COURSE LEARNING PLAN

UNIVERSITY OF BRAWIJAYA
FACULTY OF ANIMAL SCIENCE
DEPARTMENT OF ANIMAL SCIENCE
UNDERGRADUATE STUDY PROGRAM OF ANIMAL SCIENCE
LEARNING PLAN Animal Feed Industry

Course	Code	Weight (credits)	Semester	Compilation Date
Animal Feed Industry	PEN60011	3 (2 – 1) Credits	Even	January 15, 2020

Authorization	Course Coordinator	Ka PS S1	Vice Dean 1
	Dr. Ir. Eko Widodo MAgr.Sc.MSc	Dr. Herly Evanuarini, S.Pt, MP	Dr. Ir. Halim Natsir, S.Pt, MP, IPM, ASEAN Eng

Learning Outcomes (LO)

PLO

1. CP 4: Able to develop comprehensive insight and mindset according to the science and field of the animal industry
2. CP 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight
3. CP 13: Able to apply animal technology that is oriented towards improving production, efficiency, quality, and sustainability based on mastery of animal science including breeding, feed, processing of products, marketing management and organizing a sustainable animal production system, and applying entrepreneurial concepts

CLO

After taking this course, the students are able to:

1. Describe the strategic role and development of the feed industry
2. Describe the production process in the feed industry
3. Design and make the feed mill layout
4. Carry out a feasibility study for the feed industry

Brief Course Description

The course of the forage industry discusses the strategic role and development of the feed industry in Indonesia, procurement and quality control of feed raw materials, feed industry building and equipment, feed industry layout, linear program application in the feed industry, feed formulation using software, logistics and distribution management, feed production processes, quality control of finished feed, marketing of feed industry products, organizational structure of feed industry, and feasibility studies and regulations of the feed industry.

Topics

1. Strategic role and development of the feed industry in Indonesia
2. Procurement and quality control of feed raw materials
3. Feed industry building and equipment
4. Feed industry layout
5. Linear program application in the feed industry
6. Feed formulation using software
7. Logistics and distribution management
8. Feed production processes
9. Quality control of finished feed
10. Marketing of feed industry products
11. Organizational structure feed industry
12. Feasibility studies and regulations of the feed industry

References

Learning Media

	1. Powerpoint 2. Reference books 3. Video	1. Laptop 2. LCD
Teaching Team	Eko Widodo, Dr. Ir. M.Agr.Sc., MSc. Siti Chuzaemi, Prof. Dr. Ir., MS. IPU.ASEAN Eng Hartutik, Prof. Dr. Ir., MP. IPU ASEAN Eng Kusmartono, Prof. Dr. Ir. Osfar Sjofjan, Dr. Ir. M.Sc. IPU ASEAN Eng Mashudi, Dr. Ir. M.Agr.Sc. IPM Marjuki, Dr. Ir., M.Sc Irfan H. Djunaidi, Dr. Ir., M.Sc. IPM M. Halim Natsir, Dr. Ir. S.Pt., MP. IPM Yuli Frita Nuningtyas, S.Pt., MSc. MP	
Prerequisite Courses		

Week	Sub-CLO	Indicator	Learning Materials/ Topics	Learning Methods	Criteria & Form of Assessment	Weighted Score (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Understand the strategic role and development of the feed industry	Able to explain the strategic role and development of the feed industry	Introduction, Strategic role, and development of the Feed Industry in Indonesia	Lectures and Discussions	Pretest	5
2	Understand the procurement of feed raw materials	Explain the procedure for procuring feed materials	Procurement of feed raw materials	Lectures and Discussions		5
3	Understand the material of quality control of feed materials	Explain the difference in the quality of feed materials	Quality control of feed materials	Lectures and Discussions		10
4	Able to recognize the type of feed industry equipment	Explain and select the proper feed industry equipment	Feed industry buildings and equipment	Lectures and Discussions	Structured Assignments	10
5	Able to know the type of feed industry equipment	Explain and select the proper feed industry equipment	Feed industry buildings and equipment	Lectures and Discussions	Quizzes	5
6	Able to understand the	Describe the feed industry layout	Feed industry layout	Lectures, presentations,		5

	material of feed factory layout			and Discussions		
7	Able to understand the linear program in the feed industry	Able to use the linear program application in the feed industry	The linear program application in the feed industry	Lectures and Discussions		10
8	MIDTERM EXAM					
9	Able to understand feed formulation software	Able to operate feed formulation software	Feed formulation using software	Lectures and Discussions		5
10	Able to understand the logistics and feed distribution	Describe logistics management and feed distribution	Logistics and distribution management	Lectures and Discussions		10
11	Able to understand feed production processes	Know the steps of the production process and the quality produced	Feed production processes	Lectures and Discussions		10
12	Able to understand feed production processes	Know the steps of the production process and the quality produced	Feed production processes	Lectures and Discussions	Structured Assignments	10
13	Able to understand the material of quality control for the production process and finished feed	Able to implement quality control production and finished feed	Quality control for the production process and finished feed	Lectures and Discussions	Quizzes	5
14	Able to know organizational management	Explain the position of the workplace in the organization	Organizational management	Lectures and Discussions	Presentation	5
15	Able to understand how to conduct a feasibility study for the establishment of the feed industry	Conduct a feasibility study	Feasibility Study and feed industry regulations	Lectures, Presentations, and Discussions		5
16	FINAL EXAM					

ASSESSMENT RUBRIC

	UNIVERSITY OF BRAWIJAYA FACULTY OF ANIMAL SCIENCE DEPARTMENT OF ANIMAL SCIENCE UNDERGRADUATE STUDY PROGRAM OF ANIMAL SCIENCE		
Course	Animal Feed Industry		
Score Level	CLO and PLO	Conversion	PLO Score
PLO 4: Able to develop comprehensive insight and mindset according to the science and field of the animal industry CLO 1: Describe the strategic role and development of the feed industry			
Very Good (4)	Have **comprehensive** abilities to explain the strategic role and development of the animal feed industry	80-100	
Good (3)	Have **good** abilities to explain the strategic role and development of the animal feed industry	70-79,9	
Moderate (2)	Have **moderate** abilities to explain the strategic role and development of the animal feed industry	60-69,9	
Poor (1)	Have **poor** abilities to explain the strategic role and development of the animal feed industry	<60	
Score Level	CLO and PLO	Conversion	PLO Score
LO 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight LO 13: Able to apply animal technology that is oriented towards improving production, efficiency, quality, and sustainability based on mastery of animal science including breeding, feed, processing of products, marketing management and organizing a sustainable animal production system, and applying entrepreneurial concepts CLO 2: Describe the production process in the feed industry			
Very Good (4)	Have **comprehensive** abilities to explain the production process in the feed industry	80-100	
Good (3)	Have **good** abilities to explain the production process in the feed industry	70-79,9	
Moderate (2)	Have **moderate** abilities to explain the production process in the feed industry	60-69,9	
Poor (1)	Have **poor** abilities to explain the production process in the feed industry	<60	
Score Level	CLO and PLO	Conversion	PLO Score
CP 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight			

CP 13: Able to apply animal technology that is oriented towards improving production, efficiency, quality, and sustainability based on mastery of animal science including breeding, feed, processing of products, marketing management and organizing a sustainable animal production system, and applying entrepreneurial concepts CLO 3: Design and make feed mill layout			
Very Good (4)	Have **comprehensive** abilities to design and make feed mill layout	80-100	
Good (3)	Have **good** abilities to design and make feed mill layout	70-79,9	
Moderate (2)	Have **moderate** abilities to design and make feed mill layout	60-69,9	
Poor (1)	Have **poor** abilities to design and make feed mill layout	<60	
Score Level	CLO and PLO	Conversion	PLO Score
CP 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight CLO 4: Carry out a feasibility study for the feed industry			
Very Good (4)	Have **comprehensive** abilities to carry out a feasibility study for the feed industry	80-100	
Good (3)	Have **good** abilities to carry out a feasibility study for the feed industry	70-79,9	
Moderate (2)	Have **moderate** abilities to carry out a feasibility study for the feed industry	60-69,9	
Poor (1)	Have **poor** abilities to carry out a feasibility study for the feed industry	<60	

Formula to Calculate PLO Score: $\frac{Level\ Skor}{\sum level\ skor} \times \frac{\sum CLO}{\sum PLO} \frac{Level\ Skor}{\sum level\ skor} \times \frac{\sum CLO}{\sum PLO}$

CLO Score Calculation

Assessed components	Component Weights	CLO Weight on the Score			
		CLO 1	CLO 2	CLO 3	CLO 4
Midterm Exam	0.3	0.3	0.7		
Final Exam	0.3			0.5	0.5
Practicum	0.2		1		
Assignment	0.05	0.25	0.25	0.25	0.25
Quiz	0.05	0.25	0.25	0.25	0.25
Presentation	0.1			1	
CLO WEIGHT					

PLO Score Calculation

CLO	CLO Score	CLO Weight	PLO		
			PLO 4	PLO 12	PLO 13
CLO 1			1.0		
CLO 2				0.5	0.5
CLO 3				0.5	0.5
CLO 4				1.0	

Basic Format for the Lecture Portfolio

	UNIVERSITY OF BRAWIJAYA **FACULTY OF ANIMAL SCIENCE** **STUDY PROGRAM OF ANIMAL SCIENCE**

Course: Animal Feed Industry	Code:	RMK:	Semester: 7

Lecturers	Eko Widodo, Dr. Ir. M.Agr.Sc., MSc. Siti Chuzaemi, Prof. Dr. Ir., MS. IPU.ASEAN Eng Hartutik, Prof. Dr. Ir., MP. IPU ASEAN Eng Kusmartono, Prof. Dr. Ir. Osfar Sjofjan, Dr. Ir. M.Sc. IPU ASEAN Eng Mashudi, Dr. Ir. M.Agr.Sc. IPM Marjuki, Dr. Ir., M.Sc Irfan H. Djunaidi, Dr. Ir., M.Sc. IPM M. Halim Natsir, Dr. Ir. S.Pt., MP. IPM Yuli Frita Nuningtyas, S.Pt., MSc. MP

Introduction (Describe the necessary explanation about this course, the experiences that have been done)

The course of the forage industry discusses the strategic role and development of the feed industry in Indonesia, procurement and quality control of feed raw materials, feed industry building and equipment, feed industry layout, linear program application in the feed industry, feed formulation using software, logistics and distribution management, feed production processes, quality control of finished feed, marketing of feed industry products, organizational structure of feed industry, and feasibility studies and regulations of the feed industry.

1	**Objectives** (describe general and specific course objectives)
	After completing this course students are able to: 1. Describe the strategic role and development of the feed industry 2. Describe the production process in the feed industry 3. Design and make the feed mill layout 4. Carry out a feasibility study for the feed industry
2	**Learning Strategies** (describe the strategy used to achieve the course objective - CLO)
	Learning strategies are carried out in lectures, including giving lectures, discussions, structured assignments, quizzes, and group presentations.
3	**Lecture Management** (describe the lecture management: lectures, tutorials, practicum, assignments, major assignments, etc.)
	1) *Lecture: 100 minutes/meeting (14 meetings)* 2) *Practicum 150 minutes/meeting (14 meetings)* 3) *Structured Assignments/quizzes/group presentations:*

	4) *Attendance: 80% of the total attendance*
4	**Lecture Contents** (explain its suitability with the applicable curriculum)
	The topics in this course include: 1. Strategic role and development of the feed industry in Indonesia 2. Procurement and quality control of feed raw materials 3. Feed industry building and equipment 4. Feed industry layout 5. Linear program application in the feed industry 6. Feed formulation using software 7. Logistics and distribution management 8. Feed production processes 9. Quality control of finished feed 10. Marketing of feed industry products 11. Organizational structure feed industry 12. Feasibility studies and regulations of the feed industry
5	**Lecture Participants** (provide an overview of the lecture participants)
	The lecture participants are the 7th-semester students
6	**Attendance Percentage** (% lecturer attendance; % student attendance)
	% of lecturer attendance: 100% % of student attendance: 80%
7	**Evaluation System** (explain the homework, quizzes, group assignments, practicum, etc.)
	Midterm Exam: 30% *Final Exam: 30%* *Pass the Practicum Test: 30%* *Structured Assignments/quizzes: 10%*
8	**Class Observation** (explain important and interesting things that were encountered during the lecture)
9	**Learning Outcomes** (explain the achievement of the objectives that have been set, also include the learning achievements that can be explained)
	The expected learning outcomes are: CP 4: Able to develop comprehensive insight and mindset according to the science and field of the animal industry CP 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight CP 13: Able to apply animal technology that is oriented towards improving production, efficiency, quality, and sustainability based on mastery of animal science including breeding, feed, processing of products, marketing management and organizing a sustainable animal production system, and applying entrepreneurial concepts
10	**Obstacles** (provide an overview of the main obstacles in the learning process)

11	**Score Distribution** (provide the score distribution following the learning achievements of this course)
	Midterm Exam: 30% *Final Exam: 30%* *Pass the Practicum Test: 30%* *Structured Assignments/quizzes: 10%*
12	**Conclusion**
13	**Improvement Recommendations**
	Appendices:
	1. 2. etc.