



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

Module Name	Animal nutrition and Feed Stuff
Module Level	Undergraduate program
Code	PEN60001
Subtitle	-
Course	Animal nutrition and Feed Stuff
Semester (s)	2
Person Responsible for the module	Prof. Dr. Ir. Siti Chuzaemi, MS.IPU. ASEAN Eng
Lecturer	<ol style="list-style-type: none"> 1. Prof. Dr. Ir. Siti Chuzaemi, MS.IPU. ASEAN Eng. 2. Hartutik, Prof. Dr. Ir., MP. IPU. ASEAN Eng. 3. Kusmartono, Prof. Dr. Ir. 4. Eko Widodo, Dr. Ir. M.Agr.Sc., MSc. 5. Osfar Sjojfan, Dr. Ir. M.Sc. IPU. ASEAN Eng. 6. Mashudi, Dr. Ir. M.Agr.Sc. IPM. ASEAN Eng. 7. Marjuki, Dr. Ir., M.Sc 8. Irfan H. Djunaidi, Dr. Ir., M.Sc. IPM. ASEAN Eng. 9. M. Halim Natsir, Dr. Ir. S.Pt., MP. IPM. ASEAN Eng. 10. Yuli Frita Nuningtyas, S.Pt., MSc. MP 11. Poespitasari Hazanah N., S.Pt., MP
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) 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 136 hours/semester, practical 42,50 hours/semester
Credit points	4 (3-1) credits/ 6.8 ECTS (5.10-1.70 ECTS)
Requirements according to the examination regulations	-

Recommended prerequisites	-
Module objectives/intended learning outcomes	<p>ILO:</p> <p>ILO3: Developing awareness of Animal welfare and halal issue</p> <p>ILO-6: Proficient in biology, physiology, animal nutrition, breeding, farm management, and implementation in Animal Science</p> <p>ILO-7: Capability to perform an independent, standardized, measurable, effective, efficient and sustainable work</p>
	<p>Objetives: This course discusses: 1) Understanding and explaining the differences in the animal digestive system and processes 2) Understanding and explaining the types, benefits, functions, symptoms of food deficiency (proximate analysis and van soest), basic metabolism of food substances including protein, carbohydrates, fats, vitamins, and minerals, 3) Understand and explain the types of nutritional feed materials, feed additives, and antinutrients, as well as evaluate the physical, chemical and biological quality of feed materials 4) Understand the basics of animal feed formulation</p>
	<p>Knowledge: able to recognize and understand the differences animal digestive system and process, digestion and metabolism of carbohydrate, protein, fat, vitamin and mineral, kind of feed stuff and antinutrient</p>
	<p>Skills</p> <p>Cognitive: Able to explaining the types, benefits, functions, symptoms of food deficiency (proximate analysis and van soest), basic metabolism of food substances including protein, carbohydrates, fats, vitamins, and minerals</p> <p>Phsycomotoric: practical abilties to do proximate analysis and basic of feed formulation</p>
	<p>Competences: Student able to evaluate feed formulation based on proximat analysisis</p>
Content	<ol style="list-style-type: none"> 1. Introduction, Animal Body, and Food Substances 2. Digestive System and Processes in Animals 3. Carbohydrates (digestion and metabolism) 4. Protein (digestion and metabolism)

	<ul style="list-style-type: none"> 5. Fat (digestion and metabolism) 6. Minerals and vitamins (metabolism) 7. Anti-Nutritional Substances 8. Classification of feed ingredients (types and characteristics of ingredients of forage) 9. Additive Feed 10. Feed Quality Assessment 11. Basic Feed Formulation
Study and examination requirements and forms of examination	<p>A minimum attendance of 80% to take the Final Exam Multiple Choice/Essay/Group Presentation/etc.</p> <p>Practical: 20% 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	PPT, reference book, video, laptop, LCD, online class (zoom meeting)
Reading list	<ul style="list-style-type: none"> 1. Ilmu Nutrisi Ternak Dasar. 2019. Penerbit: UB Press 2. McDonald, P., Edwards, R.A., Greenhalgh, J.F.D., Morgan, C.A., Sinclair, L.A. and Wilkinson, R.G. 2010. Animal Nutrition. 7th Edition. 3. Maynard, L.A and J. K Loosli.1999. Animal Nutrition. 7th Edition. Mc. Graw=Hill Book Company. New york.