UNIVERSITAS SUMATERA UTARA (USU)
FACULTY OF AGRICULTURE
Animal Science Study Programme

Document Code
(to follow)

SEMESTER LEARNING PLAN (RPS)

COURSE	CODE	Course Group	WEIGHT (credits)	SEMESTER	Date of Preparation
Livestock By-products Technology	PTN3232	Exact	3	VI	22 February 2024

	Developer Lecturer	Approved Head of Study Programme	Knowing Chairman of LINKUP USU
AUTHORISATION/ ATTESTATION	Dr Nurjama'yah Br. Ketaren S.Pt, M.Si Ir. Peni Patriani S.Pt., M.P, IPM, ASEAN Eng. Vivi Indriani S.Pt., M.S.	Dr Ir Ma'ruf Tafsin, M.Si., IPM.	Prof. Dr Dwi Suryanto M.Sc.

Learning Outcomes	**LO-Study Progrmme Charged to MK**	
	LO03	Able to identify, formulate, and find solutions to problems related to the field of animal husbandry
	LO06	Supervise and evaluate the completion of assigned work and be able to manage learning independently throughout life.
	LO07	Able to disseminate knowledge and application of the latest technology based on TALENTA in the field of animal husbandry
	LO08	Able to manage integrated and sustainable livestock cultivation based on integration with other agroecosystems and the latest applications in processing livestock products and waste
	LO11	Able to develop, understand, and apply various best techniques and methods that combine theory and practice relevant to animal husbandry expertise.
	LO13	Know the concept of identification safety with a cross-multidisciplinary approach in animal science.

Course Learning Outcomes (CLO)	CLO Weight
CLO0708: Able to apply technology in the processing of livestock products	16.67%
CLO0337: Able to explain solutions to problems in applying technology in the processing of livestock products	20.83%
CLO0632: Able to evaluate the application of technology in the processing of livestock products	16.67%
CLO0820: Able to combine agricultural and plantation waste products in processing Livestock product	16.67%

	CLO1132: Able to make processed livestock products with the application of the latest techniques and technology	16.67%
	CLO1323: Able to apply livestock product processing technology within the monodisciplinary and/or interdisciplinary scope.	12.50%

End Capability of Each Learning Stage (Sub-CLO)	
Sub-CLO1	After attending this lecture, students can explain the scope of introduction to Animal By-products Technology and Classification of Animal By-products
Sub-CLO2	After attending this lecture, students can explain the technology for handling and processing livestock products
Sub-CLO3	After attending this lecture, students can explain the animal fat utilization for rendering
Sub-CLO4	After attending this lecture, students can explain the animal fat utilization for soap
Sub-CLO5	After attending this lecture, students can explain the utilisation of leather as a non-food animal by-product (tanning)
Sub-CLO6	After attending this lecture, students can explain the non-food leather quality and processing industry
Sub-CLO7	After attending this lecture, students are able to explain utilisation of leather as livestock by-product
	Mid Semester Exam
Sub-CLO8	After attending this lecture, students can explain the leather processing industry as a food commodity
Sub-CLO9	After attending this lecture, students are able to explain the utilisation of blood as an animal by-product
Sub-CLO10	After attending this lecture, students can explain the industrial Whey processing
Sub-CLO11	After attending this lecture, students can explain the utilisation of bone as livestock by-product
Sub-CLO12	After attending this lecture, students can explain the eggshell utilisation and processing methods
Sub-CLO13	After attending this lecture, students can explain the sausage sleeve
Sub-CLO14	After attending this lecture, students can explain various processing regulations regarding the livestock by-product industry (tanning, gelatin,etc)
	Final Exam

Correlation of CLO with Sub-CLO

	Sub-CLO1	Sub-CLO2	Sub-CLO3	Sub-CLO4	Sub-CLO5	Sub-CLO6	Sub-CLO7	Sub-CLO8	Sub-CLO9	Sub-CLO10	Sub-CLO11	Sub-CLO12	Sub-CLO13	Sub-CLO14
CLO0708	√		√		√		√							
CLO00337	√	√		√		√			√					
CLO0632				√	√	√	√							
CLO1132								√	√	√	√			
CLO1323		√							√			√	√	
CLO0820	√				√		√							√

Brief Course Description	After completing the Livestock By-products Technology course, students in semester VI of the Animal Husbandry Study Programme will be able to apply skilfully the correct processing techniques of various livestock by-product commodities.
Study Material: Learning Materials	1. Introductory scope of Animal By-products Technology and Classification of Animal By-products, 2. Technology for handling and processing livestock products 3. Animal fat utilization for rendering 4. Animal fat utilization for soap 5. Utilisation of leather as a non-food animal by-product (tanning) 6. Non-food leather quality and processing industry 7. Utilisation of leather as livestock by-product 8. Leather processing industry as a food commodity 9. Utilisation of blood as an animal by-product 10. Industrial Whey processing 11. Utilisation of bone as livestock by-product 12. Industrial processing sausage sleeve 13. Eggshell utilisation and processing methods 14. Various processing regulations regarding the livestock by-product industry (tanning, gelatin, sausage sleeve, etc.)
Library	**Main:** 1. Saleh E. 2004. The Basis of Milk Processing and Livestock Derivative Products. USU Press: Medan 2. Pratiwi, S. 2014. Physical, Chemical and Organoleptic Characteristics of Beef Sausage with Beef Intestinal Sleeve at Different Pineapple Mixing Durations. Thesis. Bogor Agricultural University: Bogor 3. Ockerman H.W., Hansen C.L. 2000. Animal ByProduct Processing and Utilization. CRC Press: Florida 4. Peni Patriani and Harapin Hafid. 2021. Animal Husbandry Post-Harvest Technology. Widina Bhakti Persada Bandung. ISBN: 9786236092262 5. Nanung Agus Fitriyanto. 2016. Animal Husbandry Industry Waste Handling. Gajah Mada University Press. Yogyakarta 6. Suharjono Triatmojo, Yuny Erwanto, and Nanung Agus Fitriyanto. 2017. Animal Husbandry Industry Waste Handling Gajah Mada University Press. Yogyakarta 7. Aman Yemen. 2019. Handling Technology, Processing of Livestock Waste and Livestock By-products. Syah Kuala University Press. Banda Aceh, Indonesia. 8. Neni Suhaeni. 2019. Practical Guide to Leather Tanning. Nuansa Cendekia, Bandung, Indonesia. 9. Nova Nancy Lontaan, Conny K. M. Palar, Merri M. Rotinsulu. 2022. Processing Technology of Livestock By-products. Unstrat Press. 10. Agung Hardono and Ludfia Windyasmara. 2023. Development of Livestock By-product Wastes. Lakeisha Press 11. M. Aman Yaman. 2020. Handling Technology, Processing of Livestock Waste and Livestock By-products. Syah Kuala University Press 12. Muhamad Irfan Said. 2018. Histology Book and Basic Science of Livestock Skin Preservation. Deepublish. ISBN. 978-602-475-501-0 13. Suharjo Triatmojo. 2012. Cowhide Processing Technology. Citra Aji Pratama, ISBN. 978-602-234-017-1

	14. Ockerman, H.W. and C.L. Hansen. 2000. Animal By-product Processing & Utilisation. CRC Press. New York.
	Supporters: 1. Thohari, I., Mustakim, M. C. Padaga, P. P. Rahayu. 2017. Livestock Product Technology. Malang: UB Press 2. Suharjono Triatmojo and M. Zainal Abidin. 2022. Environmentally Friendly Leather Tanning. Gajah Mada University Press. ISBN. 978-979-420-842-7 3. Sugihartono, Yuny Erwanto and Rina Wahyuningsih. 2020. Collagen and Gelatin for Food and Health Industry. 1st Published. ISBN: 978-623-7267-13-3 4. Minister of Industry Regulation. Green Industry Standard for Leather Tanning Industry from Cattle, Buffalo, Sheep and Goat No. 37 Year 2019 5. Johan Wahyu Utomo, Edhy Sudjarwo and Adelina Ari Hamiyanti. 2024. Effect of blood meal addition to feed on feed consumption, body weight gain, feed conversion and first egg laying age of quail. Journal of Animal Sciences24(2):41-48 6. Diode Yonata, Siti Aminah, Wikanastri Hersoelistyorini. 2017. Calcium Levels and Physical Characteristics of Egg Poultry Shell with Soaking Various Solvents. Journal of Food and Nutrition No. 7 (2) pp 82-93. 7. Food and Drug Administration Regulation No. 11 Year 2019. Food Additive (Gelatin) 8. Tamrin Tamrin, Cahyani Cahyanti Putri, Winda Rahmawati, Sapto Kuncoro. 2023. Studying the Effect of Temperature and Type of Offal on the Quality of Offal Flour. Agricutulturan Biosisten Engenering Vol 2. No. 4
Lecturer	Dr Nurjama'yah Br. Ketaren S.Pt, M.Si Ir. Peni Patriani S.Pt., M.P, IPM, ASEAN Eng. Vivi Indriani S.Pt., M.S.
Conditional Subjects	-

	End ability of each learning stage (Sub-CLO)	**Assessment**		**Form of Learning; Learning Methods; Student Assignment; [Estimated Time]**		**Study Material (Learning Material)**	**Assessment Weight (%)**
		Indicator	**Criteria and Techniques**				
(1)	**(2)**	**(3)**	**(4)**	**Asynchronous (5)**	**Synchronous (6)**	**(7)**	**(8)**
1	Sub-CLO1: After attending this lecture, students can explain the Introductory scope of Animal By-products Technology and Classification of Animal By-products	Accuracy in explaining information about the scope of Animal By-products Technology and Classification of	Criteria: Using an assessment rubric. Shape: a Read the provided passage (book)	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** a. Attendance	TM (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:**	Subject matter: a. Course contract b. Introductory Scope of Livestock By-products Technology	This sub-CLO will be assessed during midterm exams

		Animal By-products	b Respond to the opening question given. c Answer questions according to the reading.	b. Download and read the Syllabus (RPS), Learning Implementation Plan (SAP), Course Agreement, and Learning Materials. **Moda (*Learning Management System*):** Class.usu.ac.id	a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Textbook	c. Classification of Livestock By-products	
2	Sub-CLO 2: After attending this lecture, students can explain technology for handling and processing livestock products	a. Accurately expressing the required information about Technology for handling and processing livestock products b. Correctness of students' answers (Quiz)	**Criteria:** Essay assessment rubric **Techniques:** *Test:* Quiz	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing the quiz* ***Quiz 1:*** Quiz to measure student understanding. **Moda (*Learning Management System*):** Class.usu.ac.id	TM (2 weeks x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion c. Quiz **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD a. Textbook	**Subject matter:** a Livestock by-products from livestock slaughter b Utilisation of livestock by-products from livestock slaughter at abattoirs	Quiz 2,5%
3	Sub-CLO 3: After attending this lecture, students can	a. Accuracy in explaining the	**Criteria:** Paper assessment rubric	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:**	TM (1 week x 2 credits x 50 minutes)	**Subject matter:** Rendering	This sub-CLO will be assessed

	explain the animal fat utilization for rendering	utilisation of rendering b. Accuracy in explaining the utilisation of rendering	**Techniques:** *Non-test:* *Assignment*	*Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing assignment* ***Assignment 1:*** a Review the previous lesson. Read the added teaching materials. b Recording attendance. c Respond to the opening question. *d* Moda (*Learning Management System*): class.usu.ac.id	**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. Textbook		during midterm exams
4	Sub-CLO 4: After attending this lecture, students can explain the animal fat utilization for soap	a. Accuracy in explaining processing Animal fat utilization for soap b. Accuracy in explaining processing animal fat utilization for soap	**Criteria:** Use presentation and paper assessment rubrics **Techniques:** *Non-Test:* Assignment	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing assignment* *c. Practicum*	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:**	**Subject matter:** Animal fat utilization for soap	This sub-CLO will be assessed during midterm exams

		c. accuracy in explaining the *assessment*		***Problem-Based Learning 1:*** a. The lecturer divides students into groups. b. Conducting a practicum c. Make a practicum report **Moda (*Learning Management System*):** Class.usu.ac.id	a. Slides/ ppt b. Zoom meeting / LCD c. Textbook		
5	Sub-CLO 5: After attending this lecture, students can explain the utilisation of leather as a non-food animal by-product (tanning)	a. Accuracy in providing the required information a. Accuracy in doing assignments b. Correctness of students' answers	**Criteria:** Use essay and multiple-choice assessment rubrics **Techniques:** *Quiz*	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Practicum* **Moda (*Learning Management System*):** Class.usu.ac.id	TM (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion c. Quiz **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Textbook	**Subject matter:** Utilisation of leather as a non-food animal by-product (tanning)	Quiz 2,5%
6	Sub-CLO 6: After attending this lecture, students can	a. Accuracy in explaining the processing, methods and	**Criteria:** Use essay and multiple-choice assessment rubrics	KM+PT (2 weeks x 3 credits x 120 minutes) **Learning Methods:**	TM (2 weeks x 2 credits x 50 minutes) **Learning Methods:**	Non-food leather quality and processing industry	Tasks 2,5%

	explain non-food leather quality and processing industry	quality of bone meal b. Accuracy in explaining processing, methods and quality of bone meal	**Techniques:** Tasks	*Self-Paced Learning* **Activities:** - *Recording attendance* - *Completing quizzes and assignments*	- Lecture - Discussion - Tasks **Activities:** - Online/offline learning - Class discussion - Take notes on learning materials **Media:** - Slides/ ppt - Zoom meeting/ LCD - Textbook		
7	Advanced Sub-CLO 7 After attending this lecture, students are able to explain how leather is used as a non-food livestock by-product (tanning).	a. Accuracy in explaining the utilisation of leather as non-food livestock by-products a Accuracy in explaining tanning	*Criteria:* *Use presentation and paper assessment rubrics* *Techniques:* *Non-test* *Assignment*	KM+PT (2 weeks x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *c. Recording attendance* *d. Completing quizzes and assignments* *e. Deepening the Case* ***Case Method 1:*** a. Divide the group evenly (lecturer divides)	TM (2 weeks x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion **Activities:** d. Online/offline learning e. Class discussion f. Take notes on learning materials **Media:** c. Slides/ ppt d. Zoom meeting/ LCD Textbook	a Utilisation of leather as a non-food animal by-product b Leather tanning method	This sub-CLO will be assessed during midterm exams

				b. Create a *case study* on tanning ***Quiz 3:*** *Quiz to measure students' understanding of the prospects of the leather tanning industry* **Moda (*Learning Management System*):** Class.usu.ac.id			
	MID SEMESTER EXAMINATION (UTS)						20%
8	Sub-CLO 8: After attending this lecture, students can explain leather processing industry as a food commodity	a. Accuracy in explaining Leather processing industry as a food commodity b. Accuracy in explaining the Leather processing industry as a food commodity .	**Criteria:** Paper assessment rubric **Techniques:** *Tasks*	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing assignment* *c. Practicum* ***Quiz 2:*** Quiz to measure students' understanding of Hardy-Weinberg probability through	TM (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion c. *Tasks* **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Textbook	**Subject matter:** Leather processing industry as a food commodity	Tasks 2,5%

				calculations on several cases **Moda (*Learning Management System*):** Class.usu.ac.id			
9	Sub-CLO 9: After attending this lecture, students can explain the utilisation of blood as an animal by-product	Accuracy in explaining the utilisation of utilisation of blood as an animal by-product	**Criteria:** Use essay and multiple-choice assessment rubrics **Techniques:** *Test*	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b.* Completing assignment *c.* Practicum **Moda (*Learning Management System*):** Class.usu.ac.id	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. Textbook	**Subject matter:** Utilisation of blood as an animal by-product	This sub-CLO will be assessed during final exams
10	Sub-CLO 10 (continued) After attending this lecture, students can explain the industrial Whey processing	a. Accuracy in explaining the Industrial Whey processing b. Accuracy in explaining Industrial	Criteria: Using an assessment rubric. Shape: a Read the provided passage (book) b Respond to the opening question given.	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *d. Recording attendance*	TM (1 week x 2 credits x 50 minutes) **Learning Methods:** a. Lecture b. Discussion - **Activities:**	**Subject matter:** Industrial Whey processing	This sub-CLO will be assessed during final exams

		Whey processing	c Answer questions according to the reading.	**Moda (*Learning Management System*):** Class.usu.ac.id	a. Online/offline learning b. Class discussion c. Take notes on learning materials - **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Textbook		
11	Sub-CLO 11: After attending this lecture, students will be able to explain utilisation of bone as livestock by-product	a. Accurately providing the required information on Utilisation of bone as livestock by-product b. Accuracy in doing assignments c. Correctness of students' answers	Criteria: Using an assessment rubric. Shape: - Read the provided passage (book) - Respond to the opening question given. - Answer questions according to the reading.	KM+PT (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing assignment* ***Assignment 2:*** Resume a journal **Moda (*Learning Management System*):** Class.usu.ac.id	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. Textbook	**Subject matter:** a Utilisation of horn and fur as by-products b livestock feathers and horns for crafts	This sub-CLO will be assessed during final exams
12	Sub-CLO 12: After attending this lecture, students can	a. Accurately providing the required information on utilising	**Criteria:** Use presentation and paper assessment rubrics	KM+IDE (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning*	TM (2 weeks x 2 credits x 50 minutes) **Learning Methods:** a. Lecture	**Subject matter:** a Utilisation of viscera as feed and food.	Case Method 20%

	explain industrial processing sausage sleeve	offal/internal organs and viscera of livestock as food. b. Accuracy in doing assignments Correctness of students' answers	**Techniques:** *Case Method*	**Activities:** Case Method *Deepening the Case* ***Case Method 1:*** a. Divide the group evenly (lecturer divides) ***b.*** Create a *case study* on tanning **Moda (*Learning Management System*):** class.usu.ac.id	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. Textbook	b Utilisation of viscera as food. c Industrial processing sausage sleeve	
13	Sub-CLO 13: After attending this lecture, students will be able to explain eggshells' utilisation and processing methods.	a. Accuracy in providing the information needed b. Accuracy in doing the quiz c. Correctness of students' answers	**Criteria:** Use presentation and paper assessment rubrics **Techniques:** *Project Base Learning*	KM+IDE (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* *Project base learning* **Activities:** *a. Recording attendance* *b. Completing assignment* *c. Practicum* *d. Case Method* **Moda (*Learning Management System*):** Class.usu.ac.id	TM (1 week x 2 credits x 50 minutes) **Learning Methods:** c. Lecture d. Discussion **Activities:** a. Online/offline learning b. Class discussion c. Take notes on learning materials **Media:** a. Slides/ ppt b. Zoom meeting / LCD c. Textbook	**Subject matter:** a. Eggshell utilisation and processing methods b. Eggshell meal quality	PBL 30%

14	Sub-CLO14: After attending this lecture, students can explain the processing of various regulations regarding the livestock by-product industry (tanning, gelatin, by-products as feed, sausage sleeve, etc.).	a. Accuracy in providing the information needed b. Accuracy in doing the quiz c. Correctness of students' answers	Criteria: a.Worksheet/non test b.Reading a book c.Respond to the opening question given by the Practicum Techniques: Non-test Assignment	KM+IDE (1 week x 3 credits x 120 minutes) **Learning Methods:** *Self-Paced Learning* **Activities:** *a. Recording attendance* *b. Completing assignment* *c. Practicum* **Moda (*Learning Management System*):** Class.usu.ac.id	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. Textbook	Subject matter: 1. Regulations on the livestock by-products industry 2. SNI	This sub-CLO will be assessed during final exams
\\\\	FINAL SEMESTER EXAMINATION (UAS)						20%

Assessment Plan:

Form of Evaluation	Sub-CLO	Assessment Instrument [Frequency]		Bill (proof)	Assessment Weight (%)
		Formative	Summative		
Quiz/question and answer	Sub-CLO2 Sub CLO5	Assessment rubric [2 times]	-	Quiz answers uploaded to class.usu.ac.id	5
Tasks	Sub-CLO6 Sub-CLO8	Assessment rubric [2 times]	-	Assignments uploaded to class.usu.ac.id	5
Problem-based Learning	Sub-CLO13	-	Assessment rubric [1 times]	Logbook/worksheets / slides uploaded to class.usu.ac.id	30
Case Method	Sub-CLO12		Assessment rubric [1 times]	Logbook/worksheets / slides uploaded to class.usu.ac.id	20
Written exam 1 (UTS)	Sub-CLO1 Sub-CLO3 Sub-CLO4 Sub-CPO7	-	Assessment rubric [1 time]	Written exam result sheet	20
Written exam 2 (final exam)	Sub-CLO9 Sub-CLO10 Sub-CLO11 Sub-CLO14	-	Assessment rubric [1 time]	Written exam result sheet	20
				Total	100%

Explanation:

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

b) Assignment 5%
There will be 2 structured assignments during the semester. The assignments are an effort to add insight by creating a resume related to the material written in the RPS.

c) Project Base Learning 30%
PBL is a learning method that engages students in solving real-world problems or answering complex questions. Students will work on a group project for 2 weeks.

d) Mid semester examination 20%
The midterm exam covers all the material covered from the beginning of the semester until the 7th meeting, including reading and lectures. It is conducted in class and includes multiple-choice, short-form, and essay questions.

e) Final Semester Examination 20%
The end-of-semester exam covers all the material from the 9th to the 15th meeting, both readings and lectures. It is conducted in class and includes multiple-choice, short-form, and essay questions.

f) 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 5 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.

ASSESSMENT RUBRIC

Quiz Scoring Rubric:

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

Value per item	Criteria
16-20	can answer the question correctly, and the steps of working on the problem are correct and completely correct.
11-15	The steps of working on the problem are correct; there are a few mistakes
6-10	Most of the steps are correct, but there are many errors
0-5	The steps of working on the problem are not correct, and they are unable to solve the problem

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

Teaching Journal/Proposal/Report/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 learnt and/or assigned to read properly and appropriately during lectures. (25)	Drafts demonstrate an understanding of the material covered and integrate some of the information learnt 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 learnt and/or assigned to read during the lecture. (15)	Drafts show a lack of understanding of the material discussed, making it unclear and unable to integrate the material. Information that has been learnt and/or assigned to read during lectures. (10)
Clarity of Writing	All writing ideas are well 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 could be conveyed better and more clearly. (10)
Language Clarity	Uses foreign/Indonesian language well and correctly, with 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 reasonably well and correctly, with some grammatical and word choice errors. (15)	Do not use the 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 optimised 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 tried 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 not prepared at all for the presentation. Tasks and responsibilities are assigned and accepted randomly. (10)
Presentation Organisation	The group presented the content logically and systematically through a cohesive introduction, main points, and conclusion. The group used visual aids that effectively supported and reinforced the presentation. (25)	The group presented the content logically and systematically, with an introduction, main idea and conclusion. The group used visual aids that linked to the presentation's content. (20)	The group presented the content fairly logically and systematically, but it needed to contain an introduction, main idea, or conclusion. The group occasionally used visual aids that did not support the presentation's content. (15)	The group presented the content randomly without any introduction, main idea, or conclusion. Groups using unsupportive visual aids or no visual aids at all. (10)
Task Achievement	Each group member can demonstrate solid knowledge through their exposure and elaboration and deliver the part of the presentation assigned to them within the allotted time. (25)	Each group member demonstrates good knowledge through exposure and elaboration but in less time than the allocated time. (20)	Each group member demonstrated sufficient knowledge but needed to elaborate and present his or her part in only half the time allotted to him or her. (15)	Each group member knows nothing about 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 a complete 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 need to be critically evaluated. (15)	Each group member did not seem to understand the presentation topic very well. Some evidence was mentioned but needed to be integrated into the presentation or evaluated. (10)
Answers to Questions	The group could correctly answer almost all the questions asked by the audience about their presentation topic. (25)	The group correctly answered most of the audience's questions about the tropes of their presentation. (20)	The group could correctly answer some of the audience's questions about their presentation topic. (15)	The group could not answer the questions the audience posed 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)	I did not understand the question (10)
Contents	Answers show understanding Participants integrate information learnt and/or assigned to read properly and appropriately during lectures. (25)	Answers demonstrate an understanding of the material in question and integrate some of the information learnt 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 studied and/or assigned to read during the lecture. (15)	The answer shows a lack of understanding of the material, so it needs to be clarified and integrate it. Information that has been learnt and/or assigned to read during lectures. (10)
Clarity of Writing	All writing ideas are well 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, with 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)	Do not use the 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)**

Multiple Choice Exam Scoring Rubric:

Value per item	Criteria
100/many questions	Can answer the question correctly
0	Answers are less precise / not by the answer key that has been provided