	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Master of Science Education Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Learning Material Development (PBP)	8410104194		T=3	P=0	ECTS=6.72	2	February 6, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Prof. Dr. Erman, M.Pd. dan Dr. Sifak Indana	Dr. Sifak Indana, M.Pd.	Dr. Eko Hariyono, S.Pd., M.Pd.

Learning model	**Project Based Learning**
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**
	Program Objectives (PO)
	PLO-PO Matrix

	P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	Description This course examines and provides students with a comprehensive understanding of the development of science learning materials that suit the characteristics of students and provides skills in developing teaching materials according to the student's field of study background. The study includes instructional design assumptions, learning principles and learning conditions, instructional design rationale and instructional system design. Included in this study are learning processes, learning targets, various learning processes. Learning design: formulating learning objectives, task analysis, designing learning sequences, selecting strategies, learning methods, learning media, developing evaluation instruments, learning resources. At the end of the lecture, an analysis of the learning materials that have been developed is carried out in the form of seminar results

References

Main :

1. 1. Arends, R.I. (2012). Learning to teach. Boston: McGraw-Hill.
2. 2. Bell, R.I. (2008). Teaching the nature of science through process skill. New York: Allyn and Bacon.
3. 3. Bernstein, D. et al. (2006). Making teaching and learning visible: course portfolio and the peer review of teaching. San Francisco: Angker Publishing Company.
4. 4. Cbism, N. (2007). Peer review of teaching: a sourcebook. Bolton, Massachusseetts: Angker Publishing Co.
5. 5. Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in classroom. ICST, Atlantis Press.

Supporters:

1. Coference book of Educational of science, technology, engineering, and mathematics International Conference (ESTEMIC) 2021. Bandung: UIN GJ.
2. Erman et al. (2018). Model Discovery. PPt Presentasi PKM Prodi S2/S3 Pendidikan Sains di Lombok.
3. Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya: Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa
4. Erman (2021). STEM-based learning in science classes: Challenges for Indonesian educational system. Bandung ESTEMIC 2021
5. Wahyuni, Sanjaya, Erman, dan Jatmiko (2019). Edmodo-Based Blended Learning Model as an Alternative of Science Learning to Motivate and Improve Junior High School Students' Scientific Critical Thinking Skills. Ijet, 14(7)

Supporting lecturer	Dr. Sifak Indana, M.Pd. Prof. Dr. Erman, M.Pd.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Explain the characteristics of models, approaches and learning methods	1.1. Actively listen and record information and tasks, ask questions, and respond to information/tasks 2.2. Understand the information and learning tasks in LKM	**Criteria:** Score 4 if you actively listen and record information and assignments, and ask and/or respond to information or assignments, score 3 if you actively listen and record information and assignments, but ask or respond to information or assignments, score 2 if you actively listen but do not record information and assignments delivered, and a score of 1 if you do not listen and record the information and assignments **Form of Assessment** : Participatory Activities	Presenting information, division of tasks, and questions and answers for 150 minutes		**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** The nature of science **References:** *Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.* **Material:** Teaching and learning **References:** *Cbism, N. (2007). Peer review of teaching: a sourcebook. Bolton, Massachusetts: Armature Publishing Co.*	0%
2	Explaining TCT models: Inquiry-based learning and discovery learning		**Criteria:** 1.Score 4 if the presentation is equipped with attractive PPt slides, presented explicitly, logically and clearly, and answers participants' questions precisely and in detail 2.Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3.Score 2 if the presentation is equipped with attractive PPt slides, is presented clearly but not explicitly and cannot answer participants' questions accurately and in detail 4.Score 1 if the presentation is equipped with PPt but is presented in a way that is not clear and explicit. Score **Form of Assessment** : Portfolio Assessment		Presentation and discussion 150	**Material:** Learning models **References:** *Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Inquiry and discovery learning models **References:** *Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in the classroom. ICST, Atlantis Press.* **Material:** Discovery learning model **References:** *Erman et al. (2018). Discovery Models. PPt Presentation of PKM Masters/S3 Science Education Study Program in Lombok.*	10%

3	Explain cooperative and collaborative learning models	1. Describe the characteristics of cooperative learning and collaborative learning models	**Criteria:** 1. Score 4 if the presentation is equipped with attractive PPt slides, presented explicitly, logically and clearly, and answers participants' questions precisely and in detail 2. Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3. Score 2 if the presentation is equipped with attractive PPt slides, is presented clearly but not explicitly and cannot answer participants' questions accurately and in detail 4. Score `if the presentation is equipped with PPt but is presented in a way that is not clear and explicit **Form of Assessment** : Practice / Performance		Presentation and discussion 150 minutes	**Material:** Learning models **References:** *Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Collaborative learning **Reference:** *Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021*	0%
4		1. 1. Describe the characteristics of project-based learning and problem-based learning models 2. 2. Analyze the curriculum for implementing project-based learning and problem-based learning models	**Criteria:** 1. Score 4 if the presentation is equipped with attractive PPt slides, presented explicitly, logically and clearly, and answers participants' questions precisely and in detail 2. Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3. Score 2 if the presentation is equipped with attractive PPt slides, is presented clearly but not explicitly and cannot answer participants' questions accurately and in detail 4. Score 1 if the presentation is equipped with PPt but is presented unclearly and explicitly **Form of Assessment** : Practice / Performance		Presentation and discussion 150	**Material:** Learning models **References:** *Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Project-based learning **Reference:** *Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya: Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa*	0%

5	Explains learning approaches: STEAM and Blended learning.	1. Describe the characteristics of the project-based learning model 2. Describe the characteristics of the problem-based learning model	**Criteria:** 1. Score 4 if the presentation is equipped with attractive PPt slides, presented explicitly, logically and clearly, and answers participants' questions precisely and in detail 2. Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3. Score 2 if the presentation is equipped with attractive PPt slides, is presented clearly but not explicitly and cannot answer participants' questions accurately and in detail 4. Score 1 if the presentation is equipped with PPt but is presented unclearly and explicitly **Form of Assessment** : Practice / Performance		Presentation and discussion 150	**Material:** STEAM **Reader:** *Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021* **Material:** Blended learning **References:** *Wahyuni, Sanjaya, Erman, and Jatmiko (2019). Edmodo-Based Blended Learning Model as an Alternative to Science Learning to Motivate and Improve Junior High School Students' Scientific Critical Thinking Skills. Ijet, 14(7)* **Material:** STEM **Library:** *Conference book of Educational of science, technology, engineering, and mathematics International Conference (ESTEMIC) 2021. Bandung: UIN GJ.*	10%
6	Prepare a project plan for developing teaching materials/textbooks	Designing teaching material/textbook development projects	**Criteria:** 1. Score 4 if the proposal is prepared completely according to the format, realistic and logical, and equipped with a team, schedule and costs. 2. Score 3 if the proposal is prepared completely according to the format, realistic and logical, equipped with a team, but the schedule and costs are less realistic 3. Score 2 if the proposal is prepared according to the format, but is less realistic and logical, and is equipped with a team, schedule and costs **Form of Assessment** : Project Results Assessment / Product Assessment	150 minute workshop		**Material:** Learning models **References:** *Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** STEM/STEAM, Collaborative learning **Library:** *Conference book of Educational of science, technology, engineering, and mathematics International Conference (ESTEMIC) 2021. Bandung: UIN GJ.*	20%

7	Presenting the project design for developing teaching materials: teaching materials/textbooks	Explain the design of the teaching material development project according to the model and approach developed.	**Criteria:** 1. Score 4 if the presentation is equipped with attractive PPt slides, presented explicitly, logically and clearly, and answers participants' questions precisely and in detail 2. Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3. Score 2 if the presentation is equipped with attractive PPt slides, is presented clearly but not explicitly and cannot answer participants' questions accurately and in detail 4. Score 1 if the presentation is equipped with PPt but is presented unclearly and explicitly **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation and question and answer 150 minutes		**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** The nature of science **References:** *2. Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.* **Material:** STEAM/STEM **Library:** *1. Conference book of Educational of science, technology, engineering, and mathematics International Conference (ESTEMIC) 2021. Bandung: UIN GJ.*	20%
8	1. Explaining TCT models: Inquiry-based learning and discovery learning 2. Explain cooperative and collaborative learning models 3. Explain project-based learning and problem-based learning models 4. Explains STEAM/STEM and Blended learning approaches	1. 2. Explains learning models and their implementation in science learning	**Criteria:** 1. Score 4 if you can explain in detail and precisely the purpose of each learning model/approach, supporting theory, implementation of the model in science learning, and factors that influence the effectiveness of implementing the learning model/approach 2. Score 3 if you can explain the purpose of each learning model/approach, supporting theory, implementation of the model in science learning, but cannot explain in detail the factors that influence the effectiveness of implementing the learning model/approach 3. Score 2 if you can explain correctly but not in detail about the purpose of each learning model/approach, supporting theory, implementation of the model in science learning, and factors that	Midterm 100 minutes		**Material:** Learning models **References:** *Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Inquiry and discovery learning **References:** *Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in the classroom. ICST, Atlantis Press.* **Material:** Project based learning and problem based learning **Reference:** *Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya:*	0%

			influence the effectiveness of implementing the learning model/approach 4. Score 1 if there is a lack of detail and some are inaccurate in explaining the purpose of each learning model/approach, supporting theory, implementation of the model in science learning, and factors that influence the effectiveness of implementing the learning model/approach			*Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa* **Material:** STEM/STEAM **Reference:** *Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021* **Material:** Blended learning **References:** *Wahyuni, Sanjaya, Erman, and Jatmiko (2019). Edmodo-Based Blended Learning Model as an Alternative to Science Learning to Motivate and Improve Junior High School Students' Scientific Critical Thinking Skills. Ijet, 14(7)*	

9		1. Developing textbooks 2. Developing learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified **Form of Assessment** : Project Results Assessment / Product Assessment		Project: 150 minute textbook development	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** The nature of science **References:** *2. Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.* **Material:** Inquiry and discovery model **References:** *5. Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in the classroom. ICST, Atlantis Press.* **Material:** Project-based learning **References:** *3. Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya: Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa* **Material:** STEAM **References:** *4. Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021*	0%

10	Implementation of projects developing teaching materials/textbooks for cooperative learning and collaborative learning models	1. Developing textbooks 2. Developing learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment		Teaching materials development project 150 minutes	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** The nature of science **References:** *2. Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.* **Material:** Teaching and learning **References:** *4. Cbism, N. (2007). Peer review of teaching: a sourcebook. Bolton, Massachusetts: Armature Publishing Co.*	0%

11	Implementation of projects for developing teaching materials/textbooks with project-based learning and problem-based learning models	1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the textbook is in accordance with the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is certified H 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified **Form of Assessment** : Project Results Assessment / Product Assessment		Teaching materials development project 150	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Project based learning and problem based learning **References:** *3. Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya: Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa* **Material:** The nature of science **References:** *2. Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.*	0%

12	Implementation of projects to develop teaching materials/textbooks for STEM/STEAM and blended learning approaches	1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook matches the format, has novelty, is coherent, has a logical study, is presented explicitly, and fits the topic and is equipped with learning tools, published with ISBN and HK certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is IPR-certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment		150 minute textbook development project	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** STEAM **References:** *4. Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021* **Material:** Blended learning **References:** *Wahyuni, Sanjaya, Erman, and Jatmiko (2019). Edmodo-Based Blended Learning Model as an Alternative to Science Learning to Motivate and Improve Junior High School Students' Scientific Critical Thinking Skills. Ijet, 14(7)*	0%

13		1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook matches the format, has novelty, is coherent, has a logical study, is presented explicitly, and fits the topic and is equipped with learning tools, published with ISBN and HK certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment		Teaching materials project: Product revision 150	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Discovery learning model **References:** *Erman et al. (2018). Discovery Models. PPt Presentation of PKM Masters/S3 Science Education Study Program in Lombok.* **Material:** Inquiry model **References:** *Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in the classroom. ICST, Atlantis Press.*	20%

14	Implementation of projects to develop teaching materials/textbooks for inquiry-based learning and discovery learning models	1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the presentation is equipped with attractive PPt slides, presented explicitly and logically, but has not answered the participants' questions precisely and in detail. 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment		Textbook project: Product revision 150	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** The nature of science **References:** *2. Bell, RI (2008). Teaching the nature of science through process skills. New York: Allyn and Bacon.* **Material:** STEAM **References:** *4. Erman (2021). STEM-based learning in science educational classes: Challenges for Indonesian system. Bandung ESTEMIC 2021*	0%

15	Implementation of projects to develop teaching materials/textbooks for inquiry-based learning and discovery learning models	1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment		Project and product presentation: Finalization 150 minutes	**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.*	45%
16		1. Developing textbooks 2. Develop learning tools	**Criteria:** 1. Score 4 if the textbook is in accordance with the format, has novelty, is coherent, has a logical study, is presented explicitly, and is appropriate to the topic and is equipped with learning tools, published with ISBN and IPR certified 2. Score 3 if the textbook matches the format, has novelty, is interesting, the study is logical, and according to	Final semester exam (UAS) 100 minutes		**Material:** Learning models **References:** *1. Arends, RI (2012). Learning to teach. Boston: McGraw-Hill.* **Material:** Inquiry and discovery learning model **References:** *5. Erman et al. (2018). Scientific thinking skills: Why junior high school science teachers cannot use discovery and inquiry models in the*	30%

			the topic, the presentation is explicit, less coherent, and is equipped with learning tools, but has not been published and is IPR certified 3. Score 2 if the textbook is in accordance with the format, has novelty, is coherent, logical study, and is on topic but lacks explicit exposure, and is not equipped with learning tools, is not published and is not certified 4. Score 1 if the textbook conforms to the format, has no novelty, is incoherent, the study is not appropriate to the topic, lacks explicit exposure, and is not equipped with learning tools, is not published, and is certified **Form of Assessment** : Project Results Assessment / Product Assessment			*classroom. ICST, Atlantis Press.* **Material:** Model discovery **References:** *2. Erman et al. (2018). Discovery Models. PPt Presentation of PKM Masters/S3 Science Education Study Program in Lombok.* **Material:** Project based learning and problem based learning **References:** *3. Erman (2023). Project-based learning implementation in science class: Challenges for Indonesian educational system. Surabaya: Paper in Agreement implementation between Science Education Department Unesa and PG Chemistry Vykram University Ujjain Indoa* **Material:** Blended learning **References:** *Wahyuni, Sanjaya, Erman, and Jatmiko (2019). Edmodo-Based Blended Learning Model as an Alternative to Science Learning to Motivate and Improve Junior High School Students' Scientific Critical Thinking Skills. Ijet, 14(7)*	

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Project Results Assessment / Product Assessment	135%
2.	Portfolio Assessment	10%
3.	Practice / Performance	10%
		100%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.

3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, 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 which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.