



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

Module Name	Advance Non-Ruminant Nutrition
Module Level	(Undergraduate Program)
Code	PEN60008
Subtitle	-
Course	Advance Non-Ruminant Nutrition
Semester (s)	6
Person Responsible for the module	Dr. Ir. Irfan H Djunaidi, M.Sc. IPM.ASEAN Eng
Lecturer	<ol style="list-style-type: none"> <li>1. Dr. Ir. Eko Widodo, M.Agr.Sc. M.Sc</li> <li>2. Dr. Ir. Osfar Sjojfan, M.Sc. IPU. ASEAN Eng</li> <li>3. Dr. Ir. Irfan H Djunaidi, M.Sc. IPM.ASEAN Eng</li> <li>4. Dr.Ir. M. Halim Natsir. S.Pt. MP. IPM. ASEAN Eng</li> <li>5. Yuli Frita Nuningtyas.,S.Pt MP. M.Sc.</li> </ol>
Language	Indonesian Language
Relation to curriculum	Study Program: Animal Science Specialization: Animal Nutrition and Food Type: Compulsory
Type of teaching, contact hours	<ol style="list-style-type: none"> <li>1. Lecture: 100 minutes/meeting</li> <li>2. Practicum of 150 minutes/meeting</li> <li>3. Structured Assignments: 100 minutes</li> </ol> Quiz: 100 minutes
Workload	<ol style="list-style-type: none"> <li>a. Lecture: 14 meetings*100 minutes</li> <li>b. Practicum: 14 meetings*150 minutes</li> <li>c. Independent learning: 16 times*150 minutes</li> </ol>
Credit points	3 credits / 5.10 ects
Requirements according to the examination regulations	-
Recommended prerequisites	Non-Ruminant Animal Nutrition Science

<p>Module objectives/intended learning outcomes</p>	<p><b>ILO:</b></p> <ol style="list-style-type: none"> <li>1. Capability to analyse the development and implementation of technology through humanities, ethical and scientific value as to provide appropriate solutions and ideas (LO 5).</li> <li>2. Demonstrating good capability to be independent and to work in team as to identify and analyse problems (LO 11).</li> <li>3. Capability to ethically design and perform experiments, analyze and interpret data as to provide sustainable problem solving in Animal Science (LO 12)</li> </ol>
	<p><b>Objetives:</b> It is an advanced course of the non-ruminant animal nutrition science which has been studied previously. The substance of the course is the manipulation of nutrition for broilers, laying fowl, waterfowl, quail, rabbits, pigs, and horses, the poultry replacement program, manipulation of nutrition for poultry, pigs, rabbits according to environmental conditions (temperature, humidity, etc.)</p>
	<p><b>Knowledge:</b> able to recognize and understand the Nutritional manipulation of broilers, laying fowl, waterfowl, quail, rabbits, pigs, and horses</p>
	<p><b>Skills</b></p> <p>Cognitive: able to do replacement program of the poultry</p> <p>Phsycomotoric: practical manipulation nutrition of poultry</p>
	<p><b>Competences:</b> Student able to Manipulation of nutrition of poultry, pigs, and rabbits according to environmental conditions (temperature, humidity, etc.)</p>
<p>Content</p>	<ol style="list-style-type: none"> <li>1. Strategic role and development of the feed industry in Indonesia</li> <li>2. Procurement and quality control of feed raw materials</li> <li>3. Buildings and equipment for the feed industry</li> <li>4. The layout of the feed industry</li> <li>5. Application of linear program in the feed industry</li> <li>6. Feed formulation using software</li> <li>7. Logistics and distribution management</li> <li>8. Feed production process</li> <li>9. Quality control of the finished feed</li> <li>10. Marketing of feed industry products</li> </ol>

	<p>11. Feed industry organizational structure 12. Feasibility Study and feed industry regulations</p>
<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.</p> <p>Practicum: 20 % Midterm Exam: 30% Final Exam: 30 % Structured Assignments: 5% Quiz:5% Presentation: 10%</p> <p>A : 80 &lt; Final Score ≤ 100 B+ : 75 &lt; Final Score ≤ 80 B : 69 &lt; Final Score ≤ 75 C+ : 60 &lt; Final Score ≤ 69 C : 55 &lt; Final Score ≤ 60 D : 50 &lt; Final Score ≤ 55 D+ : 44 &lt; Final Score ≤ 50 E : 0 &lt; Final Score ≤ 44</p>
<p>Media employed</p>	<p>E-module, win feed program, video, ub feed software, Powerpoint, reference books, video, laptop, LDD</p>
<p>Reading list</p>	<ol style="list-style-type: none"> <li>1. hurch, D.C 1989. Digestive Physiology and Nutrition of Non-Ruminant Part 2. O and Books Corvallis Origin. USA.</li> <li>2. Ensminger, M. E and C. G . Olientine Jr. 1978. Feed and Nutrition. 1st ed.</li> <li>3. NRC. 1977. Nutrition Requirement of Rabbit. 2nd rev ed.</li> <li>4. NRC. 1994. Nutrition Requirement of Horses. 6th rev ed.</li> <li>5. NRC. 1994. Nutrition Requirement of Poultry. 9th rev ed.</li> <li>6. NRC. 2004. Nutrition Requirement of swine. 7h rev ed.</li> <li>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.</li> <li>8. Sjojfan, O., M. H. Natsir and I.H. Djunaidi. 2019. Ilmu Nutrisi Ternak Non Ruminansia. UB Press.</li> <li>9. Widodo, E.2018. Ilmu Nutrisi Unggas. UB Press.</li> <li>10. Wiseman J. 1984. Feeding of Non-Ruminant Livestock. Butterworths Toronto. Wilington.</li> </ol>