertation at a public examination. If, due to a difference of opinion between the pre-examiners or to deficiencies found in the dissertation manuscript, the pre-examination cannot be concluded within the set time frame or within a reasonable additional time period agreed upon by the pre-examiners and the doctoral candidate with the issuance of a statement recommending that the candidate be granted permission to defend the dissertation at a public examination, the pre-examination process will be terminated, unless the doctoral candidate wishes to submit the matter for consideration by the Faculty Council.

Subsequent to the termination of the pre-examination process, the doctoral candidate may ask for a new pre-examination when he or she has made the changes specified in the pre-examination rejection statements or other changes to the manuscript, and when the supervisor(s) and the director of studies approve the restarting of the pre-examination process.

Public examination of the dissertation

The dissertation is defended at a public examination. The Faculty Council appoints one or two opponents for the public examination. The opponent(s) must have the qualifications of a professor or docent or other equivalent academic qualifications. After the Faculty Council has appointed the opponent(s) for the public examination, the doctoral candidate must submit to them the doctoral dissertation, which has been revised in accordance with the pre-examiners' corrections, if any.

The doctoral candidate must be given the opportunity to lodge an objection to the appointment of the opponent(s). The Faculty Council will appoint one of the permanent or fixed-term professors of the Faculty to serve as the custos (chairman) of the public examination.

Grading of the dissertation

The pre-examiners and the opponent(s) are asked to pay particular attention to the following aspects:

- Formulation of the research question
- Material and methods
- Individual input
- Research results
- Familiarity with the research field
- Discussion and conclusions
- Language and presentation.

The opponent is required to submit a reasoned written statement on the dissertation to the Faculty Council within two weeks of the public examination. In addition to paying attention to the aspects listed above, the opponent must take the doctoral candidate's defense at the public examination into account in the grading of the dissertation. Before the dissertation is graded, the doctoral candidate must have the opportunity to respond to the opponent's statement.

Based on the statements of the opponent and the two pre-examiners, the Faculty Council grades the thesis as "approved with distinction", "approved" or "failed". The grading is based on the written statements and numerical evaluation of the pre-examiners and the opponent. Only dissertations of exceptional quality receive the grade "approved with distinction". The Faculty grants this grade primarily in cases in which both the pre-examiners and the opponent propose it. Approximately one dissertation per year is approved with distinction (maximum 10% of the dissertations).

Candidates unsatisfied with the grading of their dissertation may apply for its re-evaluation by writing to the Board of Examination Appeals within 14 days of the publication of the grade decision. The Board may ask the Faculty Council to re-grade the dissertation. There have not been applications for re-evaluation of the grading.

Table 5. Figures for post-graduate academic education

	2008	2007
Number of students enrolled	Doctor of Veterinary Medicine: 7 students Doctor of Philosophy: 7 students	Doctor of Veterinary Medicine: 15 students Doctor of Philosophy: 6 students
Number of students passed	Doctor of Veterinary Medicine: 12 students Doctor of Philosophy: 4 students	Doctor of Veterinary Medicine: 4 students Doctor of Philosophy: 2 students
Mean number of papers per doctoral dissertation	4.46*	4.67
Mean number of impact factors obtained per student	2.49	2.18

* additionally 1 monography, not included in the calculation

2.3 POSTGRADUATE STUDENT EDUCATION: PROFESSIONAL TRACK (AP 3b)

Types of programmes offered, admission procedures for national and foreign students

The Faculty conducts six specialist programmes in

- Equine diseases
- Food and environmental hygiene
- Hygiene of food manufacture
- Infectious diseases
- Small animal diseases
- Production animal medicine

The Faculty Council has accepted general and field-specific instructions for the specialisation programmes. These instructions include information concerning admission procedures, the objectives of the training, the structure and administration of the training and supervision guidelines. The instructions are available on the Faculty's webpage in Finnish (<http://www.vetmed.helsinki.fi/opiskelu/jatkotutkinnot/erikoistuminen.html>).

Any veterinarian who has the right to work as a veterinarian in Finland can apply for specialisation studies. Foreigners must obtain the right to practice as a veterinarian from the National Food Safety Authority (Evira) in cases where they have earned their degree of veterinary medicine outside of EU's EEA (European Economic Area). Before applying for the right to pursue specialisation studies, the student must have worked for one year in tasks related to the field of specialisation.

After this one year's field-specific general studies and training, the student can apply for guided specialist training supervised by the Faculty. The duration of the guided training programme is three years. Thus, the total duration of the specialisation training is 4 years (240 ECTS). The training programme includes, for example, practical training and reports, writing an article, courses and a specialisation examination. It is also possible to incorporate international Diploma studies into the degree.

The department responsible for the specialist training programme approves student's work

experience when the student applies for the right to study in the Faculty.

One or more staff members, representing the specialisation field at the department nominate a supervisor for the student and recommend that the vice dean accepts the applicant as a student for the specialisation programme. The supervisor and/or departmental steering group approve his/her study plan. Other study achievements are approved by the supervisor. The student may have more than one supervisor.

Co-operation with other institutions

Students can perform parts of the guided specialisation training in private small animal and equine clinics approved by the Committee for Specialisation training. There are 57 approved small animal clinics and 12 approved equine clinics. The approval criteria include certain requirements for staff qualifications, patient numbers, facilities and equipment. In all specialisation programmes, it is also possible to work in a specialist training position outside the Faculty, such as in the National Institute of Health and Welfare, in Evira or abroad in accepted, high-standard veterinary hospitals. There are eight positions in the Faculty in different specialisation fields and one extramural position in food and environmental hygiene paid, in this case, by the city of Seinäjoki. It is a challenge for the Faculty to acquire new partners for training positions and course co-operation.

Student assessment procedures and results

During specialisation studies, discussions between the student and the supervisor play a major role in assessing the students and the progress of their studies. These discussions are carried out at least three times during the supervised training programme. As a result, the student must update his/her personal study plan. The student must also compile a portfolio during training (Ruohoniemi & Levander, 2005). At the end of the specialist training programme, the summary of the portfolio is sent to the supervisor for approval.

When the student has earned at least 160 ECTS in the specialisation programme, he or she is allowed to take part in the specialisation examination which is arranged once a year. To pass the examination, the student must earn $\geq 60\%$ of the maximum points.

The students in specialisation training are also involved in Etappi. If the student has studied for seven years without graduating, he or she must update his or her personal study plan in order to be able to continue studying at the Faculty. The supervisor then approves the updated study plan.

The major problem in the specialisation training is that the number of completed degrees, compared to the large number of students in specialisation training, is small (Table 6). The Faculty is actively trying to identify means to promote graduation. In 2007, the state of the national specialist veterinary training was discussed in a comprehensive seminar to which experts of several important stakeholders were invited. In 2008, the Ministry of Education appointed a Committee to evaluate specialist training. In its report (published in June 2009, summary in English: http://www.minedu.fi/OPM/Julkaisut/2009/Elainlaakareiden_erikoistumiskoulutus.html?lang=fi&extra_locale=en) the Committee suggested that the number of supervisors and positions for the completion of advanced studies be increased. It is widely accepted that changes in the operating environment will increase the need for specialist expertise in veterinary medicine. Accordingly, the objective is to double the number of completed specialist degrees over the next decade.

Table 6. Data on national track specialisation.

	Number of specialists on staff	Number of trainees overall in the specialization program 31.12.2008	Success rate: Completed degrees in 2007 and 2008
Small animal medicine	11	68	2007: 1 2008: 3
Equine medicine	6	21	2007: 1 2008: 0
Production animals	6	44	2007: 3 2008: 3
Infectious diseases	1	35	2007: 1 2008: 1
Food and environmental hygiene	2	25	2007: 3 2008: 1

In addition to the national specialisation training, several postgraduate students are completing their international Diploma studies (Table 7).

Table 7. Information on diplomats among staff, interns and residents.

Diplomate title offered	Number of Diplomates on staff (31 Dec 2008)	Number of interns		Number of residents	
		2008	2007	2008	2007
Small animal (valid for all SA residencies)		4	4		
Equine (valid for all equine residencies)		3	2		
ECVS - SA	1			1	1
ECVS - Equine	1			0	0
ECVN	1			1	0
ECVDI	2			1***	1
ECVO **	0			1***	1
EVDC **	0			1	0
ECEIM **	0			1***	0
ECVPT	1			1	0
ECVPH-PM	1			0	0
ECVP	1*			1*	1
Production Animal Medicine (ECAR 2, ECBHM 3, ECPHM 1, of which one is a double Diplomate ECAR+ECPHM)	6			1 (ECAR)	1 (ECAR)

* same person

** alternate track

*** board eligible: in addition to those mentioned above, one person who has completed residency abroad is ECVS board eligible

2.4 STUDENT WELFARE (AP 4)

Student health and welfare

Finnish Student Health Services (FSHS) provides preventive health care, medical care, mental health care, and oral health care for university students. All undergraduate students are members of the student union and have access to FSHS services. The service is available on weekdays during office hours. FSHS has a branch reception at the Viikki Campus. However, the queues for some services are long. There are also plans to centralise the services and to close the branch reception at Viikki, which would be detrimental to the Faculty's students.

Additionally, there is an occupational health service group at the Viikki Campus consisting of students, health care personnel and other quarters involved in student welfare. The Faculty has one student representative and one staff representative (head of academic affairs) in this group. The goal of this group is to promote student welfare through co-operation and joint projects. Problems associated with studying may also be raised and handled by this group. One example of this was in handling a situation out at the Veterinary Teaching Hospital, where the high workload and certain other problems associated with the clinical training had gradually worsened to the point that they threatened the welfare of the students and increased the risk of accidents. The report on this was published in 2007, by which e.g. the number of assisting staff members had been increased and the number of students' work hours had been limited.

Students have accident insurance which is in force during all studies included in the curriculum. In 2007, 14 student accidents were recorded at the Veterinary Teaching Hospital; in 2008, the corresponding number was 5. The most common accidents were associated with bites or kicking injuries. Instruction on protection against zoonoses is included in teaching in microbiology, pathology, epidemiology, clinical training and in food hygiene. In pathology dissections of cattle, the possibility of anthrax is the first thing to exclude.

Students are vaccinated against rabies three times during their studies: in the first and second study year, and one booster injection later by agreement. In connection with these rabies vaccinations, the students' vaccination status against tetanus can be checked. In case of exposure to anthrax in post-mortem examinations, all involved will be subjected to appropriate medication.

General and specific student counselling

The quarters responsible for student guidance are described in the study guide, on the University's intranet (Alma) and in the Operations Manual of the Faculty. Students are informed of these facilities in the orientation period at the beginning of their studies. Student tutoring is tied to the orientation period. In-house trained senior students help groups of first-year students to get acquainted with the Faculty, the Campus and the University from the student's point of view. The Faculty takes student welfare very seriously, is well aware of the most common problems that may arise, and does its best to help students early in their problems. Reasons for delays of studies have been clarified at three-to-four year intervals, and personal support is continuously offered to those in need of it.

The student affairs officials at the Faculty are responsible for student guidance and advice, the provision of information to new students, the protection of students' legal rights, the registration of completed studies (general studies and the recognition of studies completed elsewhere), retakes of Faculty examinations and communications on academic affairs. The student affairs officials help students in all practical matters, both at the departmental and faculty level, and know whom to contact if further actions are needed.

Students' study progress is supported through the personal study plan and intensive supervision and tutoring by specified persons at the Faculty. Personal study plans were already in use before the implementation of the Etappi system for students whose studies have been delayed (≥ 10 years).

The e-learning planner supports students in matters related to ICT and is responsible for teaching basic ICT skills.

Teachers at the Faculty are easily approachable and provide student guidance in their own field. Since 2009, each department has allocated half of the working hours of one of its teachers to student guidance, supervision, the development of teaching and curriculum planning. Placing such “counsellors” in all departments has been a strategic goal of the Faculty since the Evaluation of Education in 2001.

The Faculty senior lecturer in university pedagogy – a resource provided by the University since 2001– co-operates with staff working in the academic administration in supervising students facing problems in their studies for any reason or whose graduation has been delayed. Moreover, the lecturer supervises the writing of personal study plans. She also co-operates closely with the study psychologists of the University. One of the study psychologists holds reception hours at the Viikki Campus one day each week during terms.

The previously mentioned OPPI questionnaire is part of the Bachelor’s portfolio, and the senior lecturer in university pedagogy is responsible for it. A study psychologist participates in the feedback sessions when necessary. One major reason for implementing a portfolio-type open-ended personal study plan was to offer students an opportunity to practice reflection.

The Student Affairs and Student Financial Aid Service of the University provide general information and advice to students, attend to the University’s duties as a public authority in matters relating to student financial aid, co-ordinates the study progress monitoring system (Etappi) and offer special services to disabled students and international degree students. The Student Affairs and Student Financial Aid Services also maintain an office at the Viikki Campus.

Nyyti – Student Support Centre is a student association for promoting mental well-being. Students can send email through the website and trained volunteers answer them. Nyyti offers confidential support for all kinds of difficult situations in the students’ lives.

Chapter 3. ASSESSMENT OF TEACHING STAFF (AP 5)

Staff recruitment and appointment procedures

The evaluation of teaching and scientific merit takes place during recruitment and in the annual personal review meetings between superior and employee and in personal work performance assessments associated with the new salary system introduced in 2006.

The staff recruitment and appointment procedures include a means for ensuring that all new staff possess at least the minimum necessary level of competence. Of course, different levels of teaching and research positions (e.g. professors, university lecturers, clinical teachers, university instructors and teaching assistants) have different requirements. A university portfolio is used in recruitment as requested by the University Senate. The evaluation of teaching skills includes the assessment of pedagogical training, practical experience in teaching, the ability to produce material for teaching and learning, and other merits in teaching as well as teaching skills shown in a demonstration lesson. There are written instructions for the 20-minute lesson, which is assessed based on the following criteria:

- selection of the topic
- structure of the lesson
- ability to explain and justify statements
- ability to utilise the newest research in the field
- ability to teach in an innovative and thought-provoking way
- ability to use means for illustrating the lesson
- ability to interact with the audience
- ability to convey the message in a clear and intelligible way
- time management
- level of teaching material
- other observations.

Role of students in assessing teachers

Students are involved in the recruitment of teachers and play an important role in assessing the demonstration lesson. For professors and docents, the demonstration lesson is given to the Faculty Council, and for other teaching positions, to the departmental steering group.

The base for assessing the quality of teaching and learning is the Faculty's established student feedback system (described in detail in Chapter 1).

The staff is evaluated "indirectly" by evaluating the quality of teaching. The Faculty does not systematically collect feedback on individual teachers, but teachers may do so themselves when they find it useful. Based on national regulations, feedback on an individual teacher cannot be viewed by other teachers without the teacher's permission. However, the present system allows one to identify problem points and points of excellence without the need for the names of individual teachers.

Teaching performance and excellence

The teaching performance and excellence of individual teachers is taken in account in the personal work performance assessments associated with the new salary system. There are also systems of reward for teaching excellence in operation. The veterinary students annually award the "Teacher of the Year" prize, which the teachers greatly esteem. In addition, several teachers of the Faculty have been awarded prizes at the university level:

Magister Bonus: awarded to the professor of surgery in 2001. The criteria for the Student Union's Magister Bonus award include special skills and interest in teaching and students. Proposals can be made by any member of the University.

Eino Kaila Distinguished Teacher Award: awarded to a group of teachers of veterinary pharmacology and toxicology in 2007. The criteria for the award include teaching philosophy and methods, learning assessment practices, ideas and merits in the production and application of teaching materials, interaction with students, innovation in the development of teaching and the application of recent research in teaching. Student views of the teacher's merits play an important role in the selection process.

Educational Technology Award: awarded to a group of teachers in anatomy for the virtual animal model Vielo in 2002. The purpose of the competition for the Educational Technology Award is to seek existing projects or projects under development that will yield feasible applications and set an example for others. The aim is to promote interactive teaching and learning based on new information and communications technologies, and to support the versatile development of the learning environment.

Centres of excellence in teaching: awarded to the Department of Food and Environmental Hygiene in 2004. The University of Helsinki has been rewarding its units on the basis of the quality of their teaching since 2003. The internal performance evaluation conducted at the University every three years focuses on the central aspects of planning, implementation, evaluation and postgraduate studies. The assessment criteria consist of those compiled in the Teaching Evaluation Matrix, which specifies in concrete terms the University's strategic aims and development challenges.

Available staff development facilities

Staff members are encouraged to take part in national and international congresses and continuing education. The goal is for every teacher to participate on average, in one international and one to two national field-specific congresses or other events related to continuing education with the full or partial financial support of the Department.

Teaching staff is also given opportunities to develop and to extend their teaching capacity and are encouraged to improve their skills. Opportunities for didactic and pedagogic training and specialisation are available. Departments are responsible for providing the teachers with training in university-level teaching and learning during working hours.

The development of the teaching staff is supported by means of inhouse training. The organisation of pedagogic in-house training is provided both in a centralised and decentralised (on the campuses and in the faculties) manner. The University finances pedagogical training provided in the form of a centralised service by the Centre for Research and Development of Higher Education (<http://www.helsinki.fi/ktl/yty/english/index.htm>), located in the Faculty of Behavioural Sciences.

The University provides funding for lectureships in university pedagogy (a total of 15 posts) in all of its faculties. The Faculty has had one of these posts since 2001. The main duties included in the posts are pedagogical research and development. In addition, the Faculty's senior lecturer in university pedagogy provides counselling and support for teachers in their daily work. Together with the Centre for Research and Development of Higher Education, the four senior lecturers in university pedagogy at the Viikki Campus arrange a basic course in university pedagogy (10 ECTS) once a year. Several teachers at the Faculty have participated in the advanced course (an additional 15 ECTS) and individual teachers up to 60 ECTS (Table 7).

Table 8. Teachers' participation in pedagogic training offered by the University of Helsinki.

	2007- 2008
University pedagogy I (Basic course, 10 ECTS)	18 teachers
University pedagogy II (15 ECTS)	4 teachers
University pedagogy III (35 ECTS)	1 teacher
- 60 ECTS in total	

The Educational Centre for ICT (<http://ok.helsinki.fi/english/>) provides the University's teaching staff with services, support and training related to the use of educational technology. The Centre's experts offer consultation on the use of ICT in teaching, the development of learning environments and materials, and web-based teaching. The Centre follows up and enhances the pedagogic use of the newest technological innovations. The Faculty's e-learning planner supports teachers in all matters related to the use of ICT in teaching (e.g. in the use of learning management systems and in collecting course feedback electronically).

The senior lecturers in university pedagogy and e-learning planners together organise a meeting place for teachers at the campus level (Viklo Café), four times a year (two hours at a time). Other types of co-operation, such as seminars, ICT workshops also take place needed.

A development day for the whole staff of the Faculty is arranged once or twice a year.

Chapter 4. ASSESSMENT OF LEARNING OPPORTUNITIES (AP 6)

Promoting and monitoring the teaching-learning environment

The curriculum includes both theoretical and self-directed learning as well as supervised practical training (Table 9). Each academic year encompasses 60 ECTS. Each year, a varying number of hours are allocated for elective studies and theses.

Table 9: General table of curriculum hours taken by all students

Year	Hours of training								
	Theoretical training		Self-directed learning	Supervised practical training			Exams	Allocated for electives and thesis	Total
	Lectures	Seminars		Laboratory and desk-based	Non-clinical practical work	Clinical work			
First	362	36	848	102	183		35	54	1620
Second	463	18	703	84	183		34	135	1620
Third	255	59	656	181	286	9	12	162	1620
Fourth	497	95	510	8	24	281	16	189	1620
Fifth	45	Incl. in clinical work	25 + Incl. in clinical work	12	14	1404	12	108	1620
Sixth	252	22	533	141	118		14	540	1620
Total	1874	230	3275	528	808	1694	124	1188	9720

Lecturing is still the most common teaching method. However, an increasing number of lectures include active student participation and lectures are used for more than just for distributing information. The concretisation of theory is important to our students' learning, thus most lectures are supplemented by the use of real-life examples and cases. Research has shown that our students consider lectures valuable for their learning (Ruohoniemi and Lindblom-Ylänne, 2009) and participate in them actively. Problem-based learning is not widely used in its pure form, but elements of it can be found in various teaching situations. Case-based teaching is an essential element throughout the studies. The same is true for blended learning (combining computer-assisted learning with traditional methods). In several courses, the students practice skills to seek out, critically assess and analyse knowledge, acquired using ICT. Small group teaching and learning are used to train microscopy, laboratory work, project work, formulating research plans and evaluating scientific papers. Practical exercises, especially those with hands-on experiences, are highly valued (necropsies, examining microbiological samples, practicing surgical procedures on cadavers, clinical work).

E-learning environments are often used to support teaching and studying. In nearly every course some learning management system (BSCW, WebCT, Blackboard, Moodle) is used – not necessarily in interactively, but as a valuable tool for the distribution of course details and materials. Most lectures (in PowerPoint form) are also displayed there. Access to the learning management system remains throughout the programme, which makes it comfortable and easy for the students to go back and check out the details taught earlier. Additionally, students may ask questions and provide anonymous feedback during the course using the learning management system.

The Teaching Evaluation Matrix, used as a tool for assessing and monitoring the quality of teaching in all departments once a year, includes several aspects of teaching. With regard to learning opportunities, the sections "Management of the Teaching and Learning Environment" and "Teaching Methods" (Table 9) are the most important.

Table 10: The criteria in the Teaching Evaluation Matrix for different levels of quality with regard to aspects related to learning opportunities and results of the four departments' self-evaluation in 2007 and 2008

Aspect of teaching quality	Passable quality and results	Improving quality and results	Good quality and results	Excellent quality and results
Management of the teaching and learning environment	The use of department premises and facilities is unplanned and unorganized and acquisitions of necessary equipment have been neglected. The department assumes no responsibility for the situation and takes no steps to remedy it. Students do not feel welcome at the department and, in fact, are rarely seen on the premises.	Problems concerning the premises have been noted and there are plans to resolve them. Students do not have their own space or facilities to use computers on the premises. However, students feel welcome at the department.	The department premises are well established and equipped, also from the point of view of ICT and applied sciences. Teachers, researchers and students have had the opportunity to participate in the planning of the premises. The students have their own premises at the department, which has improved cooperation and interaction between researchers and students. The demands of an international learning environment have been taken into account in signage and instructions. The library is an integral part of a high quality learning environment.	The department premises are appropriately equipped and are easily converted to suit the need of various teaching situations. Neighboring departments and faculties have joined forces and found satisfactory solutions to particular mutual needs. Library services have been developed in cooperation with the library to meet the needs of the department and its students, and to contribute an inspiring learning environment.
<ul style="list-style-type: none"> Results: 			<p>In 2007, one department graded the management of the teaching and learning environment as good, three departments as excellent.</p> <p>In 2008, one department graded the management of the teaching and learning environment as good, three departments as excellent.</p>	
Teaching methods	Teaching methods are not consciously evaluated. Teaching is routinely based on traditional methods and ICT is not used in teaching.	Individual teachers experiment with new teaching methods (including the use of ICT), suitable for different teaching situations and exploring different alternatives.	The department supports the development of teaching methods. The matter is discussed openly in the department and the connection between learning objectives and learning assessment is understood. Teachers make use of their training in university-level teaching and use of ICT in the development of teaching methods.	Versatile learning situations and teaching methods support different learners and the attainment of learning objectives. The importance of applying relevant pedagogical methods in various teaching situations is understood, and a range of methodological options are in use. The department closely follows the latest publications on educational research.
<ul style="list-style-type: none"> Results: 			<p>In 2007, one department graded their teaching methods as good, one as good - excellent and two as excellent.</p> <p>In 2008, three departments graded their teaching methods as good and one as excellent.</p>	

One tool for monitoring the teaching-learning environment is the ETLQ, which has been used systematically since 2006 in the Bachelor's phase. Research on learning provides valuable information on the national, field-specific teaching-learning environment (Haarala-Muhonen et al., 2009, Ruohoniemi and Parpala, 2009). Additionally, several teachers at the Department of Food and Environmental Hygiene have analysed and reported their teaching in international journals (Korkeala et al., 2003, Lundén et al., 2007, Maijala & Korkeala, 2007, Korkeala & Lindström, 2009). Undergraduate training in animal welfare at the Faculty has also been reported (Hewson et al., 2005).

Learning opportunities for the students are described in the study guide and in the e-learning systems of the courses. This includes the types of learning opportunities (e.g. lectures, laboratory work, supervised group work, homework in the form of written assignments). All courses are awarded credits according to the national credit allocation and accumulation system similar to the European Credit Transfer System (ECTS; 1 ECTS = 27 hours of student's work). In most cases the number of hours allocated for each type of supervised training is given in the study guide, and the remaining hours are reserved for self-study. The study guide is updated annually.

Departments are responsible for teaching in their fields. The competence of the teachers is assessed in the recruitment process, and teachers are encouraged to participate in pedagogical training. Each teacher is responsible for his or her teaching. One of the main principles in teaching at the University of Helsinki is that teaching is based on research. Updating the information according to the latest research in the field is important. The course materials, including the PowerPoint slides shown in the lectures, are commonly included in the learning systems of the course and are available for other teachers in the department as well.

The provision of IT and library facilities at the Faculty level

The Viikki Science Library (<http://www.tiedekirjasto.helsinki.fi/english/>) serves the four faculties (Agriculture and Forestry, Biosciences, Pharmacy, Veterinary Medicine) and research institutes (Neuroscience, Biocenter) located on the Viikki Campus. Each faculty has one member in the Library Board and the rest of the members are from the library staff, research institutes and students. The Library has three advisory boards with members representing teachers, researchers and students, so that the primary customers are able to contribute to the development of the library. Each subject area has its own subject librarian (subject specialist) nominated by the Library Board. The subject specialist in veterinary medicine is the link between the Faculty and the Viikki Science Library. She also ensures that the financial input from the Faculty is spent to the benefit of veterinary medicine, oversees the collection of veterinary titles in the library, is responsible for the description of the collection, and teaches information literacy. The subject librarian is a consultant member of the Faculty's Academic Planning Committee.

The Viikki Science Library provides staff and students access to the National Electronic Library, FinELib, and through that, access to ca. 20 000 e-journals, 131 databases and almost 300 000 e-books. In addition, the Viikki Science Library subscribes to 342 e-journals not included in the FinELib collection. The number of printed journals is 2300, and there is an extensive book collection. Through the Nelli-portal (National Electronic Library), staff and students have access to the electronic material from home also. This service is greatly appreciated by the students.

Every year, the staff of the Faculty is asked to name new titles they wish to see in the library. The Viikki Science Library also receives a list of all course books mentioned in the Faculty's study guide and acquires at least two copies, usually four or five, of each textbook. The Library staff also checks whether electronic versions of textbooks are available. All the books and journals are catalogued and indexed in the electronic catalogue of the Helsinki University Libraries, Helka.

On weekdays during the term, the library is open from 8 am to 8 pm, on Saturdays from 10 am to 4 pm and is closed on Sundays. During vacations, opening hours are on Mondays from 9 am to 6 pm, Tuesday to Friday from 9 am to 4 pm, and on Saturdays and Sundays, the library is closed. The Information Desk of the library is open from 10 am to 4 pm on weekdays.

The total number of study places in the Viikki Science Library is 381. The self-study room is available 24 hours each day once the student has signed for key. In addition, the veterinary students have five group-study rooms in the learning centre of the EE building.

The Faculty has two small reference libraries: one in the Clinicum building and the other in connection with the learning centre in the EE building. The students have 24-hour access to the reference library in the Clinicum, and the library in the learning centre is open from 8 am to 6 pm. In addition, the books in these reference libraries are catalogued in the Catalogue of Helsinki University Libraries, Helka.

In connection with the learning centre at the EE building, there is a computer class for veterinary students with 31 computers, and the four group-study rooms also have one computer each. The students have access to this class 24 hours per day. The class is also used for teaching during undergraduate and doctoral courses. Another 18 computers are available in the hallway in the EE building. The Clinicum has a corner with 11 computers and each of the group-study rooms has one computer. The students that work in the animal hospital can also use their computers. In addition, there are two computer classes in the Viikki Science Library.

The Viikki Science Library is responsible for the teaching of information literacy. The ICT driving licence (3 ECTS) is included in the obligatory Bachelor's studies. The studies on information literacy are partially integrated in the veterinary curriculum. The first-year students learn to use one reference database (PubMed) in their problem-based projects. For the second-year students, information literacy is part of the Bachelor's thesis project. This includes a lecture on literature searching and personal training on the student's own topic. Before attending clinical studies, students must take a course on Evidence-Based Medicine which includes literature searches of databases used in clinical sciences (CAB and Medline). For students beginning their Licentiate's thesis, the Viikki Science Library arranges courses on RefWorks and advanced literature searches that focus on their own topics. All information literacy is taught by the library subject specialist in veterinary medicine with teachers of the Faculty assisting in the subject matters. The teaching of information literacy is similar in all four faculties of the campus, but each of them has their own subject specialist.

Chapter 5. ASSESSMENT OF TRAINING PROGRAMMES AND THE AWARDING OF THE TITLE OF VETERINARY SURGEON (AP 7)

Explicit intended learning outcomes and provision of a structure that promotes life-long learning

The general learning objectives of the whole undergraduate curriculum and the learning objectives of each course are presented in the study guide and in the course information on the learning management systems used in the courses. The learning objectives of the whole curriculum were set by the Faculty's Academic Planning Committee and approved in the Faculty Council in 2005. The requirements of the EU Directive, the University of Helsinki and the Bologna Process as well as the Faculty's own mission have been taken in account in preparing the list of objectives. The official list of objectives of the undergraduate curriculum (i.e. objectives of the degree of the Licentiate of Veterinary Medicine) is available in the study guide and includes:

- comprehensive basic knowledge of the disciplines that form the basis of the work of a veterinarian
- ability to make scientifically and ethically justified decisions independently and critically
- ability to communicate and co-operate in a variety of ways
- ability to perform the professional duties of a veterinarian and practice veterinary medicine independently
- ability to follow developments in the field and continue learning
- ability to pursue further academic and professional training.

The degree of the Licentiate of Veterinary Medicine offers the information and skills necessary to become a legal veterinarian under Finnish law and to practice as a certified veterinarian in the different fields of veterinary medicine as described in EU regulations.

The objectives of the curriculum are in agreement with and supported by the learning objectives of courses and other learning opportunities within the curriculum. The degrees offered by the University of Helsinki encourage lifelong-learning and provide skills for the development of personal expertise and communication. Thus, the curriculum includes studies on the general skills of an academic individual, such as co-operation, communication (including language skills) and information technology and literacy skills. The Bachelor's degree provides a versatile foundation for studies towards a higher academic degree, which focuses on deepening one's skills and knowledge. The Licentiate's degree provides the student with skills and knowledge in the fields expected of an international academic professional. The Licentiate's thesis, where students are expected to produce new information and to communicate it in public both orally and literally, shows the student's ability to fulfill most of the general objectives of the curriculum.

Based on the learning objectives and content of the courses, strands, modules, clinical training and students' theses, all day-1-skills are embedded in the curriculum. Thus, passing all obligatory studies ensures that the student has acquired the required knowledge and skills. The requirement to become a legal veterinarian under Finnish law, and to practice as a certified veterinarian in the different fields of veterinary medicine as described in EU regulations immediately after graduation, is demanding.

Discussion on the national day-1-skills at the Faculty has begun. The subject specific and generic outcomes of the whole curriculum were discussed and worked on collaboratively on Faculty Day in May 2009 ("What are Finnish day-1-competences"). The Finnish Veterinary Journal will serve as a channel to obtain feedback from professionals working in the field for development of the curriculum.

Additionally, a national project is ongoing at the Faculty (2007-2009), aiming to further define the learning outcomes and to make concurrent changes in other aspects of course planning (assessment, teaching methods) when necessary. Understood this way, learning outcomes are

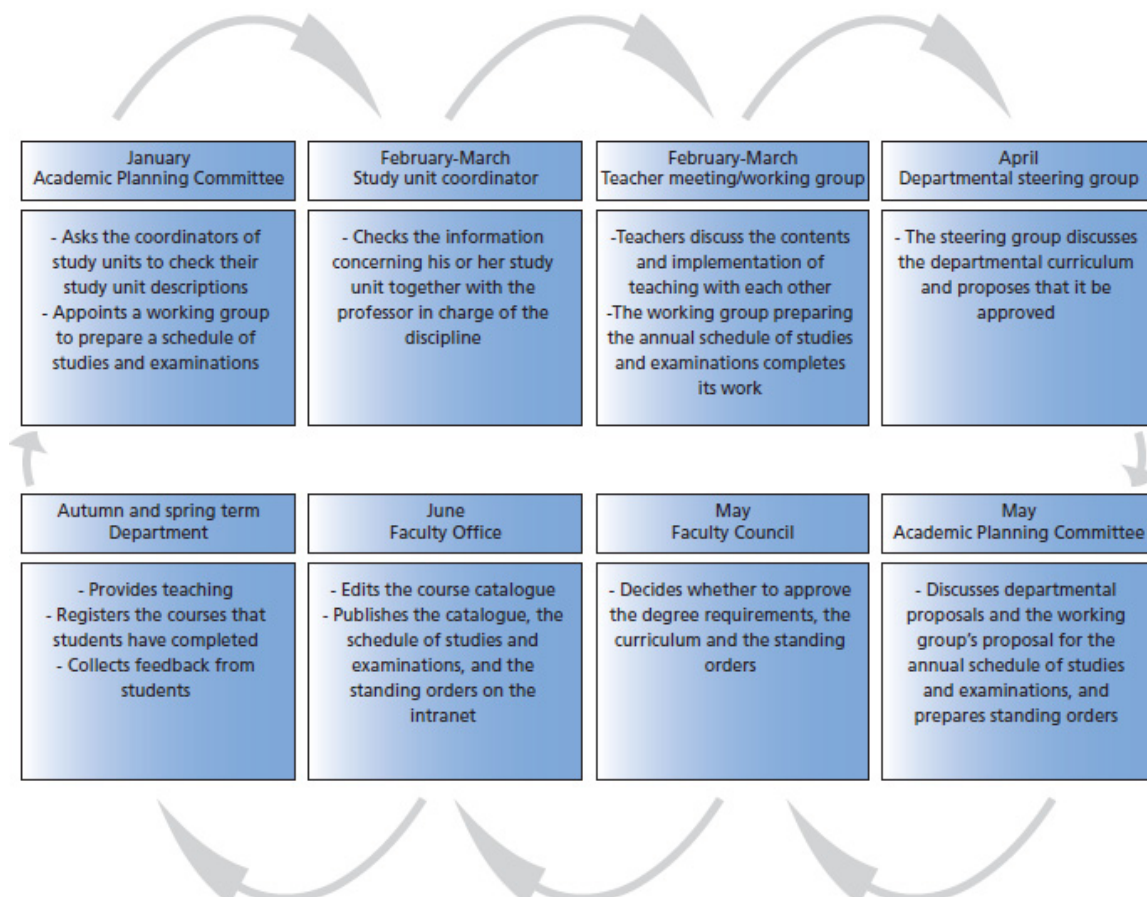
statements of what the learner is expected to know, understand and/or be able to demonstrate after the completion of a learning process (e.g. after a course), and are closely connected in the assessment. Clear and concrete assessment criteria help the student to understand what is expected of them at the end of the course. More focus on the outcome helps the students to set their goals and manage their learning process. Students will know the threshold criteria and criteria for achieving a higher grade in a more concrete way than at present. The Academic Planning Committee has accepted this as policy at the Faculty level, and according to current plans, the learning outcomes of all courses will be completed by spring 2010. A planning officer, supervised by the Faculty's senior lecturer in university pedagogy, has been employed in this project. The counseling teachers in all four departments have also participated in training on learning outcomes.

The main value of learning outcomes in our curriculum is that they encourage greater focus on assessment. The creation of learning outcomes will also make the generic outcomes of the course more explicit. The generic outcomes will be assessed in the same manner as the subject specific ones are. Concrete learning outcomes will make cumulative learning explicit, and thus strengthen the profile of the curriculum.

Procedures for formal curriculum and teaching programme approval and regular reviews

The curriculum is reviewed annually. The curriculum design consists of several stages, numerous associates and various activities that take place at different, but predetermined times as shown in Figure 7 (Chapter 4). At present, the departmental curriculum is discussed each year in the departmental steering group. During the past two years, there has been a preceding interactive "curriculum workshop" at each department, joined by the department head, teachers responsible for the courses and modules, the head of academic affairs, the planning officer for academic affairs, and/or the senior lecturer in university pedagogy. This approach has increased discussion between disciplines and further strengthened the co-ordination of teaching. At the same time, it ensures that the wider Faculty view is taken into account in the departmental curricula, which form part of the whole curriculum.

FIGURE 8. Curriculum design as an administrative process



Procedures for monitoring the delivery of the curriculum and the teaching procedure

The study guide is published both electronically and as a paper copy. The study guide and the brochure on veterinary studies, together with information provided by all the departments and the Veterinary Teaching Hospital, are available on the Faculty's webpage.

Application of the ECTS system to the degree programme and evidence of its use

In association with the Bologna Process in 2005, the previous system of "study weeks" (1 week corresponding to 40 hours of student work) was changed to ECTS (1 ECTS corresponding to 27 hours of student work). The workload of each course was reassessed and the change was made mechanically (x 1½) only in those cases where the workload had been found adequate based on both calculations and student feedback. Assessing and monitoring the students' workload is an important aspect of quality assurance at the Faculty. The content of the degrees is presented in Tables 11 and 12.

Table 11. Content of the Bachelor of Veterinary Medicine degree. Each year = 60 ECTS.

Year	Studies	Personal study plan ^a	L ^b	ICT ^c	E ^d	Res ^e
I	Study guidance 2 ECTS Anatomy, physiology and biochemistry (integrated, "Healthy Animal") 50 ECTS Electives* (2 ECTS)	0.5 ECTS	2.5 ECTS	3 ECTS		
II	Animal hygiene (incl. genetics) 13.5 ECTS Farm practice 6 ECTS Parasitology 5 ECTS Microbiology and immunology 11.5 ECTS Pathology 8.5 ECTS Meat inspection technique 1.5 ECTS Electives* (2 ECTS)	0.5 ECTS	6.5 ECTS		1 ECTS	4 ECTS
III	Epidemiology 10 ECTS Pathology (continued) 8.5 ECTS Meat inspection 6 ECTS Meat inspection practice 6 ECTS Veterinarian as an officer 2 ECTS Pharmacology and toxicology 7 ECTS Introduction to clinical work 7.5 ECTS Electives* (3 ECTS)	1 ECTS	1 ECTS	2 ECTS	2 ECTS	4 ECTS

a = Bachelor's portfolio (2 ECTS)

b = Language studies (Finnish, Swedish and English) and communication (written & oral) skills (10 ECTS)

c = Information and communication technology studies (5 ECTS)

d = Veterinary ethics and animal welfare (3 ECTS)

e = Introduction to scientific work (2 ECTS), Bachelor's thesis (6 ECTS)

* The students must earn 7 ECTS of electives during the Bachelor's studies

Table 12. Content of the Licentiate of Veterinary Medicine degree. Each year = 60 ECTS.

Year	Studies	Personal study plan ^a	(L) ^b	(ICT) ^c	(Et) ^d	Res ^e
IV	Internal medicine (companion animals, horse) 13.5 ECTS Anesthesiology, intensive care 3 ECTS Surgery (companion animals, horse) 9 ECTS Reproduction 12 ECTS Herd health, production animal medicine and surgery 11.5 ECTS Electives** (2 ECTS) Clinical practice 4 ECTS	+	+	+	+	5 ECTS
V	Clinical training (rotations) 52 ECTS Veterinary health services and municipal administration (2 days) Clinical practice 4 ECTS	+	+	+	+	4 ECTS
VI	Food hygiene and food inspection 18.5 ECTS Environmental hygiene and toxicology 9.5 ECTS Health protection practice 3 ECTS Veterinary health service and municipal administration 5 ECTS Practice Management 3 ECTS Electives** (4-9 ECTS)	1 ECTS	+	+	+	+ 11-16 ECTS

a Licentiate's portfolio (1 ECTS)

b Applied language and communication skills studies

c Applied information and communication technology skills

d Applied veterinary ethics and animal welfare

e Licentiate's thesis 20 ECTS (literature review) or 25 ECTS (research project)

+ Included in teaching, but no separate ECTS allocated

** Based on the type of the student's Licentiate's thesis, he/she must gain 6 or 11 ECTS in electives during the Licentiate phase

Degree certificates are accompanied by a supplement (Diploma Supplement) that describes the overall content of the degree. The purpose of this supplement is to improve the international comparability of degrees and to facilitate mobility for either postgraduate study or employment.

Granting the license to work as certified veterinary surgeon

The Finnish Food Safety Authority (Evira) works under the Ministry of Agriculture and Forestry. Evira grants licences to work as certified veterinary surgeons to the graduates of the Faculty's Licentiate of Veterinary Medicine programme. For foreign degrees not recognised in Finland or in EU, Evira requests an individual evaluation and the need of additional studies from the Faculty. Evira is the authority that ensures compliance with veterinary practice based on the current legislation in the country.

Assurance concerning the participation of students, stakeholders and graduates in quality assessment activities

Students are represented in the Faculty Council and in committees and working groups of the Faculty. The student feedback system is described earlier in this report (Chapter 1).

The Career Services of the University systematically collects feedback from recent graduates. Unfortunately, the response rate has been very low.

In general, collecting feedback from stakeholders and graduates has been found to be one of the main objects in need of development. As the connections within the veterinary profession

are tight and the trade is relatively small, there are plenty of opportunities for obtaining informal feedback. The Annual Veterinary Meeting, arranged by the Finnish Veterinary Association, offers a good possibility for discussion. The elective courses in which graduated veterinarians can also participate are valuable to this end. The Department of Food and Environmental Hygiene has close connections with veterinarians working in slaughterhouses and control tasks in veterinary public health.

Chapter 6. ASSESSMENT OF QUALITY ASSURANCE FOR CLINICS, LABORATORIES AND FARM (AP 8)

Clinical services

Quality assurance is part of the daily clinical work and its assessment at the Veterinary Teaching Hospital. The staff reports on unexpected events to the head of the corresponding unit and, in cases requiring administrative or financial measures, to the Hospital Director.

Daily rounds, lead by a senior veterinarian of the corresponding unit of the Hospital, offer an excellent opportunity to ensure the quality of clinical work. At the same time, discussions of these rounds provide a strong educational benefit to those participating in them. Journal clubs, where veterinarians present the latest literature reviews on clinically interesting and important topics, have been integrated as part of the regular meetings of the units of the Hospital.

The Veterinary Teaching Hospital carried out extensive assessment of its quality assurance in 2007. This document is available on the University's intranet. There are detailed instructions for students about clinical work and activities at the Veterinary Teaching Hospital. These instructions are updated every year and are available on the intranet. Additionally, there are other practical instructions (e.g. regarding hygiene, aseptic principles and performance in operating theatres as well as biosecurity) on the intranet and in the learning management system (BSCW) used in the clinical departments.

A project on the welfare of the whole staff of the Hospital was carried out in 2006-2008 in co-operation with the occupational health service of the University. Targeted coaching for superiors and the development of teams were important goals of the project. The commitment of the entire staff was considered vital. The project has, at some points, clarified the functioning of the Hospital and has improved communication in many ways.

The Veterinary Teaching Hospital publishes information about its activities and functioning on its recently renewed webpage. The Hospital collects feedback from its clients, and the results are published on the intranet. Clients also have an opportunity to provide feedback and to contact the Hospital Director directly. The Hospital Director is responsible for handling client complaints. For each complaint, the veterinarian or other staff member in question is asked to provide a written statement about the case. If necessary, the head of the unit is consulted. Individual cases may be forwarded to the Dean or to the Evaluation Board of Complaints regarding Veterinary Treatment which operates under the Ministry of Agriculture and Forestry.

Laboratory services

Diagnostic services for the Veterinary Teaching Hospital are provided by the departments of Equine and Small Animal Medicine, Production Animal Medicine and Basic Veterinary Sciences.

In the Central Laboratory of the Department of Equine and Small Animal Medicine pre-analytical quality assurance includes the visual evaluation of sample quality and identification problems, which may lead to the subjective rejection of the sample by an analyst. The clinicians are informed directly about the problems, which are not recorded by the laboratory.

Analytical quality at the Central Laboratory is monitored by internal and external quality assessment. The internal quality assessment scheme includes daily one-level control samples for clinical chemistry and haematology analysers. Commercial pre-assayed control samples are available for most of the tests performed in the laboratory. The results of the control samples are evaluated by comparing them to target mean values with accepted ranges assayed in the laboratory, which also serve as guidelines for the acceptance of patient results. The results of the control samples are recorded and saved in the quality control files of the analysers.

The external quality assessment scheme includes ten unknown samples for chemistry and three two-level sample surveys for haematology per year. The statistical assessment of laboratory performance is made on the basis of the results by the independent producer of the service according to the guidelines for laboratory medicine. The reports are examined by the head of the

laboratory, and reparative actions are made as needed.

The internal quality assessment of some of the animal hospital laboratory methods is conducted by the Central Laboratory. The level of the results from the dry chemistry analyser is adjusted to equate with the results of the chemistry analyser in the Central Laboratory. The conformity of the dry chemistry results with the wet chemistry results is occasionally evaluated by analysing the same patient samples with both methods. The blood-gas analyser has a programmed internal quality assessment protocol with four-level control samples.

The laboratory in the Production Animal Hospital serves the staff of the Veterinary Teaching Hospital, Department of Production Animal Medicine, outside veterinarians and clients. The quality of the chemical samples is observed using Labquality LongTrol control serum. The laboratory participates in national quality assessment rounds ten times a year. The haematological quality control sample is the Basic Blood Count, which is sent by the above-mentioned Central Laboratory three times a year. The quality assessment scheme includes daily one-level control samples for the analyser. All the results of clinical samples that turn out to be out-of-line are controlled by reanalysing the sample and the respective veterinarian is informed. Haematological samples are checked manually in cases where the analyser fails to give a reliable result. The electrolyte analyser also has its own regularly used control samples. Mastitis diagnostics are controlled by identifying three bacteria from the Veterinary Laboratory once a year. The temperature of the freezers and deep freezers is checked daily. Microscopes are serviced annually and other devices as necessary.

The Department of Basic Veterinary Sciences plays a major role in teaching students the basics of laboratory work, including safety issues. Detailed instructions are available on the University's intranet regarding e.g.:

- Equipment and responsibilities (in Finnish)
- Quality assurance and instructions (in Finnish)
- Instructions on chemical refuse collection (in Finnish)
- Instructions for laboratories (in English)
- Instructions for the virology laboratory (in English)

The section of Pathology and Parasitology at the Department of Basic Veterinary Science provides diagnostic services in its own disciplines. Services in Pathology include necropsy as well as biopsy and cytology services. Samples originate mainly from the Veterinary Teaching Hospital, but samples from private veterinarians and animal owners are also analysed. Undergraduate students participate in diagnostic necropsy work under the supervision of teachers, but the responsibility of the report rests on the teacher. Biopsy and cytology is performed by staff members only. Since the residency programme began in 2009 a great deal of pathology services has been provided by residents but all reports written by them are scrutinised by the programme supervisor who holds DipIECVP.

The diagnostic service in Parasitology is a small-scale activity that consists mainly of sample analysis referred either from the Central Laboratory of the Department of Equine and Small Animal Medicine or from extramural veterinary clinics, and involves a small number of faecal or ectoparasite samples.

Farms

The Faculty does not have its own farm. Instead, two nearby dairy farms are used for teaching purposes where needed. One of them is a research farm owned by the University of Helsinki and is located close to the Equine and Small Animal Hospital on the Viikki Campus. The other one is owned by a professional training institute (Keuda Vocational College, near the Production Animal Hospital in Saari).

Additionally, students have a compulsory two-week extramural training period on a dairy farm and another on a piglet-producing farm. These farms must have up-to-date production recording schemes for e.g. milk production, calving or farrowing dates and the growth rates of the animals. Farms must have a minimum of 30 dairy cows or 30 sows.

Chapter 7. ASSESSMENT OF CONTINUING EDUCATION (AP 9)

The obligation to maintain professional skills and for continuing education is written in the law. The Faculty maintains that continuing education is vitally important to the goal of life-long learning for veterinarians. The Faculty organises continuing education by offering optional undergraduate courses that graduated veterinarians can take part in and also offers the expertise of its staff to other institutions. Other institutions that offer continuing education are the Palmenia Centre for Continuing Education, Evira, Ministry of Agriculture and Forestry, and the Finnish Veterinary Association through its educational unit Fennovet Ltd.

These institutions are represented on the Continuing Education Advisory Board co-ordinated by the Faculty. The Continuing Education Advisory Board interacts with institutions that organise continuing education. Together they set the goals of continuing education, develop the registration of continuing education study credits and try to disseminate information on continuing education. In addition, the role of the pharmaceutical and other industries in continuing education in some fields is marked.

In the Department of Production Animal Medicine, a veterinarian can improve his or her professional skills and expertise with the Continuing Education Diploma of Production Animal Veterinarian. The continuing education diploma comprises 30 ECTS (<http://www.vetmed.helsinki.fi/saari/diplomi/>).

The Department of Food and Environmental Hygiene offers a 40-ECTS Diploma in Environmental Health Management (http://www.vetmed.helsinki.fi/elintarv/opiskelu_diplomi.html). Together with the relevant traineeships, passing the veterinary inspector examination entitles veterinarians to practice as veterinary inspectors in line with decision 5/93 of the Department of Food and Health of the Ministry of Agriculture. The Food Safety Hygienist examination and the training attached to it constitute professional postgraduate education, which is part of specialist training in environmental health and food safety hygiene. A new training programme begins every second year.

Shared courses for undergraduate students (elective courses) and graduated veterinarians (arranged in 2008):

- The ABC of Animal Experiments 6 ECTS. This course for scientists using laboratory animals follows the guidelines established for C-category competence courses in laboratory animal science by the European Union, the Council of Europe, and the Federation of European Laboratory Animal Science Associations (FELASA) curriculum. The feedback from this course has been collected electronically. The participants have noted that it was useful and well implemented, but contained too much content within the given time.
- Beef cattle “from farm to table” 2 ECTS
- Game and reindeer “from wild to table” 2 ECTS

These two courses were assessed electronically immediately after their completion. The great majority of participants evaluated both courses as good or very good. The subjects were found to be interesting, and the lecturers mainly good or very good. The main subjects to be developed were: “Beef cattle from farm to table”: compact course, should include more brakes; “Game and reindeer from wild to table”: some overlap between the lectures, underrepresentation of some topics, some lecturers were not so good.

- Equine anesthesia 3 ECTS
- Evidence Based Medicine 3 ECTS

These courses are web-based and offer the possibility for continuous participant feedback.

- Equine neurology 1 ECTS
- Basic course in veterinary acupuncture 2 ECTS.

Feedback has been collected at the end of the course, and participants have found the course inspiring and highly useful.

- Food hygiene in the fish production chain 3 ECTS
- Course for stud farm veterinarians 3 ECTS
- Reproduction and health care of pigs 3 ECTS
- Mare course 3 ECTS
- Udder health 3 ECTS

Assessment by the participants has been collected from these courses either in paper form or in a discussion at the end of the course.

These courses are free of charge for undergraduate students and for students in specialist training at the Faculty but graduated veterinarians coming from outside the Faculty must pay a course fee. The number of participants in most courses is limited.

Continuing education will play a greater role at Finnish Universities in the future. The new law will require universities to play a more active role in offering continuing education.

Chapter 8. ASSESSMENT OF RESEARCH (AP 10)

The Faculty actively promotes research-based teaching and learning. The Bachelor's studies include a short thesis, which is a review based on scientific articles. The topics are related to subjects they study during the Bachelor's studies and are given annually by teachers and all scientists of the Department of Basic Veterinary Sciences. A lecture on scientific writing and another on literature searching precede the project. If needed, the students acquire hands-on supervision of their literature searches from the Viikki Science Library. A professor at the Department of Basic Veterinary Sciences is in charge of the thesis (responsible teacher). In addition to teachers, researchers at the Department of Basic Veterinary Sciences actively supervise students' Bachelor's thesis. The supervisors receive training and they use a form designed by the Academic Planning Committee to evaluate the theses. Written rules on the supervision process are published on the University's intranet. Based on student feedback, the Bachelor thesis and its supervision works well.

Instead of a separate course on statistics, students receive training in these matters especially in association with quantitative epidemiology. This coupling proved functional for students' learning. An evidence-based approach is introduced throughout the studies.

The vice dean responsible for undergraduate education is the teacher responsible for the Licentiate's thesis. Written instructions are available for the thesis (on the intranet), and an evaluation matrix is used for its assessment. Students may perform the Licentiate's thesis in the form of a literature review or the work may consist of a small research project and a written report. The evaluation matrix has recently been rewritten, and as of the beginning of 2010, both types of theses have their own grading scales as was noted in Section 2.1.

Students are encouraged to complete their Licentiate's theses in the research groups of the Faculty, which offers them an opportunity to receive authentic training in research. Many students are involved in research projects, sometimes leading to a contribution to internationally published papers. An innovative aspect of the teaching programme is the Summer School run by the Department of Environmental and Food Hygiene. This annual summer school admits a number of students by application. Students participate in various research projects of that department and work intensively in collaboration, under systematic supervision, each aiming to complete a high-quality Licentiate's thesis during the summer. A report on the Summer School has recently been published in an international journal (Korkeala & Lindström, 2009).

Scientific publications accepted for publication in international scientific journals go through a common review process. This internationally accepted quality assurance process provides us with a third-party perspective on the quality of our science. The faculty annually collects data on scientific publications published by each department. Bibliometric methods common to the University are followed in the classification of these publications. One quantitative measure of research activity is the number of doctoral theses completed each year (agreement with the university administration).

Teaching should be based on recent research, a principle is confirmed by the fact that the majority of academic teaching personnel is, in addition to teaching actively involved in their own research projects. The Faculty has close contacts with veterinary professional associations, and researchers commonly serve as teachers/lecturers in different annual events targeted for practising veterinarians.

Research programmes have been discussed in Chapter 2.2.

University of Helsinki has as one of its policy targets the quality assurance of all of its activities dealing with either teaching or research. The international evaluation of research quality and activity at the whole university is set to take place every six years. The previous research evaluation took place in 2005, and the next one is scheduled for 2011. A written report on the evaluation in 2005 is available. The research activity of all departments at the Faculty was evaluated at a

high level: Department of Food and Environmental hygiene, 7/7 credits; Department of Clinical Sciences, 6/7 credits; Department of Basic Veterinary Science, 5/7 credits).

In addition to evaluations of the University of Helsinki, other science actors may perform their evaluations as well. One important evaluation is performed by the Academy of Finland, the major science funding organisation in Finland. The quality and activity of Finnish Food sciences, including food safety and food hygiene research at the Faculty (DEFEH and DBVM), was evaluated by an international evaluation committee in 2006. (Assessment: 6/6 credits. Food Sciences and Related Research in Finland 2000-2004. Publications of the Academy of Finland 2/06).

The Faculty has one of the Centres of Excellence in Research nominated and funded by the Academy of Finland for 2008-2013 (CoE in Microbial Food Safety Research). The activity of the Centre was evaluated in the highly competitive application process (only 23 of the applicants received funding).

List of publications

The total number of international peer-reviewed publications has been steadily growing during the recent years. The rise has been most evident at the Department of Basic Veterinary Science. The list of publications of years 2006 – 2008 is included as [Appendix 9](#).

Chapter 9. ASSESSMENT OF INTERNALISATION OF EDUCATION AND RESEARCH (AP 11)

The University of Helsinki Strategic Plan 2007-2009 cites internationalisation as one of the five key areas for development. The Faculty also sees internationalisation as a very important element in veterinary training. Until now, the Faculty has not been able to meet the objectives set by the University in the number of outgoing exchange students. One reason for this has been the structure of the curriculum. However, the Faculty has developed the curriculum according to the Bologna Process and has kept in mind also the challenges of internationalisation. At present all obligatory courses are arranged annually which makes it easier for students to go to study abroad; previously several courses were arranged only every second year. However, there is practically no harmonization between curricula in different countries and an exchange period longer than a couple of months inevitably cause some delay in the student's studies.

There are no foreign undergraduate degree students studying at the Faculty. This is due to the fact that the vast majority of the undergraduate courses are in Finnish, and only a few are in English; parts of the clinical training as well as most of the study books are in English, however.

The target number of foreign degree students set by the university is 13 for the years 2007-2009. This number cannot be reached until most courses are taught in English or there is a joint Master's programme with another faculty. Thus far, the Faculty is not a partner in any international joint degree or in the Erasmus Mundus programme.

The Strategic Plan also states that the University prepares an action plan related to its language policy and will include this in the policy programmes. For the first time, the University is assembling its views on the relationship between Finland's national languages (Finnish and Swedish), English, and other foreign languages, as well as their status within the University. The University's Language Policy (http://www.helsinki.fi/inbrief/strategy/HYn_kieliperiaatteet.pdf) specifies the development challenges stated in the Strategic Plan and in policy programmes.

As one way to increase "internationalisation at home", the University of Helsinki has also stated in its strategy that it will expand international recruitment. Consequently, the Department of Equine and Small Animal Medicine has advertised all professorships internationally for years. Furthermore, clinical teacher positions in those areas in which the Faculty lacks expertise nationally (or few to no competent applicants are expected from Finland) have been advertised internationally as well. In these cases, there has also been an emphasis on the European and/or American specialisation so that those recruited are able to serve as supervisors for residents and thus build up the expertise of the Finnish veterinarians. Naturally, all the lectures and clinical teaching given by these foreign teachers takes place in English, which further contributes to the internationalisation of the basic degree students as well.

Based on the Evaluation of Education 2007-2008, the students of the Faculty consider the need for internationalisation to be met to some extent through use of English textbooks, having some English-speaking teachers and having contact with foreign students. Additionally, most students are highly committed to their course, and are thus reluctant to leave their classmates. They also find that most parts of their programme, especially the clinical parts, are of a higher level than are foreign programmes they know about. These attitudes deserve special attention when trying to increase the number of outgoing students.

With regard to the size and resources of the Faculty, the exchange of teachers has been active. Teachers play a key role in encouraging students to study abroad. Teachers who have had personal experiences at foreign universities are likely to be more willing and better able to recommend an international period of study for students as well. Stays abroad and exchanges can provide teachers with valuable experiences in the form of exchanging good teaching practices, methods and improving language competencies. The incoming visiting lecturers have been actively engaged as lecturers in the students' elective courses.

Incoming exchange students

The annual number of incoming exchange students has been approximately 20 (Table 13). Since the new Erasmus placement was included as an opportunity in the Erasmus Programme in 2007, students from abroad have also been seeking placement at the Veterinary Teaching Hospital. The number of incoming students currently meets the goals set by the University of Helsinki.

Most incoming exchange students spend a practical clinical period (three to six months) at the Veterinary Teaching Hospital. The students are integrated into the groups of Finnish students, and in these situations, the clinical rotations are supervised in English. The students acquire plenty of clinical hands-on experiences under supervision, which the students very much appreciate, especially those who are usually allowed to watch demonstrations only at their home university. There are also other options for exchange students; studies in pathology, and being integrated into research projects of the Faculty, but in practice these have been limited to single individuals.

A student tutoring system for incoming students has been developed at the Faculty in order to help them integrate with Finnish students and familiarise themselves with the daily activities of the University Teaching Hospital. Tutors write a report on their tutoring experiences, and these evaluations are used to improve conditions for both tutors and incoming exchange students.

The University arranges an orientation week, a pick-up service and language courses for incoming exchange students and assists them in finding housing. The University also publishes an orientation handbook for international students. There are also several other services described at <http://www.helsinki.fi/exchange/>.

Thus far, no official feedback has been collected from incoming exchange students. This shortcoming has been noticed in the Faculty, and a feedback system for exchange students will be implemented there in the near future. The exchange students are asked orally about their experiences and are encouraged to provide feedback during their exchange period. However, as some students may feel uncomfortable giving particularly negative feedback face to face, this may not bring out all opinions and feelings about their experiences. In those cases where negative feedback is received, actions are taken to correct the problem that has been identified.

International exchange students are members of HYY – the Student Union of the University of Helsinki. HYY provides its members with a variety of services and looks after their interests. The Erasmus Student Network is a sub-committee of HYY that organises various social activities for exchange students. The association of veterinary students (EKY) promotes the interests of its members and arranges diverse extracurricular activities for the incoming exchange students.

Outgoing exchange students

Mobility periods are promoted through events, internet, email and personal consultation. The University also publishes guidebooks and organises information and orientation events for students planning to study abroad. The University also has a library with material from foreign universities and about studying abroad in general. Students who have been on an exchange programme have written reports which are available on the intranet for other students to read.

The low number of outgoing exchange students (from two to nine per year) has been recognised as a challenge in the Faculty, and actions to improve the situation will be taken in the forthcoming academic year(s). The target number of outgoing students set by the university is 16. More action will be taken to improve the situation through use of different ways to inform students of various opportunities to study or work in another country. The head of academic affairs and the senior lecturer in university pedagogy have helped students to build up such personal study plans where most studies completed abroad can be maximally accepted into the student's degree at his or her home university. At the departmental level (e.g. in Department of Equine and Small Animal Medicine), all studies completed during exchanges are accepted as part of the standard

curriculum or as elective studies. These are agreed upon already before the exchange takes place.

There is co-operation with the association of veterinary students, and, for example, in autumn 2009, a common evening will be held for all students in order to inform them of various opportunities for studying abroad.

Table 13. Number of incoming and outgoing exchange students

	Incoming	Outgoing
2008	19	4
2007	22	4

The Faculty has integrated international affairs into the normal plan of work and into daily activities. Since May 2009, the Faculty has had a full-time planning officer for international affairs; for the past couple of years, the position had been run only part-time. The tasks of the planning officer include:

- bilateral agreements with partner universities
- promotion of international mobility
- co-ordination of Erasmus and Nordplus mobility programmes
- managing of the Faculty's international relations
- co-ordinating the legalisation of foreign veterinary degrees
- daily routines of the NOVA co-operative network
- co-operation with student organisations and other interest groups in international affairs
- organising international meetings and seminars

International partner institutions

International mobility is an important aspect of international education. The Faculty is participating in the European Union's Life-long Learning Programme through the Erasmus programme (an exchange and placement programme). The Faculty has Erasmus partners in 12 countries (a total of 14 institutions). Additionally, two agreements are in process with Liverpool (Great Britain) and Sydney (Australia). It would be very important to increase the number of English-speaking partner institutions and several agreements that have been lapsed previously will likely be renewed. The Faculty also has plans to contact new universities for Erasmus agreements.

The Faculty's Nordplus partners (seven countries, a total of ten institutions) are largely the same as in Erasmus.

International postgraduate students

There were 13 international postgraduate students studying at the Faculty in 2007. This is more than the University had set as a target number (ten). There are also approximately 20 students acquiring the qualifications required to work as a licensed veterinarian in Finland. These students have a foreign degree and are completing the qualifications in order to obtain a license to work as a veterinarian. Many staff veterinarians are also undertaking studies and training in foreign universities under European specialist training.

NOVA network

The Faculty is a member of the Nordic co-operative network for forestry, veterinary and agricultural universities and faculties (NOVA) comprising altogether nine member universities. Co-operation with the Baltic BOVA network is strong as well. NOVA is governed by a board consisting of rectors and deans from member institutions and one student representative. NOVA-KUF is another network in which members are responsible for the prioritising of NOVA-sponsored projects, supervise the progress and evaluate the results. The local co-ordinator is responsible for contacts

between member institutions and the NOVA secretariat. The Faculty has representatives both on the NOVA board and in NOVA-KUF. The Faculty is a member of some field-specific NOVA networks active in arranging courses for participants from the Nordic and Baltic countries.

The Faculty has a local NOVA team that regularly handles NOVA issues. Additionally, a NOVA Blog for distributing information has been established on the Faculty's home page. The NOVA network and courses arranged by it play an important role in supporting the teaching resources of the Faculty.

There is an agreement between veterinary faculties in the Nordic countries regarding what are known as so-called NOVA "windows" for undergraduate students in August and in January (two weeks each) that are free from obligatory training in the parent country so that it is possible to arrange voluntary courses on an international basis. Thus far, this resource has seen limited use. Grants for travel and accommodation expenses for are available to participating students. Nordic co-operation could also be enhanced by simplifying the acceptance of studies between countries.

Internationalisation of teachers and researchers

The internationalisation of staff members is to a great extent related to their research, where international networks, contacts and visits of varying length are a necessity. In addition to Nordic co-operation, many doctoral students have supervisors from other countries. The FiDiPro professorship at the Department of Basic Veterinary Sciences has intensified its international activities. Researchers and professors of the Faculty give presentations outside Finland, and the Faculty also welcomes many top-level researchers as guests annually. Recently, the departments have also hosted several international conferences and courses (e.g. on food control research, the molecular epidemiology of the *Clostridium botulinum* food poisoning bacterium, veterinary anaesthesiology, and mastitis research). Nordic research courses and conferences have been organised co-operatively in microbiology, infection pathology and parasitology.

Several staff members are also active members in various international societies and associations, and contribute to international postgraduate training (see also Section 2.3). For example, the Department of Basic Veterinary Medicine has twice organised and hosted a large two-week training course for the European College of Veterinary Pathology. Both times, the "ECVP/ESVP Summer School" drew nearly 100 students from over 20 different countries (Kipar et al., 2007a,b).

Additionally, some professors and other teachers of the Faculty have been involved in the international evaluation of other faculties by EAEVE.

Chapter 10. ASSESSMENT OF COOPERATION WITH STAKEHOLDERS AND SOCIETY (AP 12)

The Faculty publishes an Annual Review ([Appendix 10](#)) in which one can find accurate information about the achievements of the past year, the statistics of students and studies, and highlights of the year. There are also assessments of how expectations were met during the year reviewed. The Annual Review is published in paper and on the webpage of the Faculty. The University's webpage contains statistics about the budget, resources and students faculty by faculty. The University's Career Services regularly publishes the employment destinations of former master (licentiate) and doctoral students from every Faculty.

The webpage of the Faculty regularly shares short news about different aspects of studying at the Faculty (for example the beginning of the academic year, courses, graduation etc.). Comprehensive statistics on the Faculty's student admission are also published there.

The Faculty takes part in several expositions on an annual basis. At the UniExpo, different fields of studies are presented to Finnish high school students. At the StudiaExpo, the Faculty is presented to anyone studying in a high school or vocational school. The Faculty also has its own stand at the Agricultural Fair (Farmer Exposition) open to all the public, in order to present its recent research and to attract new students. The students of the Faculty also visit upper secondary schools (high schools) where they present their studies in order to attract new students.

The Veterinary Teaching Hospital plays a major part in the Faculty's co-operation with stakeholders and society. Its societal interaction is versatile. In addition to its clientele covering the whole of Finland, it plays a significant role as a national expert organisation of veterinary medicine and as a partner of several national and international actors.

In autumn 2009, the Veterinary Teaching Hospital will open its doors to all the public via a national television show consisting of 40 episodes. The show represents the real life of the Veterinary Teaching Hospital, as well as the daily lives of the students.

The Faculty has had its own communications officer since autumn 2008, which has greatly improved the production and targeting of information and co-operation with several actors. The Faculty has also drawn up a communications plan. The impact of this is evident in the greater number of visitors to the Faculty's webpages as well as in the general visibility of the Faculty both in media and in society as a whole.

The focus on the communication is to promote research. As part of the University of Helsinki, all education is based on research. In promoting the highlights of research (e.g., doctoral theses), the Faculty also promotes its high-level education. Additionally, the Faculty has partially financed a follow-up study on the performance of ABS Graduates later in working life.

The Finnish Veterinary Journal (Suomen Eläinlääkärilehti), published by the Finnish Veterinary Association, regularly shares short news items about the Faculty, such as about the festive diploma conferment ceremony. The new, two-tier degree system was also presented in the Journal in 2008. Students entering the Faculty commonly join the Finnish Veterinary Association in the beginning of their studies. Keeping in close interaction with the Association, the Faculty also maintains connection with its former students (alumni).

The alumni association and communication with former students is, at the moment, about to begin. The University of Helsinki does not have a strong tradition of alumni activity. The Faculties on the Viikki Campus have begun an alumni project as an alliance, a planning officer has been involved in the project since autumn 2008. Currently, there are plans to use of alumni in supporting first-year undergraduate students (Haarala-Muhonen et al., 2009). It is possible for former students to join the alumni network via the University's webpages. The Faculty meets its alumni in the Annual Veterinary Meeting, a two-to-three day exposition to which all the veterinarians in Finland

are welcomed. The alumni also receive a newsletter from the University and the Faculty four times a year.

The Faculty assesses the quality of co-operation with stakeholders and society using with several indicators in different areas as follows:

- Co-operation with research institutes. Indicator: the number of co-operation partners and activities
- Activating the amount of research and study co-operation with the business community. Indicators: the number of licentiate degrees, co-operation projects, the quantity and value of chargeable services and the satisfaction of the needs of the working life
- Continuing education. Indicator: the number of occasions of continuing education
- The functioning of the Veterinary Teaching Hospital. Indicators: visibility, public image and feedback, the number of patients, adherence to the budget
- Participating in expert activities. Indicator: statements shared with ministries, parliament, public administration and the business community
- Meeting the expectations of working life. Indicator: research on employment destinations.

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