



Veterinary Continuous Education in Europe
International non-profit association

Competences for
VETCEE accredited equine programs

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Approved by
The VETCEE Board

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Introduction and goal of document

The aim of this document is to provide minimum standards that should be met by national postgraduate programs, which are intended to certify high level of knowledge, skills and competences in equine veterinary practice.

The level of competences is set at EQF Level 7, higher than graduation level, but lower than European Diplomate Specialist Boards, as from the standards and dossier of competences created by the VetCEE Board.

It is anticipated that programs meeting the standards and having been accredited by VetCEE will step into mutual recognition. It is also expected that ECTS-credits (European Credit Transfer and Accumulation System Credits) be mutually acknowledged among programs (i.e. accredited courses in any given subject with a certain ECTS delivered by an Institution of a member State will be accepted as sufficient training in the same subject with equivalent ECTS by any national body awarding a postgraduate certificate in equine practice in all member States).

This document applies for programs applying for VetCEE accreditation as equine general (general practice) program. A series of competences, classified as core competences, must be met by all applying programs. These are outlined in detail in the present document. If special interest will arise in one of the fields or core competences described in the present guidelines, more specific guidelines for competences maybe created.

Before starting postgraduate training programs, veterinary surgeons should work in general equine practice for at least one year after graduation. Programs should be based on modules which can be combined individually and can be taken on student convenience **within three to five years**.

Global learning time recommended for all programs is 30 ECTS. Program providers are encouraged to use a variety of teaching methods in order to address the different learning styles; these include direct teaching, practical teaching, self-directed learning, case logs and assignments.

Core competence 1:

Professional key skills

It is intended to provide candidates with general key skills expected from experienced equine practitioner who may be in sole charge or responsible within a group of practitioners in the delivery of high quality first opinion clinical care:

Main topics:

This module should include the following topics:

1. Welfare and Ethics
2. Personal development
3. Keeping of records
4. Knowledge on safe and correct disposal of sanitary waste, effective infection control and prophylactic treatments
5. Thorough knowledge* on relevant legislation, with special emphasis on legal implication of commonly performed services by equine practitioners including horse transportation. This will incorporate knowledge of legislation concerning drug accessibility and usage, peculiar status of the horse as food-producing vs. non food-producing species, end of life and safeguard of food chain.
6. Health and safety

(*as relevant to the country of origin or the program with an overview in the European context.)

Performance criteria and scope:

The level of competence acquired should be consistent with that required for a high quality first opinion equine practitioner. Candidates should be aware of welfare and ethical issues relevant to equine husbandry both when attending at the stable or in a practice/hospital facility.

The principles and purpose of accurate record keeping, retrospective data evaluation and professional reports creation should be taught and demonstrated

through verification of practical experience and skills. Awareness and practical knowledge, including ethics, in the following should be mastered

- (1) implementing compliance to national requirements for the safe handling and disposal of relevant hazardous waste
- (2) responsible use of antimicrobials
- (3) prepurchase examination of horses and relative legislation
- (4) regulation in the services equine practitioners provide to national and international breeding associations, national and international equestrian federations, racing authorities and insurance companies.

Practice business skills in the areas outlined above to a level that may be required by a senior clinician in sole charge of a practice or a group of practitioners to a level that allows delivery of high quality veterinary care in a private clinic environment.

Quantum: ECTS 1

Core competence 2:

Clinical management and communications

Communication skills to owners, staff and colleagues are an essential component of high quality equine practice. Overall management of clinical cases includes both management of the case within the first opinion practice and during and after referral where specialist input is indicated.

Main topics:

This unit includes the following areas:

- 1.Reveal an understanding of the principles of good case management and client and/or colleague communication. Provision for practical training in communication is highly encouraged
- 2.Demonstrate a knowledge of the communication issues that arise when offering referral for specialist investigation and treatment continuity in case management

Performance criteria and scope:

Communication with the client should be emphasized. Key communications

skills should include those required to obtain a comprehensive clinical history, to report treatment plans and results and to handle difficult situations such as euthanasia, loss of a horse and complaints.

Emphasis should be given to the management and communication in scenarios such as those arising at equestrian/racing events in the presence of an audience or several attendees. Communications skills should be mastered in order to promote good team work, delegate tasks, constructively criticize and praise. Presentation skills can be limited to that required in staff training.

Quantum: ECTS 1,5

Core competence 3:

Analgesia and anesthesia

In first opinion practice competence in basic anesthesia and analgesia is essential. This unit will cover the knowledge and skills required to undertake regional and general anesthesia for diagnostic and interventional procedures, as well as for emergency and general surgery. Practical knowledge of pain control is included in this module.

Main topics:

General and practical knowledge of the following will be mastered:

1. Regional anesthesia of the limbs and head, distal limb intrarticular and caudal epidural anesthesia.
2. Intravenous general anesthesia, indication and contraindications of different protocols.
3. Analgesia and pain control
4. Pre and postoperative care
5. Euthanasia
6. Basic knowledge of inhalation anesthesia and intraoperative monitoring.

Performance criteria and scope:

Knowledge on how to perform common regional, intrarticular and intravenous general anesthesia, evaluating patient risk assessment and choice of appropriate protocol. Theoretical and practical knowledge on restraint and administration of commonly used sedative combinations for diagnostic and minor invasive procedures. Pre-medication to general anesthesia. Theoretical and practical knowledge of induction and maintenance of general anesthesia consistent with field practice. Anesthetic monitoring and resuscitation techniques. Pre-surgical and post-surgical care and pain control. Care of common post-anesthetic complications. Safety measures for staff and clients.

Performing state of the art elective and emergency euthanasia.

Quantum: ECTS 2,5

Core competence 4:

Emergency and supportive care

Medical and surgical emergency requires immediate attention and must be handled proficiently by a competent equine veterinarian. Immediate intervention, stabilization, further evaluation and need for referral for specialist care should be addressed.

Main Topics:

1. Administering emergency and non-specialist intensive care
2. Familiarity with principles and practice of fluid therapy, limb immobilization, preparation for transport and safety of staff and caretakers

Performance criteria and scope:

All emergencies encountered in first opinion practice must be included, e.g. colic, acute trauma, laminitis, synovial sepsis, acute respiratory distress, hemorrhage, acute toxin ingestion, seizures, hypovolaemic and toxemic/septic shock, breeding and neonatal emergencies. Diagnostic and practical first aid skills required to stabilize and where necessary treat the patient are to be included.

Quantum: ECTS 2,5

Core competence 5:

Diagnostic imaging

This unit aims to provide candidates with adequate diagnostic imaging skills to select the appropriate imaging modality required to assess a case, and to use first level imaging techniques so that cases can be diagnosed and treated in a first opinion setting or, alternatively, referred for specialist evaluation and second level imaging modality.

Main topics:

to provide knowledge and practical skills in undertaking and interpreting:

1. plain radiographic exam performed with a portable equipment
2. ultrasonographic exam of the reproductive tract and distal limb (metacarpal/tarsal and pastern regions)
3. basic endoscopy of the upper respiratory tract

Also, to provide basic knowledge and understanding the indications of second level imaging modalities such as CT, MRI and nuclear-scintigraphy.

Performance criteria and scope:

Practical skills required for routine radiology (including radiation safety), diagnostic ultrasonography and endoscopy of the above described regions; for other regions, contrast radiography and second level imaging techniques, basic theoretical knowledge is necessary to make appropriate decision for referral.

Adequate competence in reporting first level imaging modalities (namely radiography and ultrasonography) should be mastered.

Quantum: ECTS 2,5

Core competence 6:

Internal medicine

An experienced first opinion equine practitioner should be able to conduct a thorough clinical exam, necessary to evaluate a horse presented with a medical disorder, for regular health maintenance, or during a prepurchase exam. He/she should be familiar with diagnosis and treatment of the most common equine medical disorders.

Main topics:

Health maintenance including in-depth knowledge of prevention and diagnosis of common equine infectious diseases (with reference of exotic infectious diseases and their legal and transport implications) and conditions caused by parasites.

Basic pharmacology notions. Class of drugs with particular reference to clinical use and contraindications. General antimicrobial therapy principles. Awareness of antimicrobial resistance, critically important antibiotics and multi resistant bacteria.

Diagnosis and medical treatment of abdominal pain and diarrhea, with special emphasis on stabilization and decision process for referral.

Recognition, evaluation and treatment on a field setting on complications of gastrointestinal disorders, including laminitis, chronic colic, chronic weight loss.

Recognition of urinary problem and performance of basic diagnostic in the urinary tract with special emphasis on the clinical signs of polyuria, dysuria and hematuria.

Diagnosis and treatment of common upper and lower respiratory tract conditions. Knowledge and indication of selected diagnostic and imaging modalities of the respiratory tract, with particular reference to endoscopy of common disorders

Diagnosis and medical treatment of common cardiovascular and haematological system conditions. Knowledge and indication of selected diagnostic and imaging

modalities of the cardiovascular system. Practical knowledge of EKG monitoring.

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Diagnosis and treatment of muscle disease, e.g. exertional rhabdomyolysis, polysaccharide storage myopathy (PSSM) and myopathy.

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Diagnosis and treatment of common endocrine diseases e.g. Equine Metabolic Syndrome (EMS), Pituitary Pars Intermedia Dysfunction (PPID), hyperlipemia/lipidemia and hypocalcemia. Theoretical knowledge of other endocrine diseases as Hyperkalemic Periodic Paralysis (HYPP).

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Basic neurology including e/g handling acute trauma with neurological signs ataxia, tetanus, botulism and hepatic encephalopathy. Theoretical knowledge of headshaking syndrome and viral encephalitis.

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Basic dermatology including the diagnostic methods and treatment of common dermatological disorders in horses including ectoparasitism, dermatitis, neoplasia, allergic diseases and auto-immune diseases.

Practical skills in basic ophthalmology: ocular examination, Diagnosis and medical treatment common disease in equine eye such as corneal ulcers, keratitis, uveitis, glaucoma, cataract, neoplasia, lens luxation/subluxation and entropion.

Routine dental care with recognition of abnormalities in the oral cavity.

Medical management encountered in farm medicine, including recognition of common diseases of the stallion and mare. Basic knowledge of equine neonatal medicine. Special emphasis should be given to early recognition and stabilization of the neonate before referral. Theoretical and practical knowledge in prevention and treatment of diseases in foals e/g septicemia, neonatal maladjustment syndrome (NMS) and neonatal isoerytholysis. Theoretical knowledge of congenital disorders in foals.

Performance criteria and scope:

General diagnostic principles and clinical problem solving skills. In each of the above topics the candidate should learn proficiency in assessing and diagnosing the commonly encountered diseases seen in first opinion equine practice. Knowledge and application of current treatment regimes for these diseases and

assessment of necessity of referral for specialist evaluation. It is also important to include awareness of less commonly encountered disease including non native disease and their implication on authorities report and limitation to national and international transportation.

Quantum: ECTS 5

Core competence 7:

General surgery

First opinion equine practice may involve general surgical work that can be performed in field condition and/or equine practices and theaters. A range of surgical techniques that are commonly undertaken on first opinion practice are listed in Appendix 1.

Diagnosis and pre-operative evaluation of surgical disorders together with thorough knowledge of aseptic principles, tissue handling, and basic surgical techniques. Familiarity with post-operative care and management of surgical complications is also required. The program should include adequate knowledge of surgical conditions that require referral to a specialist, including skills to recognize and stabilize these conditions prior to referral.

Main topics:

1. recognition and decision making of surgical disease; preoperative evaluation, principles of asepsis, tissue handling and basic surgical techniques
2. postoperative care, recognition and assessment of postoperative complications
3. familiarity and practical competence in a range of surgical techniques (Appendix 1)
4. Basic knowledge of advanced surgical techniques (Appendix 2)

Performance criteria and scope:

Good surgical knowledge and practical skills consistent with good first opinion general practice. Particular care is given to general surgical principles and skills applicable to all general surgery. For procedures requiring referral to specialist general knowledge as opposed to practical experience is required.

Quantum: ECTS 5

Appendix

I. Basic surgical and invasive diagnostic techniques that the candidate should be able to perform.

Wound management, surgical closure, not involving open joint or fractures, and basic grafting

Tracheostomy

Abscess drainage

Skin mass sampling and removal

Closed and open castration and inguinal cryptorchidectomy

Surgery of the caudal genital tract of the mare including Caslick's, and minor recto-vaginal tears.

Surgical management of angular deformities by periosteal transection and elevation.

Removal of uncomplicated fractures of distal II and IV metacarpal/metatarsal bones

Invasive diagnostic procedures included in the internal medicine and lameness investigation. Uterine and rectal biopsy.

II. Surgical techniques, principles and indications of which should be known to the candidate (the candidate is not required to perform these techniques).

Orthopedic surgery principles:

Tenotomy. Transphyseal fixation. Fracture repair decision making and principles of internal fixation. Common joint surgery e.g. arthroscopy

and arthrodesis

Abdominal surgery:

Indications for exploratory laparotomy and laparoscopy. Surgical disorders of the gastrointestinal tract. Placement of abdominal drains. Hernia repair techniques. Rectal tears.

Advanced wound reconstruction

Head and upper respiratory surgery:

Surgery of the upper respiratory tract. Advanced dentistry

Thoracic surgery:

Placement of thoracic drains. Thoracoscopy. Rib resection

Urogenital surgery:

Caudal and cranial urogenital mare and male surgery

Interventional medical diagnostic techniques

Kidney and liver biopsy

Neonatal surgery

Surgery of umbilical remnants, uroperitoneum

Core competence 8:

Lameness investigation and sport medicine

First opinion practice may involve the recognition and diagnosis of lameness originated in the distal limb through procedures that can be performed in field condition or basic equine practices. A range of diagnostic techniques included in the anesthesia and imaging competences are reinforced.

Basic knowledge on sports medicine diagnosis of poor performance is included. Fundamental background on clinical nutrition of the equine athlete and the equine patient in rehabilitation plans is included.

Recognition of musculoskeletal conditions that require referral to a specialist,

and ability to recognize and stabilize these conditions prior to referral either in emergency condition or as second opinion cases.

Main topics:

1. Patient preparation, handling and safety of lameness workup.
2. Lameness assessment and scoring. Assessment of abnormalities found in clinical investigation including the effect of distal limb diagnostic anaesthesia (close correlation with core competence 3)
3. Indications for intrasynovial diagnostics, including synoviocentesis for cases of suspected sepsis, and interpretation of results
4. Performing and interpreting radiographic and ultrasonographic studies described as basic in Core competence 5. Emphasis should be made on the importance of lameness and imaging findings during prepurchase examination
5. Knowledge of medical and surgical treatments available for the conditions that should be fully diagnosed by a first opinion equine practitioner (surgical procedures included in Core competence 7, Appendix 1). This should include nutritional management
6. Limb immobilization and transport of the injured horse
7. Basic knowledge and indications of advanced clinical investigation and imaging techniques available in referral practices for musculoskeletal conditions, lameness and poor performance.
8. Basic understanding of training, re-introduction to training and fitness maintenance of the equine athlete.
9. General knowledge of rehabilitation and physiotherapy of orthopedic problems encountered in first opinion practice
- 10.** Knowledge of shoeing principles, normal and corrective shoeing and communication with farriers

Performance criteria and scope:

Good theoretical and practical knowledge on recognizing lameness and ability to localize it clinically if distal to the carpus and the tarsus using clinical signs and regional anesthesia. Orthopedic assessment during prepurchase examination. Basic knowledge on the relationship of lameness and modification of training and sport activity, with special emphasis on rehabilitation and physiotherapy and corrective shoeing. Basic theoretical knowledge of musculoskeletal conditions requiring referral to specialist, either for further evaluation or treatment.

Quantum: ECTS 5

Core competence 9:

Reproduction neonatology and stud farm management

A first opinion equine practitioner offering high quality service should be able to manage basic stud farm medicine. This should include stallion, mare and foal management.

Main topics:

- Diagnosis of pregnancy and infertility of the mare. Medical management of common conditions encountered in the pregnant and infertile mare. Prevention and diagnosis of abortion.
- Evaluation and management on a field setting of the newborn foal. Health maintenance and recognition of common disorders of the growing foal.
- Diagnosis and management of common problems of the stallion including basic management of low fertility and infertility.

Knowledge of general stud management, including preventive medicine programs and familiarity with biosecurity protocols

- Knowledge, indication and experience on invasive diagnostics techniques and sampling of the urogenital tract that can be performed on a field setting. Application of the results of those diagnostics to the reproductive management.

- Demonstration of knowledge, experience and skills on rectal palpation and ultrasonographic examination of the reproductive tract of the mare. Proficiency should be demonstrated performing artificial insemination with fresh and frozen semen.
- Basic knowledge and indication for assisted reproduction techniques such as semen collection and processing, embryo collection and transfer.
- Basic knowledge of late pregnancy monitoring, including ultrasonographic assessment of the placenta and fetus

Performance criteria and scope:

General diagnostic principles and clinical problem solving skills in stud medicine. In each of the above topics the candidate should display proficiency in assessing and diagnosing the commonly encountered diseases seen in first opinion equine practice. Knowledge and application of current treatment regimes for these diseases and conditions.

Practical skills necessary for rectal palpation and ultrasonographic exam of the urogenital tract and collection of samples e/g uterine lavage, aspirates and basic biopsy techniques.

Quantum: ECTS 5

ECTS Summary

Competence No.	Description	ECTS
Core competency 1	Professional key skills	1
Core competency 2	Clinical management and communications	1,5
Core competency 3	Analgesia and anesthesia	2,5
Core competency 4	Emergency and supportive care	2,5
Core competency 5	Diagnostic imaging	2,5
Core Competence 6	Internal Medicine	5
Core Competency 7	General surgery	5
Core Competency 8	Lameness investigation and sport medicine	5
Core Competency 9	Reproduction and neonatology	5
	TOTAL	30