



Component Specification

Animal Production Science

Level 5

5N2351

1. Introduction

The Further Education and Training Awards Council is the single national awarding body in further education and training in Ireland. It is responsible for determining the standards for named awards at levels 1 to 6 on the National Framework of Qualifications. All named awards are devised in line with the National Qualifications Authority of Ireland's determinations and guidelines.

2. The National Framework of Qualifications

The National Framework of Qualifications comprises 10 levels ranging from initial learning (level 1) to the most advanced levels of learning (level 10).

At each level there are one or more award types. An award type is a grouping of awards that share similar features. The National Qualifications Authority of Ireland has determined Award Type Descriptors for each award type. See www.nqai.ie. The Award Type Descriptor identifies the key strands and sub-strands of knowledge, skill and competence for that award type.

3. Guide to Level

Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently, subject to general direction.

Strand	Sub-strand	Nature of learning
Knowledge	Breadth	Broad range of knowledge
	Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas. Some underpinning theory
Know How & Skill	Range	Demonstrate a broad range of specialised skills and tools
	Selectivity	Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems
Competence	Context	Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts
	Role	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups
	Learning to Learn	Learn to take responsibility for own learning within a managed environment
	Insight	Assume full responsibility for consistency of self- understanding and behaviour

Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI (www.nqai.ie)

4. Award Specifications

FETAC determines the standards for all awards in partnership with relevant stakeholders. This award was developed in line with the Council policy on Standards Development published in September 2005.

Standards are published in the form of Award Specifications. A Specification is devised in respect of each named award. Each Specification provides a comprehensive description of the features, characteristics and standards of the award.

A **Certificate Specification** is published for each named **major award**.

A **Component Specification** is published for each named **minor award**. Please note that each component (i.e. minor award) is associated with one or more Certificates (i.e. major, special purpose or supplemental award). See www.fetac.ie.

A **Specific Purpose Specification** is published for each **special purpose award**.

A **Supplemental Specification** is published for each **supplemental award**.

Standards are expressed in terms of **learning outcomes** i.e. concise statements of what the learner is expected to know or be able to do in order to achieve that award.

Learning outcomes for all awards (i.e. major, special purpose, supplemental awards) are contained within the associated Component Specifications.

5. Component Details

Title	Animal Production Science
Teideal as Gaeilge	Eolaíocht Táirgeadh Ainmhithe
Award Type	Minor
Code	5N2351
Level	5
Credit Value	10
Purpose	The purpose of this award is to equip the learner with the knowledge, skill and competence to apply scientific principles to the production and management of farm animals.
Learning Outcomes	<p>Learners will be able to:</p> <ol style="list-style-type: none">1 Describe legal and ethical animal welfare and food assurance requirements including freedoms, environmental conditions, protection during transport, food assurance and the effects of animal production on the environment2 Explain the behavioral characteristics of animals to be considered when working close to animals, controlling and handling animals, loading animals or designing facilities for animals3 Apply knowledge of animal anatomy and physiology to animal production systems including classifying animals, effects of skeletal structure and body systems on production and effects of genetics on animal production and efficiency4 Describe the effect of feeding on the development of the young ruminants digestive system5 Outline the principles and role of milk production including importance in Irish agriculture, breeds, milk production systems, stocking rates, quality milk production, feeding, investment and returns6 Outline the principles and role of lamb production including importance in Irish agriculture, distribution of production, breeds and crosses, lamb production systems, lamb growth rates, stocking rates, investment and returns7 Outline the principles and role of beef production including importance in Irish agriculture, distribution of production, breeds and crosses, beef production systems, beef growth rates and feed efficiency ratios, investment and returns

- 8 Outline the principles and role of pork and bacon production including importance in Irish agriculture, breeds and crosses, types of production units, pig growth rates and feed efficiency ratios, investment and returns
- 9 Outline the principles and role of poultry meat and egg production including importance in Irish agriculture, range of poultry meat products, types of poultry meat and egg production units, feed efficiency ratios, investment and returns
- 10 Apply principles of animal nutrition to growth, development, reproduction and production of animals including nutritional needs and feed utilization, feed ingredients and nutrient value, feed additives and growth stimulants and comparison of digestive systems of monogastrics and ruminants
- 11 Apply principles of animal reproduction to evaluation, selection and breeding of farm animals including male and female reproductive systems and scientific principles in the selection and breeding of farm animals.

Assessment

General Information

Details of FETAC's assessment requirements are set out in [Assessment Guidelines for Providers](#).

All FETAC assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence.

The techniques set out below are considered the optimum approach to assessment for this component. In exceptional circumstances providers may identify alternative assessment techniques through the provider's application for programme validation which are **reliable** and **valid** but which are more appropriate to their context.

Assessment of a number of components may be integrated across programmes for delivery, provided that the learning outcomes of each minor award are assessed.

Group or team work may form part of the assessment, provided each learner's achievement is separately assessed.

All providers are required to submit an assessment plan as part of their application for programme validation. Assessment Plans will include information relating to scheduling and integration of assessment. [See FETAC's Provider Guidelines for Programme Validation](#).

Assessment Techniques

In order to demonstrate that they have reached the standards of knowledge, skill and competence identified in all the learning outcomes, learners are required to complete the assessment(s) below.

The assessor is responsible for devising assessment instruments (e.g. project and assignment briefs, examination papers), assessment criteria and mark sheets, consistent with the techniques identified below and FETAC's assessment requirements.

Programme validation will require providers to map each learning

outcome to its associated assessment technique. [See FETAC's Provider Guidelines for Programme Validation.](#)

All learning outcomes **must** be assessed.

Examination - Theory 60%

Examination - Practical 40%

Description

Examination - Theory

An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.

A theory-based examination assesses the ability to recall, apply and understand specific theory and knowledge.

The assessor will devise a theory based examination to assess learning outcomes 1 - 11.

Examination - Practical

An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.

A practical examination assesses specified practical skills demonstrated in a set period of time under restricted conditions.

The assessor will devise a practical examination based on 8 practical tasks listed below.

List of Tasks

For each of tasks 1-5, the learner will be required to correctly identify items presented from a range of samples and outline their nutrient values.

- 1 One forage sample (selected from grass, hay, haylage, silage or straw)
- 2 One cereal sample (selected from wheat, oats, barley, maize or sorghum)
- 3 One protein feed sample (selected from rape seed meal, soya bean meal, sunflower meal, palm kernel meal, peas or beans)
- 4 One by-products sample (selected from brewers/distillers grains, soya bean hulls, citrus pulp, maize gluten, corn distillers grains)
- 5 One sample of a root crop (selected from fodder beet, swedes or potato)

For each of tasks 6-8, the learner will be required to correctly identify on a live animal or from a detailed anatomical picture the component part and its function

6. Five components of a ruminant digestive system
7. Five components of a male or female reproductive system
8. Five specified external component parts of an animal body

Recognition of Prior Learning (RPL)	Learners may be assessed on the basis of their prior knowledge and experience. Providers must be specifically quality assured to assess learners by this means. To do so they must complete B10, see Provider's Quality Assurance Guidelines and be included on the Register of RPL approved providers. See RPL Guidelines at www.fetac.ie for further information and registration details.	
Grading	Pass	50% - 64%
	Merit	65% - 79%
	Distinction	80% - 100%
Specific Validation Requirements	There are no specific validation requirements for this award	
Supporting Documentation	None	
Access	To access programmes leading to this award the learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.	
Transfer	Successful completion of this component award enables the learner to transfer to programmes leading to other certificates where this component is a mandatory or an elective requirement.	