



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Biology Education Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date										
Integrated Science Learning and Science Technology Society and Environment	8420503283		T=3	P=0	ECTS=4.77	8	July 18, 2024										
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator											
			Dr. Rinie Pratiwi Puspitawati, M.Si.											
Learning model	Case Studies																
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	This course discusses science knowledge (SK), pedagogical knowledge (PK), technological knowledge (TK), along with their integration in science learning																
References	Main :																
	1.																
	Supporters:																
Supporting lecturer	Dr. Rinie Pratiwi Puspitawati, M.Si.																
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	Students are able to understand the scope of the Integrated Science Learning and Science Technology Society and Environment courses	Students can understand the course syllabus, study contract, TPASK ability pretest, understanding NoS, and Self Efficacy.	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Discussion, test, presentation 3 X 50			0%
2	Students are able to orient lectures using the TPASK-C approach	Students are able to orient lectures using the TPASK-C approach	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Lectures, discussions 2 X 50			0%

3	Linking science content with its context	Introducing natural potential mapping techniques along with learning technology that can represent them	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	practice, discussion and presentation 2 X 50			0%
4	Linking science content and its context	Analyzing the curriculum in sync with the results of mapping natural potential and how to teach problems to students	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	Practice, discussion 2 X 50			0%

5	Analyzing essential Concepts	Analyzing science content in sync with the results of natural potential mapping	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	Reference studies, discussions, presentations 2 X 50			0%
6	Identifying the characteristics of science learning as it really is (nature of science)	Analyzing NoS payload	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	Reference study, discussion, practice 2 X 50			0%

7	Mastering theoretical concepts of problem solving in science education procedurally through a scientific approach	Understand how to teach science actively (based on constructivism)	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	Lectures, modeling, discussions 2 X 50			0%
8	UTS	UTS	Criteria: UTS	UTS 3 X 50			0%
9	Using science and technology-based science learning resources and learning media to support the implementation of science learning in curricular, co-curricular and extracurricular activities	Understand how to determine and use learning technology in science	Criteria: 1. The assessment is carried out on the following aspects: 2. Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6. Essay questions are accessed jointly on UTS and US 7. Performance questions are integrated during learning	Reference study, discussion 2 X 50			0%

10	Able to use science and technology-based science learning resources and learning media to support the implementation of science learning in curricular, co-curricular and extracurricular activities	Understand how to determine and use learning technology in science	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, demonstration 2 X 50			0%
11	Able to use science and technology-based science learning resources and learning media to support the implementation of science learning in curricular, co-curricular and extracurricular activities	Understand how to determine and use learning technology in science	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, demonstration 2 X 50			0%

12	Designing a Science Learning Plan	Designing a Science Learning Plan	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, presentation 2 X 50			0%
13	Designing a Science Learning Plan	Designing a Science Learning Plan	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, presentation 2 X 50			0%

14	Designing a Science Learning Plan	Designing a Science Learning Plan	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, and presentation 2 X 50			0%
15	Designing a Science Learning Plan	Designing a Science Learning Plan	Criteria: 1.The assessment is carried out on the following aspects: 2.Participation during lectures is carried out through observing honest and independent attitudes. Student activities and responses during learning activities, especially practicums, are also assessed as participation, with a weight of 20% 3. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 4. UTS weight 20% 5. US weight 30% 6.Essay questions are accessed jointly on UTS and US 7.Performance questions are integrated during learning	Practice, and presentation 2 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

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** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
 6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in 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.