The Further Education and Training Awards Council (FETAC) was set up as a statutory body on 11 June 2001 by the Minister for Education and Science. Under the Qualifications (Education & Training) Act, 1999, FETAC now has responsibility for making awards previously made by NCVA.

Module Descriptor

Equine Anatomy and Physiology

Level 5  C20113

www.fetac.ie
# Level 5 Module Descriptor

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</thead>
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<td>Describes how the module functions as part of the national vocational certificate framework.</td>
</tr>
<tr>
<td><strong>Module Title</strong></td>
<td>Indicates the module content. This title appears on the learner’s certificate. It can be used to download the module from the website <a href="http://www.fetac.ie">www.fetac.ie</a>.</td>
</tr>
<tr>
<td><strong>Module Code</strong></td>
<td>An individual code is assigned to each module; a letter at the beginning denotes a vocational or general studies area under which the module is grouped and the first digit denotes its level within the national vocational certificate framework.</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Indicates where the module is placed in the national vocational certificate framework, from Level 6 to Level 6.</td>
</tr>
<tr>
<td><strong>Credit Value</strong></td>
<td>Denotes the amount of credit that a learner accumulates on achievement of the module.</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Describes in summary what the learner will achieve on successfully completing the module and in what learning and vocational contexts the module has been developed. Where relevant, it lists what certification will be awarded by other certification agencies.</td>
</tr>
<tr>
<td><strong>Preferred Entry Level</strong></td>
<td>Recommends the level of previous achievement or experience of the learner.</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td>Usually ‘none’ but in some cases detail is provided here of specific learner or course provider requirements. There may also be reference to the minimum safety or skill requirements that learners must achieve prior to assessment.</td>
</tr>
<tr>
<td><strong>General Aims</strong></td>
<td>Describe in 3-5 statements the broad skills and knowledge learners will have achieved on successful completion of the module.</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td>Structure the learning outcomes; there may be no units.</td>
</tr>
<tr>
<td><strong>Specific Learning Outcomes</strong></td>
<td>Describe in specific terms the knowledge and skills that learners will have achieved on successful completion of the module.</td>
</tr>
<tr>
<td><strong>Portfolio of Assessment</strong></td>
<td>Provides details on how the learning outcomes are to be assessed.</td>
</tr>
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<td>Provides details of the grading system used.</td>
</tr>
<tr>
<td><strong>Individual Candidate Marking Sheets</strong></td>
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</tr>
<tr>
<td><strong>Module Results Summary Sheet</strong></td>
<td>Records the marks for each candidate in each assessment technique and in total. It is an important record for centres of their candidate’s achievements.</td>
</tr>
<tr>
<td><strong>Appendices</strong></td>
<td>Can include approval forms for national governing bodies.</td>
</tr>
<tr>
<td><strong>Glossary of Assessment Techniques</strong></td>
<td>Explains the types of assessment techniques used to assess standards.</td>
</tr>
<tr>
<td><strong>Assessment Principles</strong></td>
<td>Describes the assessment principles that underpin FETAC approach to assessment.</td>
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**Introduction**

A module is a statement of the standards to be achieved to gain a FETAC award. Candidates are assessed to establish whether they have achieved the required standards. Credit is awarded for each module successfully completed.

The standards in a module are expressed principally in terms of specific learning outcomes, i.e. what the learner will be able to do on successful completion of the module. The other elements of the module - the purpose, general aims, assessment details and assessment criteria - combine with the learning outcomes to state the standards in a holistic way.

While FETAC is responsible for setting the standards for certification in partnership with course providers and industry, it is the course providers who are responsible for the design of the learning programmes. The duration, content and delivery of learning programmes should be appropriate to the learners’ needs and interests, and should enable the learners to reach the standard as described in the modules. Modules may be delivered alone or integrated with other modules.

The development of learners’ **core skills** is a key objective of vocational education and training. The opportunity to develop these skills may arise through a single module or a range of modules. The core skills include:

- taking initiative
- taking responsibility for one’s own learning and progress
- problem solving
- applying theoretical knowledge in practical contexts
- being numerate and literate
- having information and communication technology skills
- sourcing and organising information effectively
- listening effectively
- communicating orally and in writing
- working effectively in group situations
- understanding health and safety issues
- reflecting on and evaluating quality of own learning and achievement.

Course providers are encouraged to design programmes which enable learners to develop core skills.
Module Title  Equine Anatomy and Physiology

Module Code  C20113

Level  5

Credit Value  1 credit

Purpose  This module is designed to provide the learner with the relevant knowledge and understanding of the structure and function of the horse's body to enable the learner to provide better horse care. This is an elective module on the Level 5 Certificate in Horsemanship.

Preferred Entry Level  Level 4 Certificate, Leaving Certificate or equivalent qualifications and/or relevant life and work experiences.

Special Requirements  None.

General Aims

Learners who successfully complete this module will:

8.1 acquire knowledge of the structure and function of the horse's body
8.2 develop an understanding of how the equine body works as an entity
8.3 recognise the signs of health and ill-health in a horse
8.4 recognise common disorders of the equine systems and know when to call a vet
8.5 use the acquired knowledge of the equine anatomy and physiology to understand the behaviour of the horse.
The specific learning outcomes are grouped into 8 units.

Unit 1: Introduction to Anatomy and Physiology

Learners should be able to:

10.1.1 differentiate between anatomy and physiology
10.1.2 define the following terms: cell, tissue, organ, system
10.1.3 outline the role of cells, tissues and organs in the formation of a full organism
10.1.4 describe the main outward signs of health in a horse
10.1.5 define the term soundness in relation to horse health.

Unit 2: Equine Skeletal and Muscular Systems

Learners should be able to:

10.2.1 list the functions of the skeleton
10.2.2 outline the composition of bone and of cartilage
10.2.3 distinguish between bone and cartilage
10.2.4 identify 3 major categories of joints and give examples of each type
10.2.5 identify the main bones in the axial skeleton of a horse
10.2.6 identify the main bones in the appendicular skeleton of a horse
10.2.7 compare the bones of the foreleg and the hind-leg of a horse with the bones in the human arm and leg
10.2.8 differentiate between the three types of muscle and give examples of each type
10.2.9 outline the function of ligaments and tendons
Unit 3  
**Equine Circulatory System**

*Learners should be able to:*

10.3.1 list the main functions of equine blood  
10.3.2 list the four main constituents of equine blood  
10.3.3 discuss the role of a blood analysis as an indicator of a horse's health  
10.3.4 label a diagram of the heart and blood circulation in a horse  
10.3.5 describe the role of arteries, veins and capillaries in equine blood circulation  
10.3.6 measure the normal resting heartbeat of a horse  
10.3.7 explain what is meant by the term murmur and why it may cause legal unsoundness  
10.3.8 outline the role of the lymphatic system in a horse.

Unit 4  
**Equine Respiratory System**

*Learners should be able to:*

10.4.1 outline the main functions of the respiratory system  
10.4.2 label a diagram showing the respiratory system of a horse  
10.4.3 explain the role of the muscles in inspiration and in expiration  
10.4.4 explain why racehorses are given no hay and only a small feed on the day of a race  
10.4.5 measure the normal respiratory rate of a horse and describe the factors that can affect this rate  
10.4.6 describe how to recognise normal healthy respiration in a horse  
10.4.7 list 4 signs of breathing difficulties which would necessitate the calling of a vet  
10.4.8 list common ailments of the respiratory system and describe their associated symptoms.
Unit 5  Equine Digestive System

Learners should be able to:

10.5.1 label a diagram of the digestive system and alimentary tract of a horse
10.5.2 explain the following terms: ingestion, digestion, absorption, assimilation and ejection
10.5.3 explain the functions of the different types of teeth
10.5.4 list three parasites that may be found in the digestive tract of a horse
10.5.5 describe how one of these parasites may be detected and treated and how to prevent a re-invasion of the horse by the parasite
10.5.6 explain the term colic
10.5.7 describe the symptoms, causes and treatment of any type of colic.

Unit 6  Equine Urinary, Reproductive and Mammary Systems

Learners should be able to:

10.6.1 outline the main functions of the urinary system
10.6.2 state the location of the kidneys in a horse and estimate the volume of urine that may be passed by a horse per day
10.6.3 explain the following terms: castration, gelding, 'rig', insemination, fertilisation
10.6.4 outline how to recognise that a mare is in season
10.6.5 state the age and time of year at which a mare will come into season
10.6.6 describe the oestrus cycle of the mare and outline the role played by hormones in the control of this cycle.

Unit 7  Equine Skin

Learners should be able to:

10.7.1 label a diagram of the main components of the skin
10.7.2 outline the main functions of the skin
10.7.3 describe the following coat colours in horses: black, brown, bay-brown, bay, chestnut, roan, dun, grey, cream, piebald and skewbald
10.7.4 describe different types of common markings found on horses.
Unit 8  
Equine Nervous and Endocrine Systems

*Learners should be able to:*

10.8.1  explain the term reflex action
10.8.2  explain the importance of the senses of smell, taste, touch, sight and sound for a horse
10.8.3  explain what is meant by sixth sense in a horse
10.8.4  list common nervous habits that can be seen in horses (e.g. crib-biting, weaving, wind-sucking) and list their symptoms, causes and treatment
10.8.5  list three sources of stress for a horse and outline how the horse may react both physiologically and psychologically to these stresses.

11  Portfolio of Assessment

Please refer to the glossary of assessment techniques and the note on assessment principles at the end of this module descriptor.

All assessment is carried out in accordance with FETAC regulations.

Assessment is devised by the internal assessor, with external moderation by FETAC.

**Summary**

<table>
<thead>
<tr>
<th>Examination (Theory-Based)</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments (2)</td>
<td>40%</td>
</tr>
</tbody>
</table>

11.1  Examination

The internal assessor will devise a theory-based examination that assesses candidates’ ability to recall and apply theory and understanding, requiring responses to a range of question types, short answer and structured. These questions may be answered in different media such as in writing or orally.

The examination will be based on a range of specific learning outcomes and will be 2 hours in duration.

The format of the examination will be as follows:

**Section A**

12 short answer questions
Candidates are required to answer 10 (2 marks each)

**Section B**

5 structured questions
Candidates are required to answer 4 (10 marks each).
11.2  **Assignments (2)**

The internal assessor will devise two briefs that require candidates to produce evidence that demonstrates an understanding and application of a range of specific learning outcomes.

Candidates will carry out an investigation of topics in equine anatomy and physiology using appropriate research methods, analysing the findings and presenting conclusions.

Topics for the two assignments will be drawn from different units of the module.

Each assignment may be presented using a variety of media, including written, oral, graphic, audio, visual or any combination of these. Any audio or video evidence must be provided on tape.

Each assignment carries equal marks.

12  **Grading**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>50 - 64%</td>
</tr>
<tr>
<td>Merit</td>
<td>65 - 79%</td>
</tr>
<tr>
<td>Distinction</td>
<td>80 - 100%</td>
</tr>
</tbody>
</table>
Candidate Name: _______________________________ PPSN: ________________________
Centre: ____________________________________________________________________ Centre No.: _________

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Mark</th>
<th>Candidate Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section A: short answer questions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 short answer questions, answer any 10 (2 marks each)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Indicate questions answered)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question No.:* _____ 2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>______ 2</td>
<td>2</td>
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<tr>
<td>______ 2</td>
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<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Section B: structured questions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 structured questions, answer any 4 (10 marks each)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Indicate questions answered)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question No.:* _____ 10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>______ 10</td>
<td>10</td>
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<td></td>
</tr>
<tr>
<td>______ 10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL MARKS</strong></td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

* The internal assessor is required to enter here the question numbers answered by the candidate.
Candidate Name: ______________________________  PPSN: __________________________
Centre: _________________________________________________  Centre No.: ___________

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Mark</th>
<th>Candidate Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• appropriate methodology including careful observations and recording of relevant</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>information</td>
<td></td>
<td>Assignment 1</td>
</tr>
<tr>
<td>• effective use of analysis to draw logical conclusions</td>
<td>5</td>
<td>Assignment 2</td>
</tr>
<tr>
<td>• clear demonstration of understanding and application of concepts in equine</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>anatomy and physiology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subtotal 20

TOTAL MARKS 40

This mark should be transferred to the Module Results Summary Sheet

Internal Assessor’s Signature: ______________________________  Date: ___________

External Authenticator’s Signature: ____________________________  Date: ___________
# FETAC Module Results Summary Sheet

**Module Title:** Equine Anatomy and Physiology  
**Module Code:** C20113

<table>
<thead>
<tr>
<th>Candidate Surname</th>
<th>Candidate Forename</th>
<th>Mark Sheet 1</th>
<th>Mark Sheet 2</th>
<th>Total 100%</th>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assessment Marking Sheets**  
**Maximum Marks per Marking Sheet**

<table>
<thead>
<tr>
<th>Mark Sheet</th>
<th>Mark Sheet 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>40</td>
</tr>
</tbody>
</table>

**Signed:**  
**Internal Assessor:**  
**Date:**

This sheet is for internal assessors to record the overall marks of individual candidates. It should be retained in the centre. The marks awarded should be transferred to the official FETAC Module Results Sheet issued to centres before the visit of the external Authenticator.

<table>
<thead>
<tr>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td>D: 80 - 100%</td>
</tr>
<tr>
<td>M: 65 - 79%</td>
</tr>
<tr>
<td>P: 50 - 64%</td>
</tr>
<tr>
<td>U: 0 - 49%</td>
</tr>
</tbody>
</table>

W: candidates entered who did not present for assessment.
Glossary of Assessment Techniques

Assignment

An exercise carried out in response to a brief with specific guidelines and usually of short duration.

Each assignment is based on a brief provided by the internal assessor. The brief includes specific guidelines for candidates. The assignment is carried out over a period of time specified by the internal assessor.

Assignments may be specified as an oral presentation, case study, observations, or have a detailed title such as audition piece, health fitness plan or vocational area profile.

Collection of Work

A collection and/or selection of pieces of work produced by candidates over a period of time that demonstrates the mastery of skills.

Using guidelines provided by the internal assessor, candidates compile a collection of their own work. The collection of work demonstrates evidence of a range of specific learning outcomes or skills. The evidence may be produced in a range of conditions, such as in the learning environment, in a role play exercise, or in real-life/work situations.

This body of work may be self-generated rather than carried out in response to a specific assignment eg art work, engineering work etc.

Examination

A means of assessing a candidate’s ability to recall and apply skills, knowledge and understanding within a set period of time (time constrained) and under clearly specified conditions.

Examinations may be:

- practical, assessing the mastery of specified practical skills demonstrated in a set period of time under restricted conditions
- oral, testing ability to speak effectively in the vernacular or other languages
- interview-style, assessing learning through verbal questioning, on one-to-one/group basis
- aural, testing listening and interpretation skills
- theory-based, assessing the candidate’s ability to recall and apply theory, requiring responses to a range of question types, such as objective, short answer, structured, essay. These questions may be answered in different media such as in writing, orally etc.

Learner Record

A self-reported record by an individual, in which he/she describes specific learning experiences, activities, responses, skills acquired.

Candidates compile a personal logbook/journal/daily diary/daily record/laboratory notebook/sketch book.
The logbook/journal/diary/daily diary/record/laboratory notebook/sketch book should cover specified aspects of the learner’s experience.

**Project**

*A substantial individual or group response to a brief with guidelines, usually carried out over a period of time.*

Projects may involve:

- research – requiring individual/group investigation of a topic
- process – eg design, performance, production of an artefact/event

Projects will be based on a brief provided by the internal assessor or negotiated by the candidate with the internal assessor. The brief will include broad guidelines for the candidate. The work will be carried out over a specified period of time.

Projects may be undertaken as a group or collaborative project, however the individual contribution of each candidate must be clearly identified.

The project will enable the candidate to demonstrate: *(some of these – about 2-4)*

- understanding and application of concepts in (specify area)
- use/selection of relevant research/survey techniques, sources of information, referencing, bibliography
- ability to analyse, evaluate, draw conclusions, make recommendations
- understanding of process/planning implementation and review skills/planning and time management skills
- ability to implement/produce/make/construct/perform
- mastery of tools and techniques
- design/creativity/problem-solving/evaluation skills
- presentation/display skills
- team working/co-operation/participation skills.

**Skills Demonstration**

*Assessment of mastery of specified practical, organisational and/or interpersonal skills.*

These skills are assessed at any time throughout the learning process by the internal assessor/another qualified person in the centre for whom the candidate undertakes relevant tasks.

The skills may be demonstrated in a range of conditions, such as in the learning environment, in a role-play exercise, or in a real-life/work situations.

The candidate may submit a written report/supporting documentation as part of the assessment.

Examples of skills: laboratory skills, computer skills, coaching skills, interpersonal skills.
FETAC Assessment Principles

1. Assessment is regarded as an integral part of the learning process.

2. All FETAC assessment is criterion referenced. Each assessment technique has assessment criteria which detail the range of marks to be awarded for specific standards of knowledge, skills and competence demonstrated by candidates.

3. The mode of assessment is generally local i.e. the assessment techniques are devised and implemented by internal assessors in centres.

4. Assessment techniques in FETAC modules are valid in that they test a range of appropriate learning outcomes.

5. The reliability of assessment techniques is facilitated by providing support for assessors.

6. Arising from an extensive consultation process, each FETAC module describes what is considered to be an optimum approach to assessment. When the necessary procedures are in place, it will be possible for assessors to use other forms of assessment, provided they are demonstrated to be valid and reliable.

7. To enable all learners to demonstrate that they have reached the required standard, candidate evidence may be submitted in written, oral, visual, multimedia or other format as appropriate to the learning outcomes.

8. Assessment of a number of modules may be integrated, provided the separate criteria for each module are met.

9. Group or team work may form part of the assessment of a module, provided each candidate’s achievement is separately assessed.
The development of the National Qualifications Framework is funded by the Department of Education and Science with assistance from the European Social Fund as part of the National Development Plan 2000-2006.