COURSE LEARNING PLAN

UNIVERSITY OF BRAWIJAYA
FACULTY OF ANIMAL SCIENCE
DEPARTMENT OF ANIMAL SCIENCE
UNDERGRADUATE STUDY PROGRAM OF ANIMAL SCIENCE
LEARNING PLAN OF Miscellaneous Animal Production

Course	Code	Weight (credits)	Semester	Compilation Date
Miscellaneous Animal Production		3	3	July 27, 2020

Authorization	Course Coordinator	Ka PS S1	Vice Dean 1
	Dr. Ir. Sri Minarti, MP	Dr. Herly Evanuarini	Dr. Halim Natsir

Learning Outcomes (LO)

PLO

1. LO 4: Able to develop comprehensive insight and mindset according to the science and field of the animal industry.
2. LO 5: Able to examine the implications of the development or implementation of science and technology that consider and apply humanities values in accordance with their expertise based on scientific principles, procedures, and ethics to produce excellent solutions and ideas.
3. LO 6: Able to apply biological science, physiology, nutrition science, breeding science, animal raising management to comprehend the concept and implement it in the field of animal science.
4. LO 11: Able to show performance, both independently and in teamwork (inter- and multi-disciplinary), identify and analyze to solve problems in quality and measurable way

CLO

1. Able to identify various types of animals in Indonesia (LO 4, LO 6)
2. Able to explain the concept of various animal production (LO 5, LO 6)
3. Able to compare productivity between strains in a commodity of various animals (LO 5, LO 6, LO 11)

Brief Course Description

This course discusses commodities of Various Animals with its various aspects. The subject areas of the Various Animal Production Science include: breed, housing, feed, reproduction, pests, and diseases. This course connects the topics with reality

	in society so that it is relevant to student needs. The commodities to be provided are honey bees, rabbits, swallows, and silkworms.
Topics	1. INTRODUCTION - Theory - Forms of learning - Assessment - References - Definition of Various Animals - History - Breeding of rabbits, swallows, bees, and silkworms 2. Breeding of Rabbits: - Breed - Housing - Feed - Reproduction - Pests and diseases 3. Breeding of Honey Bees: - Breed - Housing - Feed - Reproduction - Pests and diseases 4. Breeding of Silkworms: - Breed - Housing - Feed

	- Reproduction - Pests and diseases 5. Breeding of Swallows: - Breed - Housing - Feed - Reproduction - Pests and diseases
References	
Learning Media	Software / Hardware
Teaching Team	1. Dr. Ir. Sri Minarti, MP 2. Prof. Dr.Ir. Moch, Junus, MS 3. Ir. Nur Cholis, Msi 4. Prof. Dr. Ir. Woro Busono, MS
Prerequisite Courses	Animal Biology, Anatomy, and Animal Physiology

Week	Sub-CLO	Indicator	Learning Materials / Topics	Learning Methods	Criteria & Form of Assessment
(1)	(2)	(3)	(4)	(5)	(6)
1	- Understanding the course material and the methods used - Understanding various animal groups - Understanding the history of the development of	The students are able to: - explain the differences in various animal groups and their	Introduction: Competence - Theory - Form of learning - Assessment	Lectures, discussions, assignments	5%

	commodities of various animals	breeding history	- References - Definition of Various Animals - History - Breeding of rabbits, swallows, bees, and silkworms		
2	- Able to identify breeds from various strains of rabbit commodity - Able to understand the types, feed needs of rabbits, and the feed management	The students are able to: - identify the strain and feeding in rabbit	Breeding of Rabbit: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%
3	- Able to select materials and design housing in accordance with the needs of rabbit - Able to breed rabbits	The students are able to: - make housing and breed the rabbit	Breeding of Rabbit: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%
4	- Able to understand the early symptoms of various types of diseases and the prevention of predators.	The students are able to: - understand about symptoms of diseases and prevention of predators	Breeding of Rabbit: - Breed - Housing - Feed - Reproduction	Lectures, discussions, assignments, practicum	5%

			- Pests and diseases		
5	- Able to identify breeds from various strains of honey bee commodity - Able to understand the types, feed needs of honey bees, and the feed management	The students are able to: - identify the strain and feeding in honey bee	Breeding of Honey Bee: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%
6	- Able to select materials and design a beehive in accordance with the needs of honey bee - Able to breed honey bees	The students are able to: - make a beehive and breed the honey bee	Breeding of Honey Bee: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	10%
7	- Able to understand the early symptoms of various types of diseases and the prevention of predators.	The students are able to: - understand about symptoms of diseases and prevention of predators	Breeding of Honey Bee: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%
8	- Able to identify breeds from various strains of silkworm commodity	The students are able to: - identify the strain and feeding in silkworm	Breeding of Silkworm: - Breed - Housing - Feed	Lectures, discussions, assignments, practicum	10%

			- Reproduction - Pests and diseases		
9	- Able to understand the types, feed needs of silkworms, and the feed management	The students are able to: - identify the strain and feeding in silkworm	Breeding of Silkworm: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	10%
10	- Able to select materials and design housing in accordance with the needs of silkworm - Able to breed silkworm	The students are able to: - make housing and breed the silkworm	Breeding of Silkworm: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%
11	- Able to understand the early symptoms of various types of diseases and the prevention of predators.	The students are able to: - understand about symptoms of diseases and prevention of predators	Breeding of Silkworm: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	10%
12	- Able to identify breeds from various strains of swallow commodity	The students are able to: - identify the strain and	Breeding of Swallow: - Breed - Housing	Lectures, discussions, assignments, practicum	10%

	- Able to understand the types, feed needs of swallow, and the feed management	feeding in swallow	- Feed - Reproduction - Pests and diseases		
13	- Able to select materials and design a cage in accordance with the needs of swallow - Able to breed swallow	The students are able to: - make a cage and breed the swallow	Breeding of Swallow: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	10%
14	- Able to understand the early symptoms of various types of diseases and the prevention of predators.	The students are able to: - understand about symptoms of diseases and prevention of predators	Breeding of Swallow: - Breed - Housing - Feed - Reproduction - Pests and diseases	Lectures, discussions, assignments, practicum	5%

ASSESSMENT RUBRIC

<table>
<tr><td>  </td><td>UNIVERSITY OF BRAWIJAYA
FACULTY OF ANIMAL SCIENCE
DEPARTMENT OF ANIMAL SCIENCE
UNDERGRADUATE STUDY PROGRAM OF ANIMAL SCIENCE</td></tr>
<tr><td>Course</td><td>VARIOUS ANIMAL PRODUCTION SCIENCE</td></tr>
<tr><td>PLO & CLO Matrix</td><td>
<table>
<tr><td rowspan="2">CLO</td><td colspan="3">Program Learning Outcome (PLO)</td></tr>
<tr><td>4</td><td>5</td><td>13</td></tr>
<tr><td>CLO 1</td><td>x</td><td></td><td>x</td></tr>
<tr><td>CLO 2</td><td></td><td>x</td><td></td></tr>
<tr><td>CLO 3</td><td>x</td><td></td><td></td></tr>
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<tr><td>PLO Score Calculation</td><td>$\frac{\text{Level Skor}}{\sum \text{Level skor}} \times \frac{\sum \text{CLO}}{\sum \text{PLO}}$</td></tr>
<tr><td>Score Level</td><td>CLO and PLO</td><td>Conversion</td><td>PLO Score</td></tr>
<tr><td>PLO 4</td><td colspan="3">Able to develop comprehensive insight and mindset according to the science and field of the animal industry</td></tr>
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PLO 6	Able to apply biological science, physiology, nutrition science, breeding science, animal raising management to comprehend the concept and implement it in the field of animal science		
CLO 1	Able to identify various types of animals in Indonesia (LO 4, LO 6)		
Very Good (4)	Showing the ability to identify the Types of Various Animals **comprehensively** in Indonesia	80-100	0.5
Good (3)	Showing the ability to identify the Types of Various Animals **properly** in Indonesia	70-79	0.375
Moderate (2)	Showing the ability to identify the Types of Various Animals **limitedly** in Indonesia	60-69	0.25
Poor (1)	Showing the ability to identify the Types of Various Animals **very limitedly** in Indonesia	<60	0.125
Score Level	CLO and PLO	Conversion	PLO Score
PLO 5	Able to examine the implications of the development or implementation of science and technology that consider and apply humanities values in accordance with their expertise based on scientific principles, procedures, and ethics to produce excellent solutions and ideas		
PLO 6	Able to apply biological science, physiology, nutrition science, breeding science, animal raising management to comprehend the concept and implement it in the field of animal science		
CLO 2	Able to explain the concept of various animal production (LO 5, LO 6)		
Very Good (4)	Showing the ability to explain the concept of various animal production **comprehensively**	80-100	0.5
Good (3)	Showing the ability to explain the concept of various animal production **properly**	70-79	0.375
Moderate (2)	Showing the ability to explain the concept of various animal production **limitedly**	60-69	0.25

Poor (1)	Showing the ability to explain the concept of various animal production **very limitedly**	<60	0.125
Score Level	CLO and PLO	Conversion	PLO Score
PLO 5	Able to examine the implications of the development or implementation of science and technology that consider and apply humanities values in accordance with their expertise based on scientific principles, procedures, and ethics to produce excellent solutions and ideas		
PLO 6	Able to apply biological science, physiology, nutrition science, breeding science, animal raising management to comprehend the concept and implement it in the field of animal science		
PLO 11	Able to show performance, both independently and in teamwork (inter- and multi-disciplinary), identify and analyze to solve problems in quality and measurable way		
CLO 3	Able to compare productivity between strains in a commodity of Various Animals (LO 5, LO 6, LO 11)		
Very Good (4)	Showing the ability to compare productivity between strains of commodities of various animals **comprehensively**	80-100	
Good (3)	Showing the ability to compare productivity between strains of commodities of various animals **properly**	70-79	
Moderate (2)	Showing the ability to compare productivity between strains of commodities of various animals **limitedly**	60-69	
Poor (1)	Showing the ability to compare productivity between strains of commodities of various animals **very limitedly**	<60	

	UNIVERSITY OF BRAWIJAYA **FACULTY OF ANIMAL SCIENCE** **STUDY PROGRAM OF ANIMAL SCIENCE** **PORTFOLIO OF Miscellaneous Animal Production COURSE**		
Miscellaneous Animal Production	Code:	RMK:	Semester: Even
Supporting Lecturers	1. Dr. Ir. Sri Minarti, MP, IPM, Asean Eng 2. Prof. Dr. Ir. Moch. Junus, MS 3. 3. Ir. Nur Cholis, M.Si, IPM, Asean Eng 4. Prof. Dr. Ir. Woro Busono, MS		

Introduction (Describe the explanation needed about this course, the experiences that have been encountered)

This course discusses commodities of Various Animals with its various aspects. The subject areas of the Various Animal Production Science include: breed, housing, feed, reproduction, pests, and diseases. This course connects the topics with reality in society so that it is relevant to student needs. The commodities to be provided are honey bees, rabbits, swallows, and silkworms.

1	**Objectives** (Describe general and specific course objectives)
	The objectives of presenting the TLT Course are: 1. The students able to identify various types of animal in Indonesia 2. The students able to explain the concept of various animal production 3. The students able to compare productivity between strains in a commodity of various animals
2	**Learning Strategies** (Describe the strategy used to achieve the course objective - CLO)
	The strategies to achieve the CLO include: a. Transferring the lecturer knowledge to students in face-to-face (tutorial) and online activities. b. Independent learning carried out by the students to increase knowledge from various reference sources (e-books, journals, etc.) c. The students do structured assignments provided by the course supporting lecturers d. The students carry out practicum in online and offline laboratories
3	**Lecture Management** (Describe the lecture management: lectures, tutorials, practicum, assignments, major assignments, etc.)

The lectures are managed by carrying out several PBM activities, including:

a. Lecture/Face-to-Face/Tutorial: 100 minutes per week for 1 semester
b. Structured Assignments
c. Independent Learning
d. Practicum: 50 minutes per week for 1 semester

Materials	Lecture Contents (minutes)			
	Lecture/Tutorial	Structured Assignments	Independent Learning	Practicum
INTRODUCTION	√ (1·100 minutes)			
Breeding of Rabbits	√ (3·100 minutes)	√	√	√ (3·50 minutes)
Breeding of Honey Bees	√ (3·100 minutes)	√	√	√ (3·50 minutes)
Breeding of Silkworms	√ (4·100 minutes)	√	√	√ (4·50 minutes)
Breeding of Swallows	√ (3·100 minutes)	√	√	√ (3·50 minutes)

4	**Lecture Contents** (explain its suitability with the applicable curriculum)
	1. INTRODUCTION - Theory - Forms of learning - Assessment - References - Definition of Various Animals - History - Breeding of rabbits, swallows, bees, and silkworms 2. Breeding of Rabbits: - Breed - Housing - Feed - Reproduction - Pests and diseases 3. Breeding of Honey Bees: - Breed - Housing - Feed - Reproduction - Pests and diseases 4. Breeding of Silkworms: - Breed - Housing - Feed - Reproduction - Pests and diseases 5. Breeding of Swallows: - Breed

	- Housing - Feed - Reproduction - Pests and diseases
5	**Lecture Participants** (provide an overview of the lecture participants)
	The lecture participants are 3rd semester students of the Undergraduate Study Program of Animal Science, with a max number of participants of 40 students/class. The students can enroll in this course after taking the Anatomy and Animal Physiology, Biology, Animal Behavior courses.
6	**Attendance Percentage** (100% lecturer attendance; 80% student attendance)
	The attendance requirement for students to be able to take part in the PBM evaluation is 80% (referring to the Academic Guidelines of the Faculty of Animal Science of UB 2016/2017)
7	**Evaluation System** (explain the homework, quizzes, group assignments, practicum, etc.)
	The PBM evaluation refers to the Academic Guidelines for the Faculty of Animal Science 2016/2017, with the assessment components including Midterm Exam (UTS), Final Exam (UAS), Practicum, and Structured Assignments with the weight of each component as follows: a. Midterm Exam 30 % b. Final Exam 30 % c. Practicum 20 % d. Structured Assignments/Quiz 20% The learning outcomes of the IPAT course performance instrument is attached (Assessment Rubric)
8	**Class Observation** (explain important and interesting things that were encountered during the lecture)
	Attendance, Activeness in discussions and Compliance with Tasks
9	**Learning Outcomes** (explain the achievement of the objectives that have been set, also include the learning achievements that can be explained)
	The learning outcomes of the IPAT course in even semester of 2019/2020 for class A are as follows:

	1. Able to develop comprehensive insight and mindset according to the science and field of the animal industry. 2. Able to examine the implications of the development or implementation of science and technology that consider and apply humanities values in accordance with their expertise based on scientific principles, procedures, and ethics to produce excellent solutions and ideas. 3. Able to apply biological science, physiology, nutrition science, breeding science, animal raising management to comprehend the concept and implement it in the field of animal science. 4. Able to show performance, both independently and in teamwork (inter- and multi-disciplinary), identify and analyze to solve problems in quality and measurable way
10	**Obstacles** (provide an overview of the main obstacles in the learning process)
	a.
11	**Score Distribution** (provide the score distribution following the learning achievements of this course)
	The average achievement score of the learning outcomes of the IPAT course a. Midterm Exam 30 % b. Final Exam 30 % c. Practicum 20 % d. Structured Assignments/Quiz 20%
12	**Conclusion**
13	**Improvement Recommendations**
	1.
	Appendices:
	1. Assessment rubric 2. Midterm Exam questions, Final Exam questions 3. Structured Assignment Paper 4. Practicum Report 5. Records of the quality of the PBM evaluation score 6. etc.