

Module Title:	Animal Nutrition
Language of Instruction:	English
Credits:	10
NFQ Level:	6
Module Delivered In	No Programmes
Teaching & Learning Strategies:	Learners will be encouraged to actively partake in class discussions and group work. Site visits to farms to discuss nutritional management will be in discussion group format. Case studies, (e.g. IFA smart farming) will be used to demonstrate nutritional management strategies that improve the performance of the farm business. Practical lab sessions will explore the chemistry of feed and how nutritional composition is determined. Students will have the opportunity to visit feed compounders and nutrition service providers in the south east as part of their course.
Module Aim:	The aim of this module is develop the learners understanding of nutrition as it applies to animals with a particular emphasis on farm animal production. The various sources of feed and the relative inclusion levels in monogastric and ruminant diets will be explored as well as some of the nutritional management considerations in a well-run animal production system. Students will also have an understanding of the consequences of animal nutrition on the wider environment including the impact on consumer health.

Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Describe and illustrate the structure and organization of the digestive systems of monogastric and ruminant animals
LO2	Demonstrate a knowledge of animal nutrition as it applies to various farmed animals and the interaction between nutrition and management of the animal
LO3	Describe the inter-relationship between nutrients and the consequences of these interactions for the nutritional wellbeing of the animal
LO4	Explain how a typical on-farm and commercial ration for monogastric and ruminant animals is formulated
LO5	Be capable of completing a feed budget for an animal production system
LO6	Demonstrate an understanding of the environmental impact of animal nutrition and strategies to minimise this.
LO7	Demonstrate a knowledge of the link between animal nutrition and the health of those consuming animal products, including the role of nutritionally enhanced animal products (e.g. high vitamin D eggs).

Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Digestive Systems of Monogastric and Ruminant Animals

Digestive and Nutritional Disorders, their diagnosis, prevention and treatment

The Main Food Groups

Carbohydrates, proteins and fats • Minerals and Vitamins

Ration Formulation

• Production and procurement of quality ingredients – grain, industrial by-products (such as brewers and distillers grains, citrus pulp), silage, hay, straw, protein crops - for on-farm rations • Assessing quality/price ratio of bought-in protein and other ingredients • Feeding systems, automatic feeders, use of Feeder Wagons. • Formulation of rations for dairy cows, cattle, sheep and pigs.

Addressing nutritional problems

Conducting a full scale trouble shooting exercise to determine pinch points within the animal production system from the quality of the soil, plant and subsequently the animal

Assessment Breakdown	%
Continuous Assessment	10.00%
Project	25.00%
Practical	25.00%
End of Module Formal Examination	40.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Multiple Choice Questions	A MCQ on aspects of animal nutrition will take place on material covered.	1,2	10.00	Week 14

Project

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Conduct a complete feed budget for a species of the students choice. The project can be based on the students own farm or that of a neighbouring farm.	2,3,4,5	25.00	Week 24

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Practical labs will be conducted as part of this module. Labs will focus on determining the nutritional composition of agricultural food / feed and field reports	1,2,3,4,5	25.00	n/a

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Terminal Examination	1,2,3,4,5,6,7	40.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	26 Weeks per Stage	2.00
Practicals	26 Weeks per Stage	1.00
Independent Learning Time	26 Weeks per Stage	2.00
Total Hours		130.00

