



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

**Documen
Code**
(Follow)

SEMESTER LEARNING PLAN (SLP)

COURSE	CODE	Course Group	CREDIT (credits)		SEMESTER	Date of Compilation
Germplasm of North Sumatra Cattle	PTN3204	Exact	Theory =2	Practice =0	VI	October 2022
AUTHORIZATION / APPROVAL	SLP Developer Lecturer		Vice Dean I		Chairman of LINK-UP USU	
			Dr. Lisnawita, SP, MP		Prof. Dr. Dwi Suryanto M.Sc.	
Learning Outcomes	Learning Outcomes (LO)					
	LO02	Able to apply the concept of leadership and teamwork, communicate, motivate oneself and innovate in completing work in the livestock sector.				
	LO08	Able to manage integrated and sustainable livestock farming based on integration with other agro-ecosystems as well as the latest applications in processing livestock products and waste.				
	Course Learning Outcomes (CLO)					CLO Credit
	CLO0206: Students are able to explain the variety and benefits of genetic resources of endemic livestock in North Sumatra.					47.5%
	CLO0813: Able to identify the concept of adaptation and genetic diversity of local livestock as well as various local livestock conservation and development techniques.					52.5%
	Final Ability of Each Learning Stage (Sub-CLO)					
	Sub-CLO1	After taking this course, students will be able to explain about the basic concept of germplasm and the importance of local livestock conservation				
	Sub-CLO2	After taking this course, students will be able to explain about the diversity of endemic livestock in North Sumatra				
Sub-CLO3	After taking this course, students will be able to understand adaptation and ecology of local livestock					
Sub-CLO4	After taking this course, students will be able to understand technique genetic conservation					

	Sub-CLO5	After taking this course, students will be able to understand local livestock development techniques						
	Sub-CLO6	After taking this lecture, students are able to understand the economic value and benefits of endemic livestock.						
	Sub-CLO7	After taking this lecture, students are able to explain the challenges and opportunities for preserving local livestock.						
Correlation of CLO with Sub-CLO		Sub-CLO1	Sub-CLO2	Sub-CLO3	Sub-CLO4	Sub-CLO5	Sub-CLO6	Sub-CLO7
	CLO0206	√	√				√	√
	CLO0813			√	√	√		√
Brief Description of Course	This course discusses the genetic diversity of local livestock in North Sumatra, including identification, adaptation, and plasma conservation techniques. Students are expected to understand the benefits and economic potential of local livestock as well as conservation strategies to support their sustainability as genetic resource assets.							
Study Material: Learning materials	BK03 Animal Production Science <ol style="list-style-type: none"> 1. Basic concepts of germplasm and the importance of local livestock conservation 2. Diversity of endemic livestock of North Sumatra 3. Adaptation and ecology of local livestock 4. Technique genetic conservation 5. Local livestock development techniques 6. Economic value and benefits of endemic livestock 7. Challenges and opportunities for local livestock conservation 							
Library	Main: <ol style="list-style-type: none"> 1. Budisatria, IGS Widayati, DT, Suhartanto, B., Kustantinah, Mulyadi, H and Santosa, KA 2009. Goat Germplasm in Indonesia. Animal Husbandry, Gajah Mada University. Yogyakarta. 2. Devendra, C. And M. Burns. 1983. Goat Production in The Tropics. Common Wealth Agricultural Bureau. United Kingdom. 3. Kosgey, IS 2004. Breeding objectives and breeding strategies for small ruminants in the tropics. [Ph.D. thesis]. Wageningen: Animal Breeding and Genetics Group, Wageningen University 4. Marzuki, S. 1996. Livestock Breeding Strategy in the Framework of Increasing Sheep Livestock Productivity. Semarang: Faculty of Animal Husbandry 5. Sumantri, C., A. Einstiana, JF Salamena and I. Inounu. 2008. Performance and Phylogenic Relationships between Local Sheep in Indonesia through a Morphological Analysis Approach. JITV 12(1): 42-5 							

	Diponegoro University 6. Warwick, EJ, JM Astuti, & W. Hardjosubroto. 1995. Animal Breeding. Yogyakarta: Gadjah Mada University Press						
	Supporters: 1.						
Supporting lecturer							
Required Courses							
(1)	Final ability of each learning stage (Sub-CLO) (2)	Evaluation		Form of Learning; Learning methods; Student Assignments; [Estimated Time]		Study Materials (Learning materials) (7)	Assessment Criteria (%) (8)
		Indicator (3)	Criteria and Techniques (4)	Asynchronous (5)	Synchronous (6)		
1	Sub-CLO1: After taking this course, students will be able to explain about the basic concept of germplasm and the importance of local livestock conservation	Accuracy in explaining - Definition of germplasm, - The importance of germplasm for the sustainability of livestock resources, the concept of genetic diversity	Criteria: - Technique: <i>Non-test</i>	Asynchronous (5) KM+PT (1 week x 2 credits x 120 minutes) Learning methods: <i>Self-Paced Learning</i> Activity: a. Attendance presence b. Download and read the Syllabus (RPS), Learning Implementation Plan (SAP), Course Agreement, and Learning Materials Mode (Learning Management System): class.usu.ac.id	Synchronous (6) TM (1 week x 2 credits x 50 minutes) Learning methods: a. Lecture b. Discussion Activity: a. Online/offline learning b. Class discussion c. Make notes about learning materials Media: a. Slides/ ppt b. Zoom meeting/ LCD c. Text book	Subject: - Definition of germplasm - The importance of germplasm for the sustainability of livestock resources, the concept of genetic diversity	0%

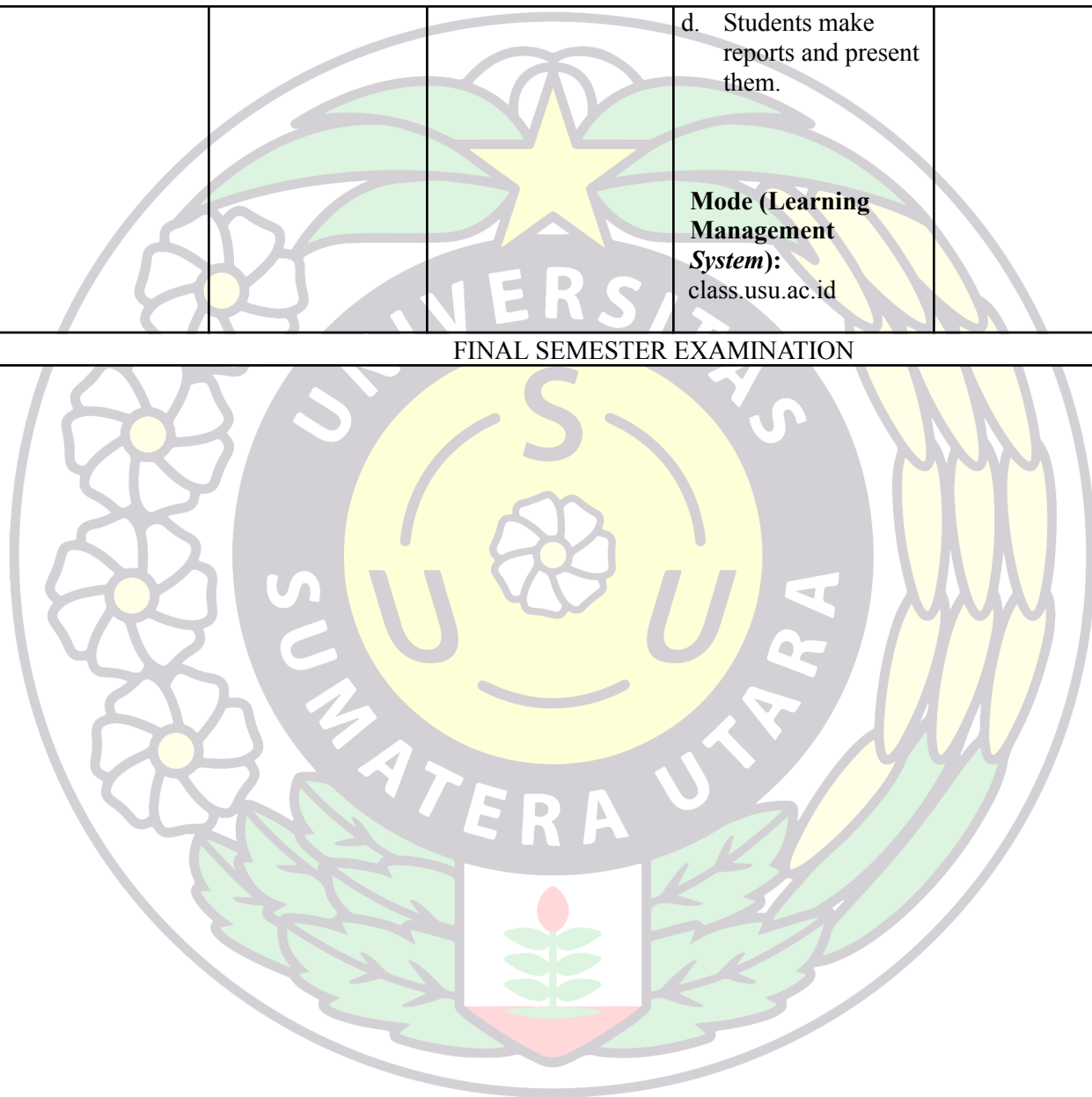
<p>2-3</p>	<p>Sub-CLO2:</p> <p>After taking this course, students will be able to explain about the diversity of endemic livestock in North Sumatra</p>	<p>Accuracy in explaining</p> <ul style="list-style-type: none"> - Species and varieties of endemic livestock of North Sumatra - Diversity of Samosir Goats - Diversity of Estuary Goats - Diversity of river and swamp buffalo 	<p>Criteria: Assessment rubric</p> <p>Technique: Case method</p>	<p>KM+PT (2 weeks x 2 credits x 120 minutes)</p> <p>Learning methods: <i>Self-Paced Learning</i></p> <p>Activity:</p> <ul style="list-style-type: none"> a. <i>Recording attendance</i> b. <i>Completing the quiz</i> <p>Case method 1</p> <ul style="list-style-type: none"> a. Students are divided into several groups b. Students choose one of the livestock germplasm in North Sumatra c. Students identify qualitative, quantitative and diversity characteristics of livestock d. Students make reports and present them. <p>Mode (Learning Management System):</p>	<p>TM (2 weeks x 2 credits x 50 minutes)</p> <p>Learning methods:</p> <ul style="list-style-type: none"> a. Lecture b. Discussion <p>Activity:</p> <ul style="list-style-type: none"> a. Online/offline learning b. Class discussion c. Make notes about learning materials d. Presentation <p>Media:</p> <ul style="list-style-type: none"> a. Slides/ ppt b. Zoom meeting/ LCD c. Text book 	<p>Subject:</p> <ul style="list-style-type: none"> - Species and varieties of endemic livestock of North Sumatra - Samosir goat - Estuary goat - River and swamp buffalo 	<p>PjB 30%</p>
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				class.usu.ac.id			
4-5	<p>Sub-CLO 3:</p> <p>After taking this course, students will be able to understand adaptation and ecology of local livestock</p>	<p>Accuracy in explaining</p> <ul style="list-style-type: none"> - The concept of genetic adaptation of local livestock to specific environments - Environmental factors that influence adaptation 	<p>Criteria:</p> <ul style="list-style-type: none"> - <p>Technique:</p> <ul style="list-style-type: none"> - 	<p>KM+PT (2 weeks x 2 credits x 120 minutes)</p> <p>Learning methods: <i>Self-Paced Learning</i></p> <p>Mode (Learning Management System): class.usu.ac.id</p>	<p>TM (2 weeks x 2 credits x 50 minutes)</p> <p>Learning methods:</p> <ol style="list-style-type: none"> a. Lecture b. Discussion <p>Activity:</p> <ol style="list-style-type: none"> b. Online/offline learning c. Class discussion d. Make notes about learning materials <p>Media:</p> <ol style="list-style-type: none"> a. Slides/ ppt b. Zoom meeting/ LCD c. Text book 	<p>Subject:</p> <ul style="list-style-type: none"> - The concept of genetic adaptation of local livestock to specific environments - Environmental factors that influence adaptation 	Midterm Exam
6-7	<p>Sub-CLO 4:</p> <p>After taking this course, students will be able to understand technique genetic conservation</p>	<p>In-situ and ex-situ approaches in germplasm conservation, examples of local and national conservation programs</p>	<p>Criteria:</p> <ul style="list-style-type: none"> - <p>Technique: <i>Quiz</i></p>	<p>KM+PT (2 weeks x 2 credits x 120 minutes)</p> <p>Learning methods: <i>Self-Paced Learning</i></p> <p>Quiz 1: Quiz to measure student understanding technique genetic conservation</p>	<p>TM (2 weeks x 2 credits x 50 minutes)</p> <p>Learning methods:</p> <ol style="list-style-type: none"> c. Lecture d. Discussion <p>Activity:</p> <ol style="list-style-type: none"> e. Online/offline learning f. Class discussion 	<p>Subject:</p> <p>In-situ and ex-situ approaches in germplasm conservation, examples of local and national conservation programs</p>	Midterm exam 1 Assignment 5%

					g. Make notes about learning materials		
				Mode (Learning Management System): class.usu.ac.id	Media: d. Slides/ ppt e. Zoom meeting/ LCD f. Text book		
8	MID SEMESTER EXAMINATION						
9-10	Sub-CLO 5: After taking this course, students will be able to understand local livestock development techniques	Accuracy in compiling: - Glorification - Selection - Artificial insemination - Embryo transfer	Criteria: - Technique: -	KM+PT (2 weeks x 2 credits x 120 minutes) Learning methods: <i>Self-Paced Learning</i> Activity: a. <i>Recording attendance</i> b. <i>Completing the quiz</i> Mode (Learning Management System): class.usu.ac.id	TM (2 weeks x 2 credits x 50 minutes) Learning methods: a. Lecture b. Discussion Activity: a. Online/offline learning b. Class discussion c. Make notes about learning materials Media: a. Slides/ ppt b. Zoom meeting/ LCD c. Text book	Subject: - Glorification - Selection - Artificial insemination - Embryo transfer	Final EXAM %
11-12	Sub-CLO 6: After taking this lecture, students are able to understand the economic value and benefits of endemic livestock.	Accuracy in understanding economic potential of local livestock, socio-cultural benefits, role of local livestock in	Criteria: RAssessment section Technique: Quiz	KM+PT (5 weeks x 2 credits x 120 minutes) Learning methods: <i>Self-Paced Learning</i> Quiz 2:	TM (2 weeks x 2 credits x 50 minutes) Learning methods: a. Lecture b. Discussion	Subject - Economic potential of local livestock	Final EXAM 10% Quiz

		the community economy		<p>Quiz to measure student understanding technique genetic conservation</p> <p>Mode (Learning Management System): class.usu.ac.id</p>	<p>Activity:</p> <ol style="list-style-type: none"> Online/offline learning Class discussion Make notes about learning materials Presentation <p>Media:</p> <ol style="list-style-type: none"> Slides/ ppt Zoom meeting/ LCD Text book 	<ul style="list-style-type: none"> Socio-cultural benefits, the role of local livestock in the community economy 	
13-15	<p>Sub-CLO 7:</p> <p>After taking this lecture, students are able to explain the challenges and opportunities for preserving local livestock.</p>	<p>Accuracy in identifying threats to local livestock germplasm, mitigation strategies and conservation policies</p>	<p>Criteria: Assessment rubric</p> <p>Technique: Case method</p>	<p>KM+PT (5 weeks x 2 credits x 120 minutes)</p> <p>Learning methods: <i>Self-Paced Learning</i></p> <p>Case method 2</p> <ol style="list-style-type: none"> Students are divided into several groups Students choose one of the livestock germplasm in North Sumatra Students identify challenges and opportunities for preserving local livestock 	<p>TM (2 weeks x 2 credits x 50 minutes)</p> <p>Learning methods:</p> <ol style="list-style-type: none"> Lecture Discussion <p>Activity:</p> <ol style="list-style-type: none"> Online/offline learning Class discussion Make notes about learning materials Presentation <p>Media:</p> <ol style="list-style-type: none"> Slides/ ppt Zoom meeting/ LCD Text book 	<p>Subject</p> <ul style="list-style-type: none"> Threats to local livestock germplasm Mitigation strategies and conservation policies 	<p>Case method 20%</p>

				<p>d. Students make reports and present them.</p> <p>Mode (Learning Management System): class.usu.ac.id</p>			
16	FINAL SEMESTER EXAMINATION						209



CLO Code and Percentage	CLO0206: 52.5%				CLO0813: 47.5%				
CLO Sub Code	Sub- CLO2	Sub- CLO6		Sub- CLO7	Sub- CLO3	Sub- CLO4		Sub- CLO5	Sub- CLO7
Evaluation Form	Case Method	FINAL EXAM	Quiz	PjBL	MIDTERM EXAM	MIDTERM EXAM	Quiz	FINAL EXAM	Case Method
Percentage	20%	10%	5%	10%	10%	10%	5%	10%	20%
Total	20%	15%		10%	10%	15%		10%	20%
Implementation of Evaluation	Week 2	Week 16	Week 7	Week 12	Week 8	Week 8	Week 12	Week 16	Week 12



ASSESSMENT PLAN

Evaluation Form	Sub-CLO	Assessment Instrument[Frequency]		Invoice (proof)	Assessment Credit (%)
		Formative	Summative		
Quiz	Sub-CLO 4.6	-	MCQ test rubric [1 times]	Quiz sheets uploaded to USU LMS	5%
Assignment	Sub-CLO 2.5	-	Assessment rubric[1 time]	Assignments uploaded to USU LMS	5%
Case Method	Sub-CLO 2.7	Feedback results report [2 times]	Report assessment rubric [2 times]	Reports uploaded to USU LMS	20%
Project-Based Learning	Sub-CLO 3,5,8	Feedback results report [1 times]	Report assessment rubric [1 times]	Reports uploaded to USU LMS	30%
MIDTERM EXAM	Sub-CLO 3.7	-	Essay Assessment Rubric[1 time]	Mid-term exam scores	20%
FINAL EXAM	Sub-CLO 5.6	-	Essay Assessment Rubric[1 time]	Final Exam Score	20%
Total					100%

Explanation:

- a) Quiz 5%
During the semester there will be 2 quizzes held in class. The quizzes will be conducted via e-learning and have been scheduled in advance. The material being tested is announced by the lecturer and written in the SLP.
- b) Assignment 5%
During the semester there will be 1 structured assignments. The assignments given are an effort to add insight by making a resume related to the material written in the SLP.
- c) Case Method 20%
During one semester there will be a case method, students will analyze the given case and write it in the form of a report. The case method in this course is carried out 2 times. The report that has been made will be presented by students. Students will be assessed according to their presentation skills and accuracy in the presentation, as well as their participation in the question and answer session when other groups are presenting.
- d) Project-Based Learning 30%
During the semester there will be project based learning, students make project in groups. Project based learning in this course is done 1 times. The report that have been made will be presented by students. Students will be assessed according to their presentation skills and accuracy in the presentation, as well as their participation in the question and answer session when other groups are presenting.
- e) Midterm Exam 20%
The midterm exam covers all the materials that have been discussed since the beginning of the semester until the 7th meeting, both reading and lecture. This exam is conducted in class with multiple choice questions, short answers, and essays.
- f) Final Exam 20%
The final semester exam covers all the materials that have been discussed since the 9th to 15th meeting, both reading and lecture. This exam is conducted in class with multiple choice questions, short answers, and essays.

ASSESSMENT RUBRIC

Post Test Quiz Assessment Rubric (10%)

The Pre/Post test questions consist of 5 essay questions done on one sheet of paper (done twice during 1 semester)

Value per question item	Criteria
20	Can answer questions correctly, complete the steps correctly, and completely correct
15	The steps for completing the questions are correct, there are a few errors.
10	Most of the steps in completing the questions are correct, there are many errors.
5	The steps for completing the question are not correct, the question cannot be completed

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

Minimum score = 25 (5 questions x 5 points)

Quiz score 1: (maximum score is 100) $20 \times \sum \text{nilai per butir soal}$

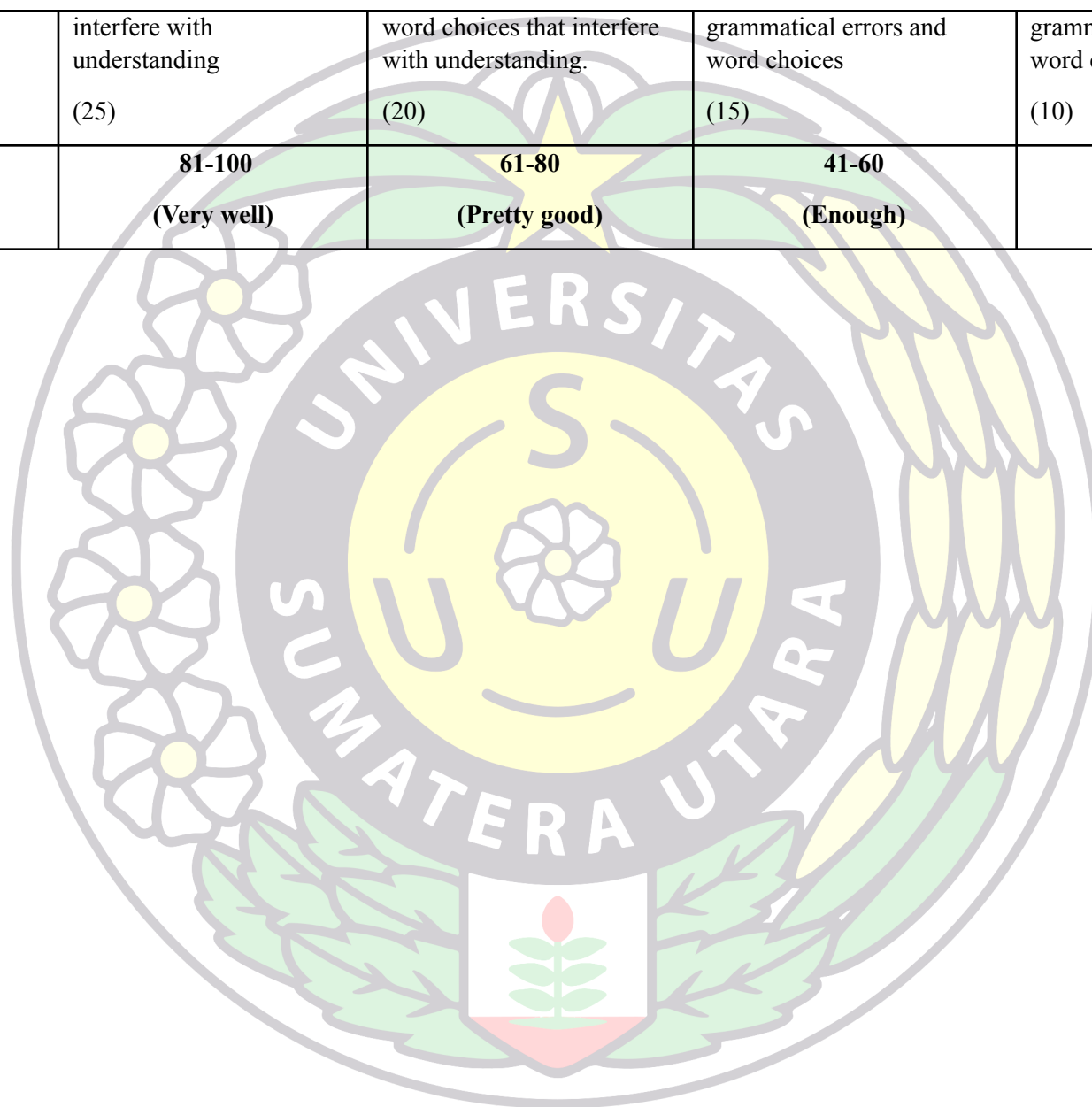
Quiz score 2: (maximum score is 100) $20 \times \sum \text{nilai per butir soal}$

Total score if you take all post-test quizzes with a perfect score is $200 \times 10\%[\text{quiz percentage}] = 20$

Essay Exam Assessment Rubric:

Assessment criteria	4 Very good	3 Good	2 Enough	1 Not enough
Understanding the Questions	Understand the question exactly once (25)	Understanding the questions (20)	Not understanding the question fully and correctly (15)	Don't understand the question (10)
Contents	Answers show understanding in-depth understanding of the material being asked and participants integrate the information that has been studied and/or assigned to be read during the lecture well and appropriately (25)	The answers demonstrate understanding of the material being asked and integrate some of the information that has been studied and/or assigned to be read during the lecture. (20)	The answer shows a lack of understanding of the material being asked and only integrates a small portion of information that has been studied and/or assigned to be read during lectures. (15)	The answer shows a lack of understanding of the material being asked so it is unclear and not integrated. information that has been studied and/or assigned to be read during lectures. (10)
Clarity of Writing	All written ideas are conveyed well and clearly. (25)	Most of the ideas in the writing are well and clearly conveyed. (20)	Some of the ideas in the writing are conveyed well and clearly. (15)	The ideas in the writing are not conveyed well and clearly. (10)
Clarity of Language	Uses foreign/Indonesian languages well and correctly with minimal grammatical errors and word choices that do not	Uses foreign/Indonesian languages well and correctly with minimal grammatical errors and	Uses foreign/Indonesian language quite well and correctly with some	Does not use foreign/Indonesian language properly and correctly because the writing contains many

	interfere with understanding (25)	word choices that interfere with understanding. (20)	grammatical errors and word choices (15)	grammatical errors and word choices (10)
Total	81-100 (Very well)	61-80 (Pretty good)	41-60 (Enough)	0-40 (Not enough)



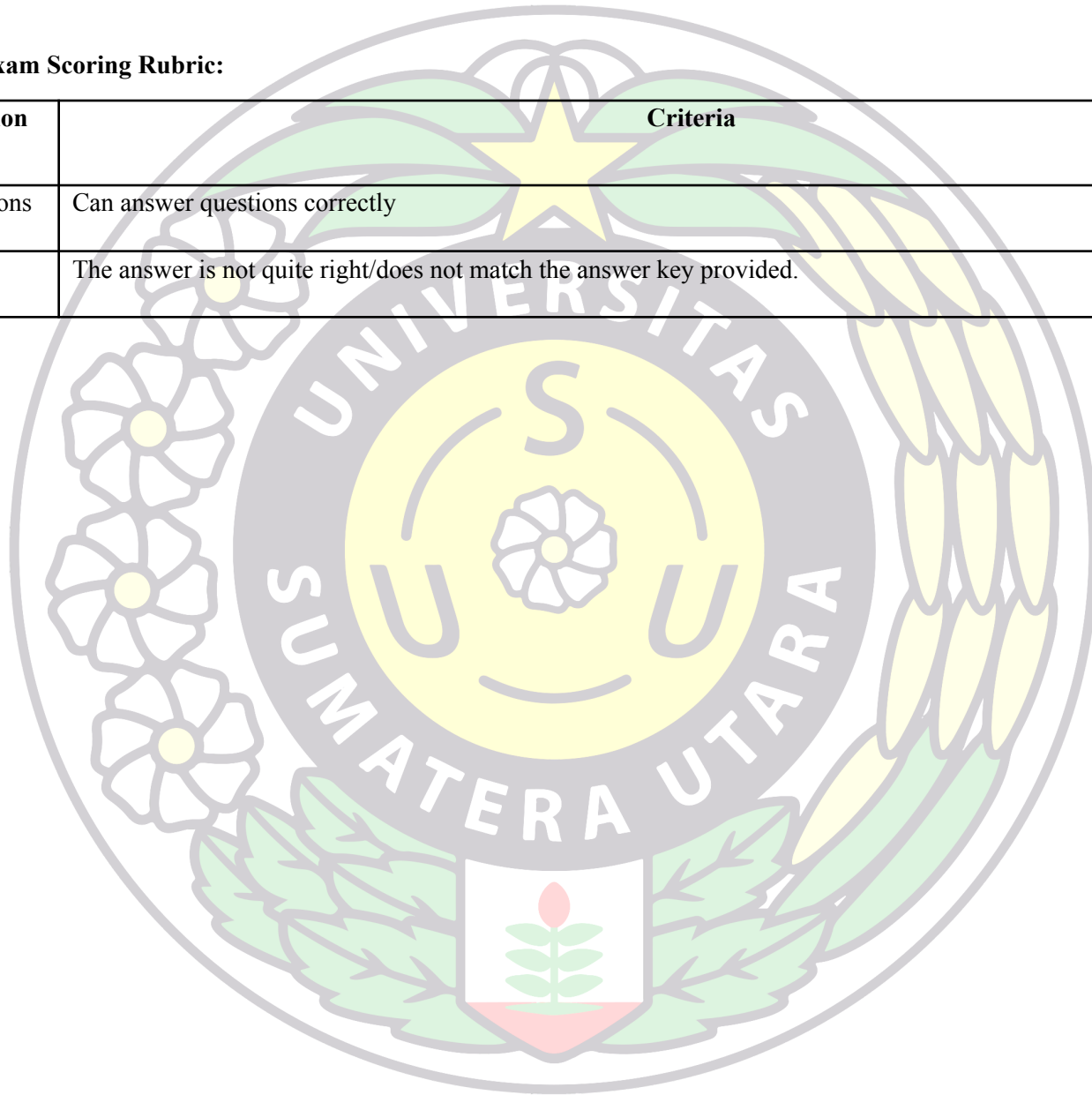
Presentation Assessment Rubric

CATEGORY	4 Very good	3 Good	2 Enough	1 Not enough	Mark
Group Preparation	<p>The group fully prepared themselves and performed optimal presentation exercises.</p> <p>Complement each other between group members with clear tasks for each group member.</p>	<p>The group seemed fairly prepared but may need more presentation practice.</p> <p>The responsibilities of each group member need to be identified.</p>	<p>The group made efforts to prepare themselves but did not practice presentation preparation.</p> <p>Tasks and responsibilities are assigned and accepted without due consideration.</p>	<p>The group did not appear to have prepared at all for their presentation.</p> <p>Tasks and responsibilities are assigned and accepted randomly.</p>	4
Presentation Organization	<p>The group presents the content clearly, logically, and systematically, through an introduction, main ideas, and a cohesive conclusion.</p> <p>Groups use effective visual aids to support and strengthen presentations.</p>	<p>The group presents the content logically and systematically, through an introduction, main ideas and conclusion.</p> <p>Groups use visual aids that show a connection to the content of the presentation.</p>	<p>The group presents the content in a fairly logical and systematic manner, but does not contain an introduction, main ideas, or conclusion.</p> <p>The group occasionally used visual aids that did not support the content of the presentation.</p>	<p>Groups present the content randomly without any introduction, main ideas, or conclusions.</p> <p>The group used visual aids that were not supportive or had no visual aids at all.</p>	3
Task Achievement	<p>Each group member is able to demonstrate solid knowledge through their respective presentations and elaborations, and deliver the part of the</p>	<p>Each group member demonstrated good knowledge through their respective presentations and elaborations but in a</p>	<p>Each group member demonstrated sufficient knowledge but failed to provide elaboration, and presented his part in only</p>	<p>Each group member had no knowledge of the content and presented their respective sections in less than half the time allocated to them.</p>	

	presentation that is their task according to the time allocation.	shorter time than the time allocated for them.	half the time allocated to him.		
Presentation Content Mastery	<p>Each group member demonstrated full understanding of the presentation topic.</p> <p>The main ideas presented are supported by evidence and critically evaluated.</p>	<p>Each group member showed a good understanding of the presentation topic.</p> <p>Most of the main ideas are illustrated with relevant evidence.</p>	<p>Each group member demonstrated a good understanding of some aspects of the topic.</p> <p>Some illustrations are given, but not critically evaluated.</p>	<p>Each member of the group did not appear to understand the presentation topic very well.</p> <p>Some evidence is mentioned, but not integrated into the presentation or evaluated.</p>	
Answers to Questions	The group was able to correctly answer almost all of the questions asked by the audience about their presentation topic.	The group was able to answer most of the questions asked by the audience about the topic of their presentation correctly.	The group was able to answer several questions asked by the audience about their presentation topic correctly.	The group was unable to answer questions asked by the audience about their presentation topic appropriately.	
Communication Quality	Group interaction with the audience shows interest and respect for the opinions of others. The responses given support effective communication.	Group interaction with the audience shows interest and respect for the opinions of others. Responses generally support effective communication.	Some parts of the interaction in the discussion show interest and respect for other people's opinions.	Interaction in discussion shows disrespect for other people's opinions. Responses do not support effective communication.	

Multiple Choice Exam Scoring Rubric:

Value per question item	Criteria
100/ many questions	Can answer questions correctly
0	The answer is not quite right/does not match the answer key provided.



REPORT ASSESSMENT RUBRIC

Task	Description	Very good > 80	Good 70 -79	Enough 60 – 69	Not enough < 60	Mark
	Scale	4	3	2	1	
1. Background behind the issues raised	<ul style="list-style-type: none"> Describes various phenomena Situation Analysis Formulation of the problem 	<ul style="list-style-type: none"> The phenomenon raised very clear Analysis very sharp situation Formulation of the problem very precise 	<ul style="list-style-type: none"> The phenomenon raised is clear Analysis sharp situation Correct problem formulation 	<ul style="list-style-type: none"> The phenomenon raised unclear Analysis less sharp situation Formulation of the problem less precise 	<ul style="list-style-type: none"> The phenomenon raised unclear Analysis non-sharp situation Formulation incorrect problem 	
2. Literature Review	<p>Accuracy use of literature</p> <p>Using the most recent literature (Journals: last 5 years; Books: last 10 years)</p>	<p>Use theory/resources are very appropriate</p> <p>Use literature from journals: 80 %</p>	<p>Use appropriate theory/resources</p> <p>Use literature from journals: 60 -70%</p>	<p>Use theory/source library less precise</p> <p>Using literature from journals: 50%</p>	<p>Use theory/source library not exactly</p> <p>Using literature from journals: < 50 %</p>	
3. Implementation Method	Schedule time of activities	Schedule time activities are very much in accordance with the schedule that has been set determined	Schedule time activity in accordance with the schedule that it has been determined	Schedule time activities are not in accordance with the schedule it has been determined	Schedule time activities do not match the schedule it has been determined	

	Division of tasks for each member	Distribution each member's duties group very clear	Distribution each member's duties clear group	Distribution each member's duties group unclear	Distribution each member's duties group unclear	
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