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**Policy paper on veterinary education  
Federation of Veterinarians of Europe – FVE****Summary**

The Federation of Veterinarians of Europe (FVE) aims for high quality science based veterinary education at both pre- and post-graduate level to ensure that veterinarians are equipped to do the best job possible. The minimum qualifications for mutual recognition of veterinary professional qualifications between the Member States (MS) in the European Union (EU) are laid down in Directives 2005/36/EC and 2013/55/EU. FVE and the European Association of Establishments for Veterinary Education (EAEVE) are, in cooperation, running the European System of Evaluation of Veterinary Training (ESEVT; [www.eaeve.org](http://www.eaeve.org)) based on the Directives but complemented with quality criteria and with an accreditation step. Accreditation is necessary for the quality assurance of veterinary competence. Not all veterinary programmes in Europe are complying with the minimum standards in the Directives, which is of serious concern. The EU ought to ensure that graduates from these faculties are excluded from the right to practice in other MS.

The veterinary profession is important for the protection of social interests and thus is a regulated profession. Major veterinary responsibilities lie in diagnostics, treatment, prevention and control of animal diseases - with special emphasis on zoonoses and notifiable infectious animal diseases both at the individual animal and herd level, as well as in food safety control.

At the time of graduation, the recent veterinarian must have the basic competences to perform in an independent and responsible way the duties expected of the veterinary profession. The minimum day-one competences must primarily consider the skills with special significance for animal and human safety. With the global challenges of today, among which many are reflected in the "One Health" concept, the competences should also include a global perspective. To identify these competences requires a good insight into the profession which is why education must be under veterinary control.

Veterinary training should consist of at least five years of full-time education, based on scientific foundations and proven experience. The faculties should, in principal, have in-house facilities for education and research in all subjects of the core curriculum in order to provide the students with a sound university environment and a natural link between education and science. Scientific development of veterinary medicine is a fundamental quality aspect of the educational institutions. Extra-mural training is complementary, and cannot replace faculty training.

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A five years common undergraduate education should be regarded as the minimum to obtain the essential basic competences required to practice within the veterinary profession upon graduation. The undergraduate training cannot provide any specialized competence. Differentiation towards the end of the curriculum into a number of orientations among which the student can choose only one, may give a little deeper training in one track, but at the expense of the necessary training in all the others. It would be jeopardizing that all students can obtain the necessary animal species width of essential skills and required competence at graduation.

The common core curriculum constitutes a shrinking part of education considering that time is furthermore allocated to two degrees, Bachelor and Master. Tracking, electives and thesis work should not reduce the common five years training for more than approximately one semester.

The undergraduate education provides the basic competence of a veterinary surgeon. Society requires a far higher level of veterinary competence, which is achieved by post graduate training. This emphasizes the necessity of continuing professional development (CPD) to ensure the quality in veterinary services, and of training the undergraduate students for life-long learning. The veterinary profession must be able to develop the science of veterinary medicine, incorporate new scientific knowledge in practice and meet new demands of professional competence. This requires regular CPD and systems for specialisation at different levels and for all veterinary competences, clinical as well as non-clinical including also veterinarians working in public veterinary services.

FVE supports the common European specialisation system run by the European Board of Veterinary Specialization (EBVS), which produce highly specialized experts. Additionally, there is a need for advanced knowledge and competence at animal species level which already exists in many countries. FVE wants to see a harmonisation of CPD credits and specialisation systems in Europe to facilitate the mutual recognition of National qualifications.

## **Introduction**

FVE, is working for high quality science based veterinary education by influencing the content of pre- and post-graduate veterinary training to ensure veterinarians are equipped to do the best job possible. A thorough undergraduate education of high quality and continued life-long learning forms the basis for a qualified and well-functioning veterinary service.

FVE and EAEVE are, in cooperation, running the European System of Evaluation of Veterinary Training (ESEVT). Furthermore, FVE has together with EAEVE and EBVS formed a joint platform with the aim to promote the quality of veterinary education at all levels; the European Coordinating Committee for Veterinary Training (ECCVT).

The EU system of mutual recognition of professional qualifications between Member States (MS) is based on Directives 2005/36/EC and 2013/55/EU (hereinafter called the Directives). It provides for automatic recognition of veterinary qualifications if the National education fulfils the minimum requirements for veterinary training laid down in the Directives - and thereby the right to practice the profession in any MS.

FVE points out the lack of a clear basis for a standard in undergraduate veterinary training in the current regulatory framework. Although a list of subjects has been included in Annex V of Directive 2005/36/EC, this cannot be considered enough for the education of future veterinarians.

Based on the requirements of the EU Directives, ESEVT has established quality criteria for veterinary education and developed the required skills and competences into the more specific 'day-one competences'. ESEVT also includes a system of accreditation.

The content and objectives of the Directives and the recommendations by ESEVT is in detail described in the "Principles and Process of Evaluation and Manual of Standard Operating Procedures" ([www.eaeve.org](http://www.eaeve.org)).

## **Vision**

The vision of FVE is an equally high quality of veterinary undergraduate education throughout Europe based on an accreditation system mandatory for all veterinary educational establishments (hereinafter called faculties), complemented with continued professional development of all veterinary surgeons on a regular basis, with a harmonized European credit and qualification system.

## **Responsibilities of the veterinary profession**

Veterinarians are professionals, specifically trained, authorized and mandated by the competent authority, to care for the health and welfare of animals. Veterinary medicine is practiced in a personal, responsible and professionally independent capacity.

The veterinary profession is important for the protection of societal interests and is therefore a regulated profession, supervised by the National competent authorities.

Veterinary competence is no longer a National concern. It plays an important role in tackling significant global challenges such as infectious diseases, antibiotic resistance, food security, climate, environment, and sustainable animal production in order to protect public interests. The "One Health" concept is a worldwide strategy in handling these global threats

based on the strong link between human and animal health, and environmental soundness. It has led to a demand for a new global dimension in all veterinary competence, particularly veterinary public health. Awareness of the global situation and competence in global transmissible diseases is becoming increasingly important in all veterinary services. The global dimension of veterinary competence should be considered in veterinary education in order to provide an elementary competence upon graduation. This will not be particularly emphasised under each head line in this document, but is considered a natural aspect in modern basic veterinary competence.

The veterinary role is based on the in-depth training in science and comparative medicine, as well as specific acquisition of veterinary knowledge, skills and attitudes. When considering the requirements for veterinary education, it is important to bear in mind the major responsibilities of the profession. These include:

- Recognition, treatment, prevention and control of known and emerging infectious diseases of animals that may significantly impact humans or animals – at the individual animal and herd level, as well as in food safety control and veterinary public health at large.
- Oversight, protection and promotion of animal health and welfare together with public health through implementation of policies and practices related to animal keeping, food animal production, international movement of animals and animal products, zoonotic diseases and food safety.
- Advancement of human and animal health through contributions to biomedical and comparative medical research.
- Promotion and development of responsible environmental and eco-system health practices, including conservation of nature.

At the time of graduation, veterinarians must have the basic competence across all common domestic animal species and in veterinary public health to perform - in an independent and responsible way - appropriate entry-level tasks and duties conferred upon and taken on by the veterinary profession. The *minimum* requirements for veterinary training must primarily meet the need of competence with special significance for animal and human safety. This includes also the international context of animal health and the “One Health” concept.

## **The modern veterinary surgeon**

Veterinary service in all fields is getting increasingly specialized and all veterinary surgeons today must acquire a deeper and more specialized competence than previously. Veterinary competence must also to a higher extent be available in growing disciplines of veterinary science – such as animal welfare, ethology, environment, aquatic and exotic animals and related to the “One Health” concept - which have emerged mainly as a result of changing conditions and attitudes in Society.

The field of veterinary public health is getting more important. Veterinary surgeons are to some extent the guardians to human health as it relates to zoonoses. The recently experienced zoonotic pandemics with avian and swine influenza virus has increased the awareness of such threats. The globalization, where a new virus is only a flight away, requires veterinarians in general to be more updated on exotic diseases and the risk of global transmission.

Animal owners and consumers expect a deep and specialized veterinary competence in most areas. The companion and sport animals have become increasingly important in

peoples life. There is a growing demand for animal medical care and for more advanced diagnostics, therapy and treatments. This is leading to larger clinics and less one-man practices. Regarding farm animals more emphasis on prevention of disease and health support has become necessary, not least to tackle the emerging threat of increasing antimicrobial resistance.

In general, employers and the public are often requiring greater personality skills of professionals, such as good communication, “emotional competence” and an ability to work as part of a team. The veterinarian is no exception. The young generation is probably prepared to meet the new needs. They are brought up in a Society where these qualities are emphasized as significant.

Men and women are obtaining more equal working conditions with career breaks and part-time work for child rearing being shared, rather than as the prerogative of the woman. Young people’s approach to life will probably result in more part-time work, in order to make time available to develop their personal interests.

## **Evaluation and accreditation of veterinary education**

Veterinary educational programmes in the EU should be subjected to reliable objective evaluation in order to ensure that they meet at least, the minimum requirements laid down in the Directives. The evaluation should emphasize the outcome in terms of competences. For quality assurance, an accreditation system is necessary to ensure that educational programmes meet high standards and strive for continuous improvement in quality.

Today, all veterinary training programmes are not complying with the Directives, which is of serious concern. Although education is the responsibility of each MS, the EU sets the rules for the free movement of professionals in the community and is thus responsible for its consequences to the public. Therefore, EU ought to ensure that graduates from faculties that do not fulfil the stipulated requirements in the Directives are excluded from the right to practice their veterinary profession in other MS.

FVE finds the current two-stage system for approval and accreditation of veterinary faculties in Europe (ESEVT) effective. The first stage provides approval that the veterinary training provided by the Faculty conforms with the minimum standards of the Directives. The second stage provides accreditation that the Faculty is following appropriate academic standards and providing learning opportunities of acceptable quality, monitored by sustainable systems for *quality assurance*. Furthermore, common international accreditation standards are being developed in order to obtain comparability and consistency of standards across Europe, North America and Australasia, an aspect that ought to be considered in the European evaluation system.

## **Minimum requirements for veterinary education**

Directive 2013/55/EU states the minimum requirements for veterinary education in the EU: *“The training of veterinary surgeons shall comprise a total of at least five years of full-time theoretical and practical study, which may in addition be expressed with the equivalent ECTS credits, at a university or at a higher institute providing training recognized as being of an equivalent level, or under the supervision of a university, covering at least the study programme referred to in point 5.4.1 of Annex V (Article 38).”*

The five years undergraduate education must lead to a basic competence across all animal species and in veterinary public health for all graduates to enable them to practice the

veterinary profession at a core competency level. Many veterinary faculties lack sufficient resources to deliver an acceptable education. This is jeopardizing the ability of newly qualified veterinary graduates to fulfil their professional responsibilities to protect the safety of animals, people and Society.

All veterinary faculties must have the appropriate physical, administrative, managerial, and financial infrastructure necessary to support high quality veterinary training.

The outcome of the training should match the responsibilities of the profession, with the study programme giving a thorough understanding of the profession. Therefore, the design and accomplishment of the training must be under the control of staff with veterinary competence. The programme should be delivered by one educational establishment (faculty) specifically established for that purpose.

Practicing veterinary medicine must be based on science and forms the basis for continuing professional development (CPD). Scientific development of veterinary medicine is a fundamental quality aspect of the faculties. They should, in principal, have in-house facilities for education and research in all subjects of the core curriculum to provide the students a sound university environment and a natural link between education and science. This does not exclude that collaborative arrangements between faculties on contractual basis and other external resources may be used to complement the in-house facilities and faculty training, on condition that the quality is under full control of the Faculty.

- The five years undergraduate education must lead to a basic competence across all animal species and in veterinary public health for all graduates, to enable them to practice the veterinary profession independently at an entry-level.
- Veterinary education should be undertaken by a faculty, specifically established for that purpose.
- The faculty should, in principal, have in-house facilities for education and research in all subjects of the core curriculum to provide students a natural link between education and science.
- Extra-mural training is complementary, and cannot be used to replace in-faculty training.
- The development of the curriculum and the co-ordination of the instruction shall be under the control of veterinary members of staff.
- Veterinary education should be based on scientific grounds and proven experience and provide students with adequate learning opportunities thereby laying the basis for life-long learning.
- There must be an objective system for evaluation of the quality of the training provided and the skills of the graduates.
- In order to ensure that the veterinary training meets the basic needs of Society and the profession, the organisational structure should allow input not only from educators and students but also from stakeholders like the profession, organisations and authorities in the veterinary sector and the public.

## **The veterinary curriculum**

The Directives state that a veterinary study programme shall include at least a number of subjects listed in Annex V, 5.4.1. of Directive 2005/36/EC. The list was set up 1978 and has never been revised according to scientific, technical and societal development. An up-date and modernisation is necessary. After the revision of Directive 2005/36/EC the up-dating

process of Annex V has been simplified under the procedure of delegated acts, a process where FVE will take action on this issue.

As a professional training a veterinary study programme should focus on the outcome in terms of skills and competences. Veterinary training shall provide an assurance that the professionals have acquired the competencies required “to enable the veterinary surgeons to perform all their duties” (Dir 2005/36/EC, Annex V). Minimum knowledge and skills are listed in Article 38 of Dir 2013/55/EU. These have been interpreted and translated into more specific day-one competences by ESEVT.

Veterinary education includes many different subjects where the understanding of one subject is dependent on the content, order and instruction in others. The training must be delivered in a cohesive concept regarding both structure and content.

The Directive further states that veterinary education “*shall comprise a total of at least five years of full-time*” study. The five-year study programme should be regarded as the minimum to provide the essential basic competences across all common domestic animal species needed to practice the veterinary profession at entry-level. The undergraduate education cannot in any aspect provide the specialized competences expected by Society. The necessary development of the competences and specialisation has to take place after graduation. To provide some elective elements in the curriculum is, however, important to give the students some freedom of choice to develop their individual interests and to motivate and stimulate learning. Modernisation of the curriculum and introducing new learning technologies should be encouraged.

Today, differentiation (“tracking”) of the curriculum is commonly applied in veterinary training. A part of the study time is split into different, usually animal species based, orientations of which the student can choose (or is given) only one. This reduces the training for all students in all tracks except one. It may give a little deeper training in one orientation but at the expense of the necessary training in all the others which jeopardizes that all students can obtain the necessary animal species width of essential skills at graduation. The common curriculum is furthermore reduced by time allocated to obtaining two degree theses, Bachelor and Master, if the Bologna process is applied, comprising approximately one and a half semesters. Thesis work is an important training to achieve general competences but it is doubtful if the benefits justify that so much time is taken from the basic core curriculum of a professional education. Differentiation, electives and degree theses should, in principal, not comprise more than approximately one semester of a five years veterinary study programme. The duration aspect of the core curriculum is pertinent because gaining practical experience and developing practical skills (“day-one competences”) which are important outcomes of the veterinary education require time.

The clinical competence is the basis for veterinary work in most areas including non-clinical jobs. Furthermore, a majority of all veterinarians are working as clinicians. Therefore, a clinical focus is expected to be maintained throughout the entire veterinary study programme and the quality of clinical training is essential.

- A common five-year full-time study programme should be regarded as the minimum period to provide the necessary width of essential basic competences all students must have acquired at graduation.
- Differentiation, electives and degree thesis should, in principal, not comprise more than approximately one semester of a five years veterinary study programme.
- Clinical training constitutes the core of the veterinary education and must cover all the listed subjects across all common, domestic animal species.

- It is doubtful if the benefits of two degree theses, at Bachelor and Master level, justify the amount of time taken from the basic core curriculum of a professional education.
- Quality of education implies training of the students for life-long learning. Completion of the undergraduate veterinary education should be considered as a starting competence. In depth competence and specialisation must be acquired after graduation.

### ***The Bologna Declaration and veterinary education***

The overall objective of the Bologna Declaration was to facilitate free movement of students and teachers in Europe by establishment of easily comparable credits and degrees. These objectives were fulfilled regarding veterinary education prior to any application of the Bologna Declaration, which appears not to have meant any improvement in mobility.

Veterinary education has long since been regulated within the EU to be compatible over Europe with harmonized content, structure and outcome of the studies and a system for automatic recognition of the professional qualifications. There are no indications that the mobility of veterinary students has increased after the introduction of the Bologna Process.

The two-cycle structure with a Bachelor and a Master degree was not developed with professional education programmes in mind and has not resulted in obvious advantages for veterinary education. Veterinary education is focused on the professional veterinarian - not primarily an academic degree. The new structure and introduction of the academic degrees together with the professional one, where the Master is corresponding to the professional degree of the Veterinary Surgeon, has in parts caused confusion and obscurities. A two degree theses in a professional education can be questioned especially considering how overloaded the veterinary core curriculum is.

- There is no obvious advantage of a two-tier structure with two academic degrees according to the Bologna Process in veterinary education, but possibly certain drawbacks.
- The intermediate Bachelor is an artificial solely academic qualification for which it is difficult to see any particular competitive value either for employment or for further studies to a Master in another subject.

### **Day-one competences**

Adequacy of the curriculum content should be assessed by objective outcomes both during and at the conclusion of the veterinary educational programme. The outcome should be translated into competences of the graduate, i.e. not only what the graduate should know and understand, but what the graduate should be able to do. This is emphasised in Directive 2013/55/EU where the veterinary day-one competence in principal is expressed as “skills and competences”.

At the time of graduation, veterinarians must have the basic scientific knowledge, skills, and values to be a full member of the veterinary profession, and to perform - in an independent and responsible way - appropriate entry-level tasks and duties conferred upon and taken on by the veterinary profession, in the interest of animal health, animal welfare, public health, and societal needs.

Directive 2005/36/EC, Annex V states that the training shall “enable veterinary surgeons to perform **all** their duties” and further Directive 2013/55/EU, Article 38 that “Training as a

veterinary surgeon **shall provide an assurance** that the person in question has acquired the following knowledge and skills:

- (a) *adequate knowledge of the sciences on which the activities of a veterinary surgeon are based and of the Union law relating to those activities;*
- (b) *adequate knowledge of the structure, functions, behaviour and physiological needs of animals, as well as the skills and competences needed for their husbandry, feeding, welfare, reproduction and hygiene in general;*
- (c) *the clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of the diseases of animals, including anaesthesia, aseptic surgery and painless death, whether considered individually or in groups, including specific knowledge of the diseases which may be transmitted to humans;*
- (d) *adequate knowledge, skills and competences for preventive medicine, including competences relating to inquiries and certification;*
- (e) *adequate knowledge of the hygiene and technology involved in the production, manufacture and putting into circulation of animal feedstuffs or foodstuffs of animal origin intended for human consumption, including the skills and competences required to understand and explain good practice in this regard;*
- (f) *the knowledge, skills and competences required for the responsible and sensible use of veterinary medicinal products, in order to treat the animals and to ensure the safety of the food chain and the protection of the environment.*

A veterinary surgeon additionally ought to possess:

- Ability to communicate with clients, colleagues, and staff effectively.
- Ability to work within the diverse disciplines that comprise veterinary medicine in accordance with appropriate professional codes of ethics and conduct.
- Adequate understanding of the role of research in furthering the practice of veterinary medicine and the need for life-long learning to ensure currency of knowledge and skills.
- Adequate understanding of the international context of the veterinary sector, e.g. the commitments of a country regarding notifiable animal diseases.
- Elementary knowledge of the organization and management of a veterinary practice.

In Annex IV of the ESEVT SOP, the above mentioned and other essential competences have been further specified and expressed in terms of knowledge and understanding, ability to apply or ability to undertake. The day-one competences should not comprise only specific veterinary skills but include three areas:

- General professional skills and attributes
- Underpinning knowledge and understanding
- Practically-based veterinary competences

The complete “List of recommended essential competences at graduation: “Day-one skills” of the ESEVT can be found in [Enclosure 1](#). This should be a living document and FVE believes it is time for a revision.

## **Continuing Professional Development**

A thorough undergraduate education of high quality shall be considered as the starting competence as a veterinary surgeon. Society is expecting and needs a far higher level of veterinary competence than the undergraduate education can provide. This emphasizes the necessity of post graduate professional development to ensure the quality in veterinary services, and the importance of training the undergraduate students for life-long learning. The veterinary profession must be able to develop the science of veterinary medicine, incorporate new scientific knowledge in practice and adapt to the changing needs of society in order to meet the increasing demands of professional competency. There is a need for regular continuing professional development (CPD) provided by single courses as well as systems of specialization at different levels.

Harmonized, easily understood and comparable National CPD credits and systems for specialisation in Europe would facilitate veterinary surgeons to seek further education of the highest quality, whether it is arranged in the home country or abroad. This would broaden the scope of further education, available for each veterinary surgeon. Thus, FVE is in favour of a European harmonisation of CPD credits and systems for all veterinary competences, clinical as well as non-clinical including also veterinarians working in public veterinary services.

FVE supports the common European specialisation system at subject or species level (leading to the title Diplomate) already existing under the European Board of Veterinary Specialisation (EBVS). The demand for specialists at the level represented by the EBVS is still, quantitatively, not very high, although indispensable when needed.

Advanced competence at animal species level is requested more or less regularly and such qualification systems exist at National level in many member states. This serves as an important guidance for the public, that the veterinarian in question has acquired a certain level of competence. FVE has recognized that there might be a need for a common European recommendation of the content and outcome of CPD systems to enable mutual recognition of the National qualifications. The federation is engaged in the Veterinary Continuing Education in Europe (VETCEE), which has the aim to develop a standard, for structured continuing professional development and mutual recognition across Europe.

Like undergraduate education, CPD should define the content and structure with the aims and the goals intended to be achieved. The outcomes should preferably consider competences of the participant after completion of the education, not only knowledge. A quality assurance system ought to be applied also in continuing education.

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