



## Higher National Unit specification

### General information for centres

**Unit title:** Equine Studies: Equine Nutrition

**Unit code:** DP1M 34

**Unit purpose:** This Unit is designed to enable candidates to develop their underpinning knowledge of equine nutrition. To enable them to understand the factors which effect the nutrient requirements of the horse. It aims to enable them to develop knowledge of the feeds, which can be used to meet the requirements for horses during pregnancy, lactation, growth and work, whilst meeting the nutritional needs. It also aims to develop the practical skills of assessment of horses in relation to nutritional requirements and to develop suitable rations.

On completion of the Unit the candidate should be able to:

- 1 Explain the factors affecting the nutritional requirements of the horse.
- 2 Describe the constituents of feeds available in relation to the requirements for maintenance, growth, work, pregnancy and lactation of the horse.
- 3 Formulate and evaluate the effectiveness of rations to meet the nutritional requirements of the horse.

**Credit points and level:** 1 HN credit at SCQF level 7: (8 SCQF credit points at SCQF level 7\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Access to this Unit will be at the discretion of the centre, however it would be useful if the candidate had some experience of feeding horses. This may be evidenced by possession of NC Unit E9TF 10 *Watering and feeding the stabled horse*, or similar qualification and experience.

**Core Skills:** There are opportunities to develop the Core Skills of *Problem Solving, Numeracy* and *Communications* in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

**Context for delivery:** If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit is part of the mandatory section of the HNC and HND in Equine Studies. It is a free-standing Unit and may be used for the purposes of continuing professional development. In this Unit the term 'horses' includes thoroughbred and non-thoroughbred horses and ponies.

## General information for centres (cont)

**Assessment:** The assessment for Outcomes 1 and 2 in this Unit should be combined together into one written assessment paper. This paper should take candidates at one single assessment event and that should last two hours. The assessment paper should be composed of a suitable balance of short answer, restricted response and structured questions. This assessment should be conducted under controlled, supervised conditions.

Outcome 3 will be assessed by a practical investigation in which candidates are asked to complete a series of practical task to enable them to describe the constituents of feeds available in relation to the requirements for growth, work, pregnancy and lactation of the horse. Candidates should produce an assignment that formulates and evaluates the effectiveness of rations to meet the nutritional requirements of the horse. Candidates should complete the assignment over a period of time. Candidates should be allowed to use any relevant course notes, textbooks and reference material for the assignment.

Both the written assessment and practical assignment should be carried out at the end of the delivery of the Unit. It should be noted that the candidate must achieve all the minimum evidence specified for each Outcome in order to pass the Unit.

## **Higher National Unit specification: statement of standards**

**Unit title:** Equine Studies: Equine Nutrition

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Explain the factors affecting nutritional requirements of the horse

#### **Knowledge and/or Skills**

- ◆ Factors that affect a horse's nutrient requirements.
- ◆ Function of nutrients
- ◆ The partition of food energy within the horse
- ◆ The purpose of gross digestible energy

#### **Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ identify the factors effecting the horse's nutrient requirements
- ◆ describe the way in which nutritional requirement changes due to these factors
- ◆ explain the function of vitamins and minerals correctly
- ◆ identify the purpose of 5 vitamins and 5 minerals in the diet correctly
- ◆ describe the deficiency problems associated with 2 minerals and 2 vitamins
- ◆ describe the purpose of gross digestible energy

#### **Assessment Guidelines**

Outcomes 1 and 2 will be combined into a written paper lasting two hours.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Equine Studies: Equine Nutrition

### **Outcome 2**

Describe the constituents of feeds available in relation to the requirements for maintenance, growth, work, pregnancy and lactation of the horse

#### **Knowledge and/or Skills**

- ◆ The different constituents of feeds
- ◆ The level of nutritional requirement from different feeds in relation to:
  - maintenance
  - workload
  - pregnancy
  - growth
  - lactation

#### **Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ describe the difference between straight and compound feeds
- ◆ evaluate the nutritional value of 5 different feeds
- ◆ describe the importance of a balanced diet
- ◆ identify the nutrient requirements for maintenance and for two of the following: workload, pregnancy, growth or lactation

#### **Assessment Guidelines**

Outcomes 1 and 2 will be combined into a written paper lasting two hours.

### **Outcome 3**

Formulate and evaluate the effectiveness of rations to meet the nutritional requirements of the horse

#### **Knowledge and/or Skills**

- ◆ The total food intake required for both maintenance and production
- ◆ Calculating the nutritional requirements for a variety of horses
- ◆ Diet adjustment according to condition score, temperament and types of horse
- ◆ Economical formulation of the rations
- ◆ Evaluation of the effectiveness of the rations in relation to nutrition, production, condition score, weight, temperament and cost effectiveness
- ◆ Recalculation of new rations to meet nutritional demands

## Higher National Unit specification: statement of standards (cont)

**Unit title:** Equine Studies: Equine Nutrition

### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ calculate the nutritional requirements for **four** of the following types of horses:
  - race horse
  - performance horse
  - breeding stock
  - riding school horses and ponies
  - endurance horses
  - trekking horses
  - driving horses
  - old and infirm horses and ponies
  - horses for other leisure pursuits
- ◆ take into account the condition score, production level, temperament and any extra nutritional demands of the horse

### Assessment Guidelines

All the knowledge and or skills must be evidenced in a practical investigation. A range of horses that the candidate has access to must be used. This must be completed over a period of time. All of the knowledge and or skills area must be evidenced for each of the four horses.

## Administrative Information

**Unit code:** DP1M 34  
**Unit title:** Equine Studies: Equine Nutrition  
**Superclass category:** SH  
**Original date of publication:** August 2004  
**Version:** 01

### History of changes:

Version	Description of change	Date

**Source:** SQA

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## Higher National Unit specification: support notes

### Unit title: Equine Studies: Equine Nutrition

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### Guidance on the content and context for this Unit

This Unit provides a solid basis on which further Equine nutritional skills can be built if required. It will enable candidates to use formulate an evaluate rations for a range of horses with minimal support. Candidates are expected to have knowledge of a range of feedstuffs on the market place and their nutritional value and cost. Candidates will develop their practical skills of assessing horses nutritional requirement and the practical application of equine rations and there management.

### Guidance on the delivery and assessment of this Unit

**Outcome 1** in this Outcome the candidate will study the energy, systems, and examine the chemical composition of feeds. The candidate will also study nutrients and examine the function of water, fibre, carbohydrates, proteins, fats and oils. Minerals and vitamins would be studied in relation to deficiencies leading to malfunction or malformation of the horse's body. Minerals would include calcium, phosphorus magnesium, sodium, chlorine, copper, cobalt, zinc, iron and selenium.

**Outcome 2** The candidate should examine all factors, which influence the nutrient requirements of the horse (growth, work, pregnancy and lactation). The practical examination of the horses and methods of determining its actual weight combined with an assessment of its condition score is essential. It is important that the candidate should have access to feed samples and their individual constituents. These would include grass nuts, barley, oats, sugar beet, alfalfa, course mixes, bran, pony nuts, stud and race cubes, performance mixes, flaked maize, flaked peas, linseed cake, locus beans, molasses, heat extruded feeds, hay, haylage, silage.

**Outcome 3** The candidate should formulate and monitor effectiveness of a ration taking into account the total food intake of the horses assuming appetite at 2.5% of bodyweight and calculate the energy required for maintenance and work adjusted for condition score, temperament and type. The ration should be checked to establish whether the protein demands are met for maintenance, pregnancy, lactation, growth or level of work. The candidate should calculate a least cost ration that meets the nutritional needs of the horse. The horses should be monitored over a period of 1 month. The use of computerised formula and data is strongly recommended.

### *Opportunities for developing Core Skills*

There may be opportunities to develop the Core Skills of *Problem Solving*, *Numeracy* and *Communication* at SCQF level 6 in this Unit, however there is no automatic certification of Core Skills or Core Skills components.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** Equine Studies: Equine Nutrition

### **Open learning**

This Unit is well suited for delivery by both open and distance learning where the candidate has appropriate workplace, home based, or other facilities to carry out the practical assignments, and adequate supervision and support is available. This will require careful planning by the centre to ensure the sufficiency and authenticity of candidate evidence. It may be necessary for an "on-line support" tutor to be involved. In situations where the student completes work away from the centre, regular contact with tutors will be necessary. This may take the form of visits by the tutor to the student or vice versa. It is at the discretion of the centre as to whether assessments take place at the centre, workplace, or at home.

### **Candidates with disabilities and/or additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* ([www.sqa.org.uk](http://www.sqa.org.uk)).

## **General information for candidates**

### **Unit title:** Equine Studies: Equine Nutrition

This Unit is designed to enable candidates to develop their underpinning knowledge of equine nutrition and to enable them to understand the factors which effect the nutrient requirements of the horse. It aims to enable them to develop knowledge of the feeds, which can be used to meet the requirements for energy, protein, minerals and vitamins of horses during pregnancy, lactation, growth and work. It aims to develop the practical skills of assessment of horses in relation to nutritional requirements and to be able to develop rations and evaluate their effectiveness in terms of the horse's requirements.