

SEMESTER COURSE PLAN

FUNDAMENTALS OF LIVESTOCK PRODUCT TECHNOLOGY COURSE (23101111102)



TEACHING TEAM :

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BACHELOR PROGRAMME IN ANIMAL HUSBANDRY
FACULTY OF ANIMAL SCIENCE
HASANUDDIN UNIVERSITY
MAKASSAR
2025

**BACHELOR PROGRAMME IN ANIMAL HUSBANDRY
FACULTY OF ANIMAL SCIENCE
HASANUDDIN UNIVERSITY**

Vision

Vision of the study program :

Becoming an international standard in livestock education provider based on the Indonesian Maritime Continent

Vision Strategic

In accordance with the vision, mission, and objectives that have been set, the Animal Husbandry Study Program of the Faculty of Animal Science sets the following objectives to be achieved:

- a. Improving the quality of learning implementation that is in line with the needs of industry and society based on research and international standards;
- b. Creating networks and partnerships in the development of Animal Husbandry science and technology and its utilization in the implementation of learning;
- c. Producing graduates who have character, vision, creativity and innovation in the field of animal husbandry science and technology with an entrepreneurial perspective.

Mission

The mission carried out in the implementation of the Bachelor of Animal Husbandry Study Program, Faculty of Animal Husbandry, Hasanuddin University is

- 1) Organizing quality learning to produce independent and globally competitive Animal Husbandry scholars.
- 2) Developing animal husbandry science for the benefit of the nation.
- 3) Providing a conducive academic climate for implementing education with an entrepreneurial perspective.

Graduate Profiles

No	Profile	Description
1	Manager	Graduates who apply concepts and techniques in managing livestock farming and institutions related to livestock businesses such as financial institutions
2	Young Researcher	Graduates who able to apply scientific concepts and methods in solving problems in the development of the field of Animal Husbandry
3	Planners	Graduates who able to prepare potential and problem analysis, as well as formulate plans and strategies for the development of the livestock and related industries
4	Educators	Graduates who have the ability and skills to transfer science and technology to students in the field of animal husbandry
5	Entrepreneur	Graduates who able to apply business in the field of Animal Husbandry as their main business, or business development to support livestock business
6	Bureaucrat	Graduates who are able to organize government duties, especially in the affairs of livestock development

Learning Outcomes imposed on the Course

ILO-2 (P1) - Mastering the concepts, theories, and methods of developing effective, efficient, and sustainable livestock (K-01).

ILO-4 (KU1) - Able to apply logical, critical, systematic, and innovative thinking in the context of developing or implementing information technology-based science and technology (GS-01).

Course Learning Outcomes (CLO)

CLO-1: Able to examine the physical, chemical, organoleptic and microbiological properties of livestock products: meat, milk, eggs and skin (SLO2)

CLO-2: Able to analyze factors that affect changes in physical, chemical, organoleptic and microbiological properties of livestock products: meat, milk, eggs and skin (SLO2 and SLO4)

Sub-CLO

Sub-CLO 1: Able to conceptualize an overview of the science of animal origin, meat, milk, eggs and skin as well as the nature of animal origin, meat, milk, eggs and skin and their changes ()

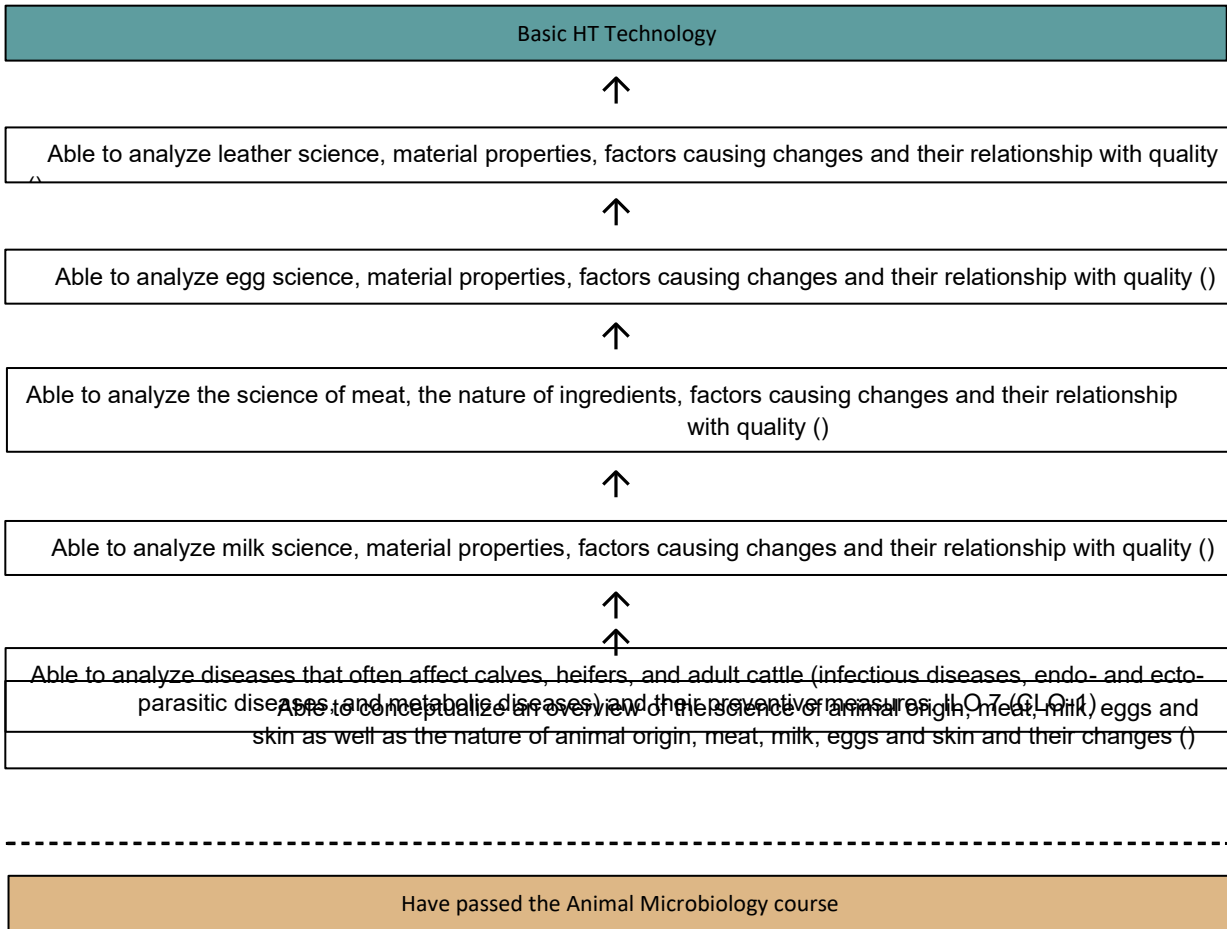
Sub-CLO 2: Able to analyze the science of milk, the nature of material properties, factors causing changes and their relationship with quality ()

Sub CLO-3: Able to examine meat science, properties of materials, factors that cause changes and their relationship with quality ()

Sub-CLO 4: Able to analyze the science of eggs, the nature of ingredients, factors causing changes and their relationship with quality ()

Sub-CLO 5: Able to examine the science of leather, the nature of the material, the factors that cause changes and its relationship with quality ()

Learning Analysis





**HASANUDDIN UNIVERSITY
FACULTY OF ANIMAL SCIENCE
BACHELOR PROGRAMME IN ANIMAL HUSBANDRY
SEMESTER COURSE PLAN**

Course	Code	Course Group	Credits Points	Semester	Date of Preparation
Fundamental of Livestock Product Technology	23I01111102	Livestock Product Technology	2	2	June 25, 2023
Authority	Developer Lecturer		Course Coordinator		Head of study Program
	Prof. Dr. drh. Ratmawati Malaka, M.Sc., Dr. Ir. Hikmah, S.Pt., M.Si., IPU, ASEAN Eng., Dr. Ir. Hajrawati, S.Pt., M.Si., Prof. Dr. Ir. Muhammad Irfan Said, S.Pt., MP., IPM, ASEAN Eng., Dr. Ir. Nahariah, S.Pt., MP., IPM., Endah Murpi Ningrum, S.Pt., MP.		Prof. Dr. drh. Ratmawati Malaka, M.Sc.,		Dr. Agr. Ir. Renny Fatmyah Utamy, S. Pt., M. Agr., IPM
Course Learning Outcomes	ILOs that are imposed on the course				
	ILO-2	Mastering the concepts, theories, and methods of developing effective, efficient, and sustainable livestock (K-01)			
	ILO-4	Able to apply logical, critical, systematic, and innovative thinking in the context of developing or implementing information technology-based science and technology (GS-01).			
	ILO⇒ Course Learning Outcomes (CLO)				
	After completing this course, it is expected:				
	ILO-2	CLO-1: Able to analyze the physical, chemical, organoleptic and microbiological properties of livestock products: meat, milk, eggs and skin.			
		CLO-2: Able to analyze factors that affect changes in physical, chemical, organoleptic and microbiological properties of livestock products: meat, milk, eggs and leather			
	ILO-4	CLO-2: Able to examine factors that affect changes in physical, chemical, organoleptic and microbiological properties of livestock products: meat, milk, eggs and skins			
	CLO⇒ Sub-CLOs				
Sub-CLO 1: Able to conceptualize an overview of the science of animal origin, meat, milk, eggs and skin as well as the nature of animal origin, meat, milk, eggs and skin and their changes ()					

	Sub-CLO 2: Able to analyze the science of milk, the nature of material properties, factors causing changes and their relationship with quality ()
	Sub CLO-3: Able to examine meat science, p r o p e r t i e s of materials, factors that cause changes and their relationship with quality ()
	Sub-CLO 4: Able to analyze the science of eggs, the nature of ingredients, factors causing changes and their relationship with quality ()
	Sub-CLO 5: Able to examine the science of leather, the nature of the material, the factors that cause changes and its relationship with quality ()

Correlation between ILOs/CLOs to Sub-CLOs

ILOs that are imposed on the course	ILO	SUB CLO	Form Assessment+				Weight	Value	Student Score
			Formative	Summative					
				Interactive Studying	Individual Paper Assignment	Case Study			
ILO-8	CLO-	SUB-CLO-1		5	5	15	0	15	
ILO-8	CLO-	SUB-CLO 2	Quiz Assessment	5	0	0	10	43	
ILO-8	CLO-	SUB-CLO-3	Quiz Assessment	10	0	0	10	8	
ILO-8	CLO-	SUB-CLO-4	Quiz Assessment	10	0	0	10	14	
ILO-8	CLO-	SUB-CLO-5	Quiz Assessment	5	0	0	15	12	
				35	5	15	45	100	

Course Description	None
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Learning Materials / Subject Matter	<ol style="list-style-type: none"> 1. Conceptual overview of animal, meat, dairy, egg and skin science and the properties of animal, meat, dairy, egg and skin materials and their changes. 2. Milk science, properties of ingredients, factors causing changes and their relationship with quality 3. Meat science, properties of ingredients, factors causing changes and its relationship with quality 4. Egg science, properties of ingredients, factors causing changes and their relationship with quality 5. Skin science, material properties, factors causing change and their relationship to quality
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Reference	Primary Reference
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		<p>Write down the main literature used, including teaching materials prepared by the lecturer teaching this course.</p> <ol style="list-style-type: none"> 1. Abustam, E. Teknologi Pengolahan Daging 2. Said, I. Teknologi Pengolahan Kulit 3. Malaka, R. Ilmu Susu, prespektif Ilmu dan Kajian Dasar. 2024. Unhas Press 					
		Additional Reference					
		Recent specific articles in related journals					
Teaching Team		Prof. Dr. drh. Ratmawati Malaka, M.Sc., Dr. Ir. Hikmah, S.Pt., M.Si., IPU, ASEAN Eng., Dr. Hajrawati, S.Pt., M.Si., Prof. Dr. Ir. Muhammad Irfan Said, S.Pt., MP., IPM, ASEAN Eng., Dr. Ir. Nahariah, S.Pt., MP., IPM., Endah Murpi Ningrum, S.Pt., MP.					
Course requirements							
Week	Sub CLO (End ability of each learning stage)	Assesment		Forms and Methods of Learning [time estimate]		Content	Weight of Assesment (%)
		Indicator	Technique & Criteria	Offline	Online		
1	2	3	4	5	6	7	8

1	Able to conceptualize an overview of the science of animal origin, meat, milk, eggs and skin as well as the properties of animal origin, meat, milk, eggs and skin and their changes ()	<p>Formative:</p> <p>-</p> <p>Summative:</p> <p>Students are able to conceptualize an overview of the science of animal origin, meat, milk, eggs and skin and the nature of the nature of animal origin, meat, milk, eggs and skin and its changes.</p>	<p>Kriteria Formative:</p> <p>Kriteria Sumative:</p> <p>nteractive Lecture (5)</p> <p>Individual Paper Assignment (5) assessed with rubric I011240003</p> <p>Case Study (15) assessed with rubric I011240003</p> <p>Assessment Technique:</p> <p>Test</p>	<p>Studying:</p> <p>Small Group Discussion</p> <p>1 x 2 x 50"</p>	<p>History of dairy</p> <p>Overview of the Science of livestock origin, meat, milk, eggs and skin as well as the nature of livestock origin, meat, milk, eggs and skin and its changes</p>	25
2-5	Able to examine the science of milk, the nature of material properties, factors causing changes and their relationship with quality ()	<p>Formative:</p> <p>Sumative Test</p> <p>Sumative:</p> <p>Students are able to analyze Milk science, material properties, factors causing changes and their relationship with quality</p>	<p>Kriteria Formative:</p> <p>Quiz assessment assessed with rubric I011240004</p> <p>Kriteria Sumative:</p> <p>Interactive Lecture (5)</p> <p>Problem Base Learning (10) assessed with rubric I011240003</p> <p>Assessment Technique:</p> <p>Test</p>	<p>Studying:</p> <p>Other Methods</p> <p>4 x 2 x 50</p>	<p>Milk science, properties of ingredients, factors causing changes and their relationship with quality</p>	15

6-9	Able to analyze meat science, properties of materials, factors causing changes and their relationship with quality ()	<p>Formative: Summative Test</p> <p>Sumative: Students are able to analyze the science of meat, the nature of materials, the factors that cause changes, and their relationship with the environment and its relationship with quality</p>	<p>Kriteria Formative: Quiz graded with rubric I011240004</p> <p>Kriteria Sumative: Interactive Lecture (10) Problem Base Learning (10) assessed with rubric I011240003</p> <p>Assessment Technique: Test and Non-Test</p>	<p>Lecture: Other Methods 4 x 2 x 50</p> <p>Practicum, Studio Practice, Workshop Practice, Field Practice: Small Group Discussion In Week 6-9 Practicum 1 x 1 x 170</p>	-	20
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10-13	Able to examine the science of eggs, properties of materials, factors that cause changes and their relationship with quality ()	<p>Formative: Formative Test</p> <p>Sumative: Able to analyze the science of eggs, the nature of ingredients, factors that cause changes and their relationship with quality</p>	<p>Kriteria Formative: Quiz graded with rubric I011240002</p> <p>Kriteria Sumative: Interactive Lecture (10) Problem Base Learning (10) assessed with rubric I011240003</p> <p>Assessment Technique: Test and Non-Test</p>	<p>Lecture: Other methods 4 x 2 x 50</p> <p>Practicum, Studio Practice, Workshop Practice, Field Practice: Project-based Learning Practicum and quiz assessment, and assignments 2 x 50 minutes, as many as 4 meetings</p>		Egg science, properties of materials, factors that cause changes and their relationship with quality	20
14-16	Able to analyze the science of leather, properties of materials, factors causing changes and their relationship with quality ()	<p>Formative: Formative Test</p> <p>Sumative: Students are able to analyze the science of leather, the nature of the material, the factors that cause changes and its relationship with quality</p>	<p>Kriteria Formative: Quiz graded with rubric I011240003</p> <p>Kriteria Sumative: Interactive Lecture (5) Problem Base Learning (15) assessed with rubric I011240003</p> <p>Assessment Technique: Test and Non-Test Test</p>	<p>Lecture: Other methods 3 x 2 x 50"</p> <p>Response and Tutorial: Project-based Learning 2 x 50 minutes, as many as 3 meeting times</p>		Leather science, properties of materials, factors causing changes and their relationship with quality	20

Matrix ILO, CLO, and Assessment Method

ILO/CLO
ILO-2 (P-1)
ILO-4 (KU1)

Evaluation Type and Assessment Weight

Type	Assessment Weight
Interactive Lecture	35
Individual Paper Assignment	5
Case Study	15
Problem Base Learning	45
Total	100

Assessment and Evaluation of Student Achievement of CLO

SLOs that are imposed on MK	CLO	SUB CLO	Form of Assessment*				Weight	Value	Student Score
			Formative	Summative					
				Interactive Lecture	Individual Paper Assignment	Case Study			
SLO-	SLOS-	SUB-CLO- 1		5	5	15	0	25	
SLO-	CLO-	SUB-CLO- 2	Quiz Assessment	5	0	0	10	15	
SLO-	CLO-	SUB-CLO- 3	Quiz Assessment	10	0	0	10	20	
SLO-	CLO-	SUB-CLO- 4	Quiz Assessment	10	0	0	10	20	
SLO-	CLO-	SUB-CLOS-5	Quiz Assessment	5	0	0	15	20	
				35	5	15	45	100	



HASANUDDIN UNIVERSITY
FACULTY OF ANIMAL SCIENCE
BACHELOR PROGRAMME IN ANIMAL HUSBANDRY

STUDENT STRUCTURED ASSIGNMENT PLAN

Course	Fundamental of Livestock Product Technology				
Code	23101130203	Credits Points	3	Semester	2 (dua)
Developer Lecturer	Prof. Dr. drh. Ratmawati Malaka, M.Sc., Dr. Ir.				
Task Form			Task Time		
Documents/Magazines			2 Weeks		
Task Title					
Basic principles Physical, chemical, organoleptic, and microbiological properties of livestock products: meat, milk, eggs, and hides.					
Course Learning Outcomes					
SUB-CLO-1: Able to analyze the physical, chemical, organoleptic, and microbiological properties of livestock products: meat, milk, eggs, and skin according to planned specifications (ILO 1)					
Task Description					
<p>The student's assignment is a group task to make a Paper Assignment " Overview of animal-derived materials, meat, milk, eggs, and skin, as well as the properties of animal-derived materials, meat, milk, eggs, and skin and their changes". The preparation of the paper follows the following procedure:</p> <ol style="list-style-type: none"> 1) Each group chooses 1 of the sub-topics for 1 group. 2) Discuss among the group members to identify the process stages for each of the selected sub-topics. Information related to the selected sub-topic can be obtained from textbooks and journals. 3) Create a paper with the following systematics: <ol style="list-style-type: none"> I. Introduction II. Discussion III. Conclusion IV. Literature 4) Group presentation 					
Assignment Method					
1. Conducted in groups using the Small Group Discussion (SGD) learning method.					
Form and Format of Output					
<p>a. Object of Cultivation: Physical, chemical, organoleptic, and microbiological properties of livestock products: meat, milk, eggs, and hides.</p> <p>b. Form of Output: Paper</p>					
Indicators, Criteria and Assessment Weight					
<p>Indicators:</p> <ol style="list-style-type: none"> 1. Systematics: 10% 2. Accuracy of analysis: 25% 3. Depth of material: 30% 4. Novelty and reputation of library materials: 10% 5. Team cohesiveness: 10% 6. Mastery of the material: 15% 					
Implementation Schedule					
2 weeks					

Other
-
Reference List
1. Abustam, E. Teknologi Pengolahan Daging
2. Malaka, R. Ilmu Susu, prespektif Ilmu dan Kajian Dasar. 2024. Unhas Press

DEFINITION OF 1 CREDIT IN THE FORM OF LEARNING				Time
A	Lecture, Reception, Tutorial			
	Face to Face	Structured Assignment	Independent Learning	
	50 minutes/week/semester	60 minutes/week/semester	60 minutes/week/semester	2,83
B	Seminars or other similar forms of learning			
	Face to face	Self-study		
	100 minutes/week/semester	70 minutes/week/semester		2,83
C	Practicum, studio practice, workshop practice, field practice, research, community service, and/or other equivalent forms of learning			
	170 minutes/week/semester			2,83

No	Metode Pembelajaran Mahasiswa	Kode
1	Small Group Discussion	SGD
2	Role-Play & Simulation	RPS
3	Discovery Learning	DL
4	Self-Directed Learning	SDL
5	Cooperative Learning	CoL
6	Collaborative Learning	CbL
7	Contextual Learning	CtL
8	Project Based Learning	PjBL
9	Problem Based Learning & Inquiry	PBL
10	Atau metode pembelajaran lain, yang dapat secara efektif memfasilitasi pemenuhan capaian pembelajaran lulusan.	