



Course Module
Department of Animal Science
Faculty of Animal Science
Universitas Brawijaya

Module Name	Non-Ruminant Nutrition
Module Level	Undergraduate Program
Code	PEN60004
Subtitle	-
Course	Non-Ruminant Nutrition
Semester (s)	3
Person Responsible for the module	Dr. Ir. Irfan H Djunaidi, M.Sc. IPM.ASEAN Eng
Lecturer	<ol style="list-style-type: none"> 1. Dr. Ir. Eko Widodo, M.Agr.Sc. M.Sc 2. Dr. Ir. Osfar Sjofjan, M.Sc. IPU. ASEAN Eng 3. Dr. Ir. Irfan H. Djunaidi, M.Sc. IPM. ASEAN Eng 4. Dr.Ir. M. Halim Natsir. S.Pt. MP. IPM. ASEAN Eng 5. Yuli Frita Nuningtyas.,S.Pt MP. M.Sc.
Language	Indonesian language
Relation to curriculum	Study Program: Animal Science Specialization: Animal Nutrition and Food Type: Compulsory/ Non-Compulsory
Type of teaching, contact hours	<ol style="list-style-type: none"> 1) Lecture: 100 minutes/meeting 2) Practicum: 150 minutes/meeting 3) Structured Assignments: 100 minutes 4) Presentation: 100 minutes 5) Quiz: 100 minutes
Workload	<ol style="list-style-type: none"> a. Lecture: 14 meetings*100 minutes b. Practicum: 14 meetings*150 minutes c. Independent learning: 16 times*150 minutes Course 90.67 hours/semester, practical 42,50 hours/semester
Credit points	3 credits / 5.10 ects
Requirements according to the examination regulations	-
Recommended prerequisites	Biochemistry and Introduction to Animal Nutrition and Forage

<p>Module objectives/intended learning outcomes</p>	<p>ILO: ILO4-Capability to develop knowledge and comprehensive mindset based on Animal science and industry ILO 5-Capability to analyse the development and implementation of technology through humanities, ethical and scientific value as to provide appropriate solutions and ideas ILO12-Capability to ethically design and perform experiments, analyze and interpret data as to provide sustainable problem solving in Animal Science</p>
	<p>Objetives: This course discusses the digestive mechanisms of non-ruminant animals (Poultry, Waterfowl, Quail, Rabbit, Pig, and Horse, factors affecting the nutritional needs of non-ruminant animals, the food substance needs for non-ruminant animals, and non-ruminant animal feed formulations</p>
	<p>Knowledge: able to recognize and understand digestive system of non ruminants animals and factor affecting of food substances of non ruminants</p>
	<p>Skills Cognitive: Able to explaining factor affecting food substances of non ruminants animals Phsycomotoric: practical feed formulation and planning for non ruminant animals</p>
	<p>Competences: Student able to design feed formulation for ruminants</p>
<p>Content</p>	<ol style="list-style-type: none"> 1. Digestive system for non-ruminant animals (Poultry, Waterfowl, Quail, Rabbit, Pig, and Horse) 2. Factors affecting food substance needs of non-ruminant animals 3. The food substance needs of non-ruminant animals 4. Feed formulation 5. Feed planning for non-ruminant animals
<p>Study and examination requirements and forms of examination</p>	<p>A minimum attendance of 80% to take the Final Exam Multiple Choice/Essay/Group Presentation/etc. Practicum: 20 %</p>

	<p>Midterm Exam: 35% Final Exam: 35% Structured Assignments: 5% Quiz: 5%</p> <p>A : 80 < Final Score ≤ 100 B+ : 75 < Final Score ≤ 80 B : 69 < Final Score ≤ 75 C+ : 60 < Final Score ≤ 69 C : 55 < Final Score ≤ 60 D : 50 < Final Score ≤ 55 D+ : 44 < Final Score ≤ 50 E : 0 < Final Score ≤ 44</p>
Media employed	E-module, win feed program, video, ub feed software, Powerpoint, reference book, video, laptop, LDD
Reading list	<ol style="list-style-type: none"> 1. Church, D.C 1989. Digestive Physiology and Nutrition of Non-Ruminant Part 2. O and Books Corvallis Origin. USA. 2. Ensminger, M. E and C. G . Olientine Jr. 1978. Feed and Nutrition. 1st ed. 3. NRC. 1977. Nutrition Requirement of Rabbit. 2nd rev ed. 4. NRC. 1994. Nutrition Requirement of Horses. 6th rev ed. 5. NRC. 1994. Nutrition Requirement of Poultry. 9th rev ed. 6. NRC. 2004. Nutrition Requirement of swine. 7h rev ed. 7. Scott, M. L., M.C, Nesheim and R.J.Young. 1982. Nutritions of The Chickens. Second Ed. M. L. Scott and Associates Ithaca. New York. 8. Sjofjan, O., M. H. Natsir, and I.H. Djunaidi. 2019. Ilmu Nutrisi Ternak Non Ruminansia. UB Press. 9. Widodo, E.2018. Ilmu Nutrisi Unggas. UB Press. 10. Wiseman J. 1984. Feeding of Non Ruminant Livestock. Butterworths Toronto. Wilington.