UNIVERSITAS SUMATERA UTARA (USU)
FACULTY OF AGRICULTURE
ANIMAL SCIENCE STUDY PROGRAM

Documen Code
(to be follow

SEMESTER LEARNING PLAN (RPS)

COURSE (MK)	CODE	Course Group	WEIGHT (credits)	SEMESTER	Date of Prepara
Animal Reproduction Science	PTN2105	Exact	3	III	August 16, 20

AUTHORIZATION/ATTESTATION	RPS Developer Lecturer	Approved Head of Study Program	Knowing Chairman of LINKUP USU
	Prof. Dr. Ir. Sayed Umar, MS. Dr. Ir. Usman Budi, S.Pt., M.Si. Fuad Hasan, S.Pt., M.Si. Dian Tria Fatmila, S.Pt., M.Si.	Dr. Ir. Ma'ruf Tafsin, M.Si., IPM.	Prof. Dr. Dwi Suryanto M.Sc.

Learning Outcomes	LO-Study Program Charged to Course	
	LO03	Able to identify, formulate, and find solutions to problems related to the field of animal husbandry
	LO08	Able to manage integrated and sustainable livestock cultivation based on integration with other agroecosystems and the l applications in processing livestock products and waste
	LO11	Able to develop and understand and apply a variety of best techniques and methods that combine theory and practice rele to animal husbandry expertise.
	Course Learning Outcomes (CLO)	**CLO Weight**
	CLO0307: Able to explain the reproductive system, the breeding process and efforts to improve reproductive efficiency and solve problems in the field of reproduction.	60%
	CLO0803: Able to apply the reproductive system, breeding process and efforts to improve reproductive efficiency.	20%
	CLO1105: Able to apply the reproductive system, breeding process and efforts to improve reproductive efficiency.	20%
	End Capability of Each Learning Stage (Sub-CLO)	
	Sub-CLO1	After attending this lecture, students will be able to explain the function of reproductive organs in male and female livesto
	Sub-CLO2	After attending this lecture, students will be able to explain reproductive endocrinology in male and female livestock.

	Sub-CLO3	After attending this lecture, students will be able to explain the formation of male and female gamete cells.
	Sub-CLO4	After attending this lecture, students will be able to explain spermatozoa transport and fertilization.
	Sub-CLO5	After attending this lecture, students will be able to explain the process of cell division to implantation.
	Sub-CLO6	After attending this lecture, students will be able to explain embryogenesis in ruminants and poultry.
	Sub-CLO7	After attending this lecture, students will be able to explain the parturition and lactation process and apply approp post-partum management.
	Sub-CLO8	After attending this lecture, students will be able to apply reproductive efficiency efforts in livestock through approp calculations.
	Sub-CLO9	After attending this lecture, students will be able to analyze reproductive disorders in livestock and apply approp treatments.

Correlation of CLO with Sub-CLO

	Sub-CLO1	**Sub-CLO2**	**Sub-CLO3**	**Sub-CLO4**	**Sub-CLO5**	**Sub-CLO6**	**Sub-CLO7**	**Sub-CLO8**	**Sub-CLO9**
CLO0307	√	√	√	√	√	√	√	√	√
CLO0803							√	√	√
CLO1105							√	√	√

Brief Course Description

After completing the 3rd semester of the Animal Reproduction Science course, students are expected to become graduates who are ab explain the physiological conditions of male and female reproduction, endocrinology in female and male livestock, spermatozoa transpor fertilization, cell division, reproductive efficiency, and reproductive disorders in livestock. This course is conducted in Indonesian a language of instruction, and 14 face-to-face meetings consisting of material presentation in class both online and offline and practicum. Stu competence is evaluated through project-based learning (PjBL), quizzes, assignments, mid-test, and final-test.

Study Material:

Learning Materials

BK03 Animal Production Science

1. Physiology of male reproductive organs
2. Physiology of female cattle reproductive organs
3. Male livestock reproductive hormones
4. Female cattle reproductive hormones
5. Gamete cell formation (spermatogenesis and oogenesis)
6. Spermatozoa transport and fertilization

	7. Cell division and implantation 8. Embryogenesis (ruminants) 9. Embryogenesis (poultry) 10. Partus and lactation 11. Post-partum (up to weaning) 12. Reproductive efficiency in livestock 13. Reproductive disorders in livestock 14. Management of reproductive disorders in livestock
References	**Main:** 1. Senger, P. L. 2012. Pathways to Pregnancy & Parturition 3rd ed. Washington: Current Conceptions, Inc 2. Hafez ESE, Hafez B. 2000. Reproduction in Farm Animals seventh edition. USA: Lippincott Williams & Wilkins 3. Yekti, A. P. A., T. Susilawati, M. N. Ihsan, S. Wahjuningsih. 2017. Fisiologi Reproduksi Ternak: Dasar Manajemen Reproduksi. Malan UB Press 4. Susilawati T. 2011. Spermatology. Malang: UB Press
	Additional: 1. Trisunuwati, P., D. Zwart, A. Kloosterman, R. de Jong. 2017. Animal Health and Disease Prevention. Malang: UB Press 2. Pineda, M., dan M. P. Dooley. 2008. McDonald's Veterinary and Endocrinology and Reproduction 5th ed. Iowa: Iowa State Press 3. Etches, R. J. 1996. Reproduction in Poultry. Wallingford: CABI Publishing 4. Bearden H.J, dan J.W. Fuquay.1992. Applied Animal Reproduction 2nd ed, Bearden. Virginia: Reston Publishing Company 5. Suresh S. H., M. K. Tandle, S. D. Sonwane, dan R. G. Bijurkar. 2009. Reproductive Disorders of Livestock: Prevention and Manager Udaipur: Bio-Green Books 6. Ball, P. J. H. dan A. R. Peters. 2004. Reproduction in Cattle 3rd ed. Hoboken, NJ: John Wiley & Sons 7. Suyadi dan S. Wahjuningsih. 2021. Fisiologi Reproduksi dan Inseminasi Buatan pada Unggas. Malang: UB Press 8. National and international journals 9. Practicum guidebook
Lecturers	1. Prof. Dr. Ir. Sayed Umar, MS. 2. Dr. Ir. Usman Budi, S.Pt., M.Si. 3. Fuad Hasan, S.Pt., M.Si. 4. Dian Tria Fatmila, S.Pt., M.Si.
Conditional Subjects	Students are expected to have completed the following courses -

	End ability of each learning stage (Sub-CLO)	**Assessment**	**Form of Learning; Learning Methods; Student Assignment; [Estimated Time]**	**Study Material (Learning Material)**	**Assess t Wei (%**

		Indicator	Criteria and Techniques				
(1)	**(2)**	**(3)**	**(4)**	**Asynchronous (5)**	**Synchronous (6)**	**(7)**	**(8)**
1-2	Sub-CLO1: After attending this lecture, students will be able to explain the function of reproductive organs in male and female livestock.	a. Accuracy in explaining the physiology of primary and secondary organs and accessory glands in male cattle. b. Accuracy in explaining the physiology of primary and secondary organs in female livestock	**Criteria:** Using essay and multiple choice assessment rubrics **Techniques:** - **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance b. Download and read the Syllabus (RPS), Learning Implementation Plan (SAP), Course Agreement, and Learning Materials **Moda (*Learning Management System*):** class.usu.ac.id	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	**Subject matter:** a. Primary organ physiology in male cattle b. Secondary organ physiology in Males c. Accessory gland physiology in male cattle d. Primary organ physiology in female cattle e. Secondary organ physiology in female cattle	Thi sub-C will *asses* during final e with weigh 20% (CLO)
3-4	Sub-CLO 2: After attending this lecture, students will be able to explain reproductive	a. Accuracy in explaining the classification and function of reproductive hormones in male and	**Criteria:** Assessment rubric **Techniques:** - **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:**	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion	**Subject matter:** a. Classification and function of hormones b. Mechanisms of action of hormones that regulate	Thi sub-C will *asses* during final e with

	endocrinology in male and female livestock.	female livestock. b. Accuracy in explaining the hormones that regulate reproductive function in male and female livestock.		*Self-Paced Learning* **Activities:** **a.** Attendance **b.** Take a quiz ***Quiz 1:*** Quiz to measure students' understanding of reproductive endocrinology in male and female cattle. **Moda (*Learning Management System*):** class.usu.ac.id	**Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials d. Presentation **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	gamete cell formation c. Mechanisms of action of hormones that regulate puberty d. Mechanisms of action of hormones that regulate the estrous cycle e. Mechanisms of action of hormones that regulate pregnancy f. Mechanisms of action of hormones that regulate parturition	weigh 20% (CLO)
5	Sub-CLO 3: After attending this lecture, students will be able to explain the formation of male and female gamete cells.	a. Accuracy in explaining the process and stages of male gamete cell formation b. Accuracy in explaining the process and stages of female gamete cell formation	**Criteria:** Assessment rubric **Techniques:** Observation **Form:** non-test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:**	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion	**Subject matter:** a. Formation of male gamete cells b. Formation of female gamete cells	Assign t 1: 5 (CLO)

				a. Attendance b. Working on assignments **Assignment 1:** Make a poster of the formation of male and female gamete cells in groups **Moda (*Learning Management System*):** class.usu.ac.id	c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	
6	Sub-CLO 4: After attending this lecture, students will be able to explain spermatozoa transport and fertilization.	a. Accuracy in explaining the process of spermatozoa transportation b. Accuracy in explaining the stages of fertilization	**Criteria:** Assessment rubric **Techniques:** - **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** **a.** Attendance **Moda (*Learning Management System*):** class.usu.ac.id	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials d. Presentation **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	**Subject matter:** a. Spermatozoa transportation process b. Fertilization	This CLO be *asse* during final e with weigh 15% (CLO)

7	Sub-CLO 5: After attending this lecture, students will be able to explain the process of cell division to implantation.	a. Accuracy in explaining the process of cell division b. Accuracy in explaining fertilization	**Criteria:** Assessment rubric **Techniques:** - **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance **Moda (*Learning Management System*):** class.usu.ac.id	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	**Subject matter:** a. Cell division b. Implantation	This CLO be *asse* during final e with weigh 20% (CLO)
8	MID SEMESTER EXAMINATION (UTS)						20%
9-10	Sub-CLO 6: After attending this lecture, students will be able to explain embryogenesis in ruminants and poultry.	Accuracy in explaining the process of embryo formation and development in ruminants and poultry.	**Criteria:** Assessment rubric **Techniques:** - **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/ offline learning b. Class discussion c. Take notes on learning materials	**Subject matter:** a. Embryogenes is in ruminants b. Embryogenes is in poultry	This CLO be *asse* duri UAS a weig 20% (CLO)

				Moda (*Learning Management System*): class.usu.ac.id;	**Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book		
11-12	Sub-CLO 7: After attending this lecture, students will be able to explain the parturition and lactation process and apply appropriate post-partum management.	a. Accuracy in explaining the condition and function of reproductive organs during parturition. b. Accuracy in explaining the morphology and function of plansenta c. Accuracy in explaining the immunologic relationship between mother and fetus d. Accuracy in explaining hormone regulation during mammary gland development e. Accuracy in explaining the process of milk secretion and ejection	**Criteria:** Assessment rubric **Techniques:** Observation **Form:** test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance **Moda (*Learning Management System*):** class.usu.ac.id	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	**Subject matter:** a. Condition and function of reproductive organs at the time of parturition b. Placenta c. Mother-fetus immunologic relationship during pregnancy d. Hormone regulation during mammary gland development e. Milk secretion	This CLO be *asse* duri UAS a weig 20% (CLO CLO and CLO1

13	Sub-CLO 8: After attending this lecture, students will be able to apply reproductive efficiency efforts in livestock through appropriate calculations.	b. Accuracy in explaining the measurement of reproductive efficiency through calculation c. Accuracy in explaining the fertility status of livestock	**Criteria:** Assessment rubric **Techniques:** quiz **Form: test**	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance b. Complete the quiz **Quiz 1:** Quizzes to measure students' understanding of the measurement of reproductive efficiency and fertility status in livestock. **Moda (*Learning Management System*):** class.usu.ac.id	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	**Subject matter:** a. Measurement of reproductive efficiency b. Fertility status of livestock	Quiz 1 (CLO CLO0 an CLO1
14-15	Sub-CLO 9: After attending this lecture, students will be able to analyze reproductive disorders in livestock and apply appropriate treatment.	a. Accuracy in explaining cases of reproductive disorders in livestock b. Accuracy in explaining efforts to handle	**Criteria:** Assessment rubric **Techniques:** Observation **Form:** non-test and test	Independent Activities (KM) + Structured Assignments (PT) (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced*	Face-to-Face (TM) (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:**	**Subject matter:** a. Cases of reproductive disorders in livestock **b.** Efforts to deal with cases of reproductive	PBL: CM: 2 (CLO CLO0 an CLO1

		cases of livestock reproductive disorders		*Learning* **Activities:** a. Attendance b. Completing problem-based learning (PBL) **Problem based learning (PBL):** - Divide the group evenly (lecturer divides) - Each group makes observations on smallholder farms, and fills in the form provided by the lecturer. The observation results will be presented at the end of the lecture meeting. - The results of the observation are complemented by an analysis of treatment	a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Text book	disorders in livestock	

				efforts based on literature review with A4 format, TNR 12 pt, with 4-3-3-3 margins, a maximum of 10 pages along with the results of the observation. **Moda (*Learning Management System*):** class.usu.ac.id			
16	FINAL SEMESTER EXAMINATION (UAS)						20%

Notes in accordance with SN Dikti Permendikbud No 3/2020:

1. Learning Outcomes of Graduates of Study Program (LO-SP) are the abilities possessed by each graduate of Study Program which are internalization of attitudes, mastery of knowledge and skills according to the level of the study program obtained through the learning process.
2. LOs imposed on courses are some of the learning outcomes of study program graduates (LO-SP) used for the formation / development of a course consisting of aspects of attitude, general skills, specific skills and knowledge.
3. Course LO (CLO) is an ability that is specifically described from the ELOs charged to the course, and is specific to the study material or learning material for the course.
4. Course Sub-CP (Sub-CLO) is an ability that is specifically described from CLO which can be measured or observed and is the final ability planned at each stage of learning, and is specific to the learning material of the course.
5. Indicators of ability assessment in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
6. Assessment criteria are benchmarks used as a measure or measure of learning achievement in assessment based on predetermined indicators. Assessment criteria are guidelines for assessors so that the assessment is consistent and unbiased. Criteria can be quantitative or qualitative.
7. Assessment techniques: test and non-test.
8. Forms of learning: Lecture, Reception, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.

9. Learning Methods: *Small Group Discussion*, *Role-Play & Simulation*, *Discovery Learning*, *Self-Directed Learning*, *Cooperative Learning*, *Collaborative Learning*, *Contextual Learning*, *Project Based Learning*, and other equivalent methods.
10. Learning Materials are details or descriptions of study materials that can be presented in the form of several topics and sub-topics.
11. The assessment weight is the percentage of assessment of each sub-CLO achievement which is proportional to the difficulty level of the sub-CLO achievement, and totals 100%.
12. **PB=** Learning **Process**, PT= Structured **Assignment**, **KM=** Independent Activity.

Assessment Design:

CLO Code and Percentage	Sub-CLO Code	Form of Evaluation	Percentage	Total	Evaluation Implementation
CLO0307 (60%)	Sub-CLO1	UTS	5%	60%	Week 8
	Sub-CLO2	UTS	5%		Week 8
	Sub-CLO3	Tasks	5%		Week 5
	Sub-CLO4	UTS	5%		Week 8
	Sub-CLO5	UTS	5%		Week 8
	Sub-CLO6	UAS	15%		Week 10
	Sub-CLO7	UAS	1,66%		Week 16
	Sub-CLO8	Quiz	1,67%		Week 13
	Sub-CLO9	PBL	10%		Week 9
		CM	6.67%		
CLO0803 (20%)	Sub-CLO7	UAS	1,67%	20%	Week 16
	Sub-CLO8	Quiz	1,66%		Week 13
	Sub-CLO9	PBL	10%		Week 15

		CM	6.67%		
CLO1105 (20%)	Sub-CLO7	UAS	1,67%	20%	Week 16
	Sub-CLO8	Quiz	1,66%		Week 13
	Sub-CLO9	PBL	10%		Week 15
		CM	6.67%		
Total			100%	100%	

Assessment Plan:

Form of Evaluation	Sub-CLO	Assessment Instrument [Frequency]		Bill (proof)	Assessment Weight (%)
		Formative	Summative		
Quiz/question and answer	Sub-CLOs 2 and 8	Assessment rubric [2 times]	-	Quiz answers uploaded to class.usu.ac.id	5%
Tasks	Sub-CLOs 3 and 7	Assessment rubric [2 times]	-	Assignments uploaded to class.usu.ac.id	5%
Problem-based learning	Sub-CLOs 7, 8, and 9	-	Assessment rubric [1 time]	Logbook / uploaded worksheets / slides to kelas.usu.ac.id	30%
Case Method	Sub-CLOs 7, 8, and 9	-	Assessment rubric [1 time]	Logbook / uploaded worksheets / slides to kelas.usu.ac.id	20%
Written exam 1	Sub-CLOs 1, 4,	-	Written test	Written test result sheet	20%

(UTS)	and 5		assessment rubric [1 time]		
Written exam 2 (UAS)	Sub-CLO 6	-	Written test assessment rubric [1 time]	Written test result sheet	20%
				Total	100%

Explanation:

a) Quiz 5%
During the semester there will be 1 quizzes held in class. Quizzes will be conducted through e-learning and is scheduled in advance. The material tested is announced by the lecturer and written in the RPS.

b) 5% Assignment
During the semester there will be 1 structured assignments. The assignment given is an effort to add insight by making a resume related to the material written in the RPS.

c) Project-based learning 30%
During the semester there will be case methods, each student will make a paper and report on each case method in groups. Project based learning in this course is conducted 1 times. The papers that have been made will be presented by students. Students will be assessed according to their participation in the presentation and accuracy in the presentation, as well as their participation in the question and answer session when other groups present.

d) Case Method 20%
During the semester there will be case methods, each student will make a paper and report on each case method in groups. Case method in this course is conducted 1 time. The papers that have been made will be presented by students. Students will be assessed according to their participation in the presentation and accuracy in the presentation, as well as their participation in the question and answer session when other groups present.

e) Mid-semester exam (UTS) (mid-test) 20%
The midterm exam covers all the material that has been covered since the beginning of the semester until the 7th meeting both reading and lectures. This exam is conducted in class with multiple choice, short form, and essay questions.

f) Final-semester exam (UAS) (final-test) 20%
The end-of-semester exam covers all the material that has been covered from the 9th to the 15th meeting, both readings and lectures. This exam is conducted in class with multiple choice, short form, and essay questions.

ASSESSMENT RUBRIC

Quiz Scoring Rubric:

Quiz consists of 5 essay questions done on a sheet of paper (done 2 times during 1 semester)

Score per item	Criteria
20	Can answer the question correctly, the steps of working on the problem are correct, and completely correct.
15	The steps of working on the problem are correct, there are few mistakes
10	Most of the steps are correct, there are many errors
5	The steps of working on the problem are not correct, unable to solve the problem

*Maximum score = 100 (5 questions x 20 points)

Teaching Journal/Paper Assessment Rubric:

Assessment Criteria	4 Very good	3 Good	2 Simply	1 Less
Understanding of Learning Topics with Resumed Journals	Understand the topic exactly once (25)	Understand the topic (20)	Does not fully and appropriately understand the topic (15)	Not understanding the topic (10)
Contents	Drafts show understanding participants integrate information that has been learned and/or assigned to read during lectures properly and appropriately. (25)	Drafts demonstrate an understanding of the material covered and integrate some of the information that has been learned and/or assigned to read during lectures. (20)	Drafts show an understanding of the material covered and only integrate a small portion of the information that has been studied and/or assigned to read during the lecture. (15)	Drafts show a lack of understanding of the material discussed so that it is not clear and does not integrate the material. information that has been learned and/or assigned to read during lectures. (10)

Clarity of Writing	All writing ideas are well and clearly conveyed. (25)	Most of the ideas are well-written and clear. (20)	Some of the ideas are well-written and clear. (15)	The idea of the writing is not conveyed well and clearly. (10)
Language Clarity	Uses foreign/Indonesian language well and correctly few grammatical and word choice errors that do not interfere with understanding. (25)	Uses foreign/Indonesian language well and correctly with few grammatical and word choice errors that interfere with understanding. (20)	Uses foreign/Indonesian language fairly well and correctly with some grammatical and word choice errors. (15)	Does not use foreign/Indonesian language properly and correctly as the writing contains many grammatical and word choice errors. (10)
Total	**81-100 (Excellent)**	**61-80 (Good enough)**	**41-60 (Enough)**	**0-40 (Less)**

Group Presentation Task Assessment Rubric:

CATEGORIES	4 Very good	3 Good	2 Simply	1 Less
Group Preparation	The group is fully prepared and has optimized presentation exercises. Mutual complementarity between group members with clear tasks for each group member. (25)	The group seemed reasonably prepared but may need more practice presenting. The responsibilities of each group member need to be identified. (20)	The group made an effort to prepare but did not do any presentation preparation exercises. Tasks and responsibilities are assigned and accepted without careful consideration. (15)	The group seemed to have done no preparation at all for the presentation. Tasks and responsibilities are assigned and accepted randomly. (10)
Presentation Organization	The group presented the content clearly, logically, and systematically, through a	The group presented the content logically and systematically, with an	The group presented the content fairly logically and systematically, but it did not	The group presented the content randomly without any introduction, main idea, or conclusion.

	cohesive introduction, main points, and conclusion. The group used visual aids that effectively supported and reinforced the presentation. (25)	introduction, main idea and conclusion. The group used visual aids that showed a link to the content of the presentation. (20)	contain an introduction, main idea, or conclusion. The group occasionally used visual aids that did not support the content of the presentation. (15)	Groups using unsupportive visual aids or no visual aids at all. (10)
Task Achievement	Each group member is able to demonstrate solid knowledge through their own exposure and elaboration, and deliver the part of the presentation that is assigned to them within the time allotted. (25)	Each group member demonstrates good knowledge through their own exposure and elaboration but in less time than the time allocated to them. (20)	Each group member demonstrated sufficient knowledge but failed to elaborate, and presented his or her part in only half the time allotted to him or her. (15)	Each group member has no knowledge of the content and presents his/her section in less than half the time allocated to him/her. (10)
Mastery of Presentation Content	Each group member demonstrates full understanding of the presentation topic. The main points presented are supported by evidence and critically evaluated. (25)	Each group member demonstrated a good understanding of the presentation topic. Most of the main points are illustrated with relevant evidence. (20)	Each group member demonstrated a good understanding of some aspect of the topic. Some illustrations are given, but not critically evaluated. (15)	Each group member did not seem to understand the presentation topic very well. Some evidence was mentioned, but not integrated in the presentation or evaluated. (10)
Answers to Questions	The group was able to correctly answer almost all the questions asked by the audience about their presentation topic. (25)	The group was able to correctly answer most of the questions asked by the audience about the tropes of their presentation. (20)	The group was able to correctly answer some of the questions the audience asked about their presentation topic. (15)	The group was unable to answer the questions posed by the audience on the topic of their presentation appropriately. (10)

Communication Quality	Group interaction with the audience shows interest and respect for the opinions of others. Responses support effective communication. (25)	Group interaction with an audience shows interest and respect for the opinions of others. Responses generally support effective communication. (20)	Some parts of the interaction in the discussion show interest and respect for others' opinions. (15)	Interaction in the discussion shows disrespect for other people's opinions. Responses do not support effective communication. (10)
Total	**81-100 (Excellent)**	**61-80 (Good enough)**	**41-60 (Enough)**	**0-40 (Less)**

Source: Halimi, Sicily. "Assessment Rubric: Learning Plan Book MK Introduction to Teaching Methods", 2021
Maximum score: 25 x 6 components = 150 points: 1.5 = 100

Essay Writing Exam Scoring Rubric:

Assessment Criteria	**4 Very good**	**3 Good**	**2 Simply**	**1 Less**
Understanding of the Question	Understand the question exactly once (25)	Understand the question (20)	Does not understand the question fully and correctly (15)	Not understanding the question (10)
Contents	Answers show understanding participants integrate information that has been learned and/or assigned to read during lectures properly and appropriately. (25)	Answers demonstrate an understanding of the material in question and integrate some of the information learned and/or assigned to read during the lecture. (20)	Answers show a lack of understanding of the material in question and only integrate a small portion of the information that has been learned and/or assigned to read during the lecture. (15)	The answer shows a lack of understanding of the material in question, so it is not clear and does not integrate the material. information that has been learned and/or assigned to read during lectures. (10)
Clarity of Writing	All writing ideas are well and clearly conveyed. (25)	Most of the ideas are well-written and clear. (20)	Some of the ideas are well-written and clear. (15)	The idea of the writing is not conveyed well and clearly. (10)
Language Clarity	Uses foreign/Indonesian language well and correctly few	Uses foreign/Indonesian language well and	Uses foreign/Indonesian language fairly well and	Does not use foreign/Indonesian language

	grammatical and word choice errors that do not interfere with understanding. (25)	correctly with few grammatical and word choice errors that interfere with understanding. (20)	correctly with some grammatical and word choice errors. (15)	properly and correctly as the writing contains many grammatical and word choice errors. (10)
Total	**81-100 (Excellent)**	**61-80 (Good enough)**	**41-60 (Enough)**	**0-40 (Less)**

Multiple Choice Exam Scoring Rubric:

Score per item	Criteria
100/number of questions	Can answer the question correctly
0	Answers are less precise / not in accordance with the answer key that has been provided

Course Schedule:

Week 1	Material	Teaching Staff
1	Physiology of male reproductive organs	Usman Budi
2	Physiology of female cattle reproductive organs	Usman Budi
3	Male livestock reproductive hormones	Usman Budi
4	Female cattle reproductive hormones	Usman Budi
5	Gamete cell formation (spermatogenesis and oogenesis)	Dian Tria Fatmila
6	Spermatozoa transport and fertilization	Dian Tria Fatmila
7	Cell division and implantation	Dian Tria Fatmila
8	**UTS**	

9	Embryogenesis (ruminants)	Fuad Hasan
10	Embryogenesis (poultry)	Fuad Hasan
11	Partus and lactation	Fuad Hasan
12	Post-partum (up to weaning)	Fuad Hasan
13	Reproductive efficiency in livestock	Sayed Umar
14	Reproductive disorders in livestock	Sayed Umar
15	Management of reproductive disorders in livestock	Sayed Umar
16	**UAS**	