



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																
Environmental Knowledge*	4620102148		T=2 P=0 ECTS=3.18	5	July 17, 2024																																
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																
		Dr. H. Sunu Kuntjoro, S.Si., M.Si.																																
Learning model	Case Studies																																				
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																				
	Program Objectives (PO)																																				
	PLO-PO Matrix																																				
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Short Course Description	Study of Environmental Knowledge through understanding laws regarding environmental management, the role of humans in nature, especially students as environmental coaches, applying environmental ethics, studying the existence of ecosystems on land and in waters and how to preserve them for sustainable development with an environmental perspective. The material is presented in the form of theory and practice																																				
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="width: 50px; height: 30px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> <td style="width: 20px;">6</td> <td style="width: 20px;">7</td> <td style="width: 20px;">8</td> <td style="width: 20px;">9</td> <td style="width: 20px;">10</td> <td style="width: 20px;">11</td> <td style="width: 20px;">12</td> <td style="width: 20px;">13</td> <td style="width: 20px;">14</td> <td style="width: 20px;">15</td> <td style="width: 20px;">16</td> </tr> </table>					P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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References	Main :																																				
	1. Enger, Smith. 2005. <i>Environmental Sciences : A Study of Interrelationships</i> .Washington :McGraw-Hill International edition. Fitrihidajati, Herlina dkk. 2014. Pemanfaatan Eceng Gondok Sebagai Pakan Ternak Hadisubroto, T. Ekologi Dasar, 1989. Jakarta: Direktorat Jendral Pendidikan Tinggi Ruminansia Sebagai Upaya Mengatasi Gulma Perairan. Laporan Penelitian Hibah Bersaing. Surabaya : LPPM UNESA. Kepmen LH tentang Peraturan Pelaksanaan Sekolah Adiwiyata Odum, E.P., 1971. Fundamentals of Ecology. (Terjemahan Samingan T dan B. Prigandono). Yogyakarta: Gadjah Mada University Press. Oram, Raymond F. And Hummer, Paul J. 2003. <i>Biology Living Systems</i> . New York : Glencoe, McGraw-Hill. Rachmadiarti, Fida. 2013. Fitoremediasi. Disertasi. Malang : PPS Universitas Brawijaya. _____ Undang-undang no 32 tahun 2009 tentang Pengelolaan Lingkungan.																																				
	Supporters:																																				
Supporting lecturer	Dra. Herlina Fitrihidajati, M.Si. Dra. Winarsih, M.Kes. Dr. Tarzan Purnomo, M.Si. Dr. H. Sunu Kuntjoro, S.Si., 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 communicate an understanding of humans as environmental builders	Students can: a. describe the background of environmental education b. describe the scope of environmental knowledge c. comparing environmental education d. identify ways to increase environmental sensitivity	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions 2 X 50			0%
2	Students are able to communicate understanding of environmental problems globally and nationally	Students can: a. describe global environmental problems b. describe national environmental problems c. communicating the results of greenhouse effect model experiments d. make a report on the results of experiments on the greenhouse effect model e. convey ideas/questions	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions, demonstrations and presentations 2 X 50			0%
3	Students are able to analyze population projections globally and nationally	Students can: a. describe global and national population projections b. describe urban population growth c. explains gross national income d. identify population conditions and problems e. make a report about the population profile of a village or sub-district	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%

4	Students are able to describe their understanding of Ecology as the Basics of Environmental Science	Students can: a. explain that IPL is part of ecology b. explain ecological development c. identify the biosphere and its processes d. convey ideas/opinions	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions, demonstrations and presentations 2 X 50			0%
5	Students are able to identify populations, communities and ecosystems and explain material cycles and energy flows	Students can: a. Identifying Population, Community, Ecosystem b. Describe the material cycle and energy flow c. Convey ideas/opinions	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%
6	Students are able to explain the principles of Environmental Science	Students can: a. identify the principles in IPL b. explains the application of IPL principles	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%

7	Students are able to explain and apply saving land and land	Students can: a. describe land and land b. identify soil structure c. explain the function of water for soil d. identify land and land damage e. describes efforts to save land and land	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, observations, discussions and presentations 2 X 50			0%
8	UTS	UTS	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	UTS 2 X 50			0%
9	Students are able to identify forest ecosystems	Students can: a. Describe forests and tropical forests b. Explain the function of forests c. identify types of forests d. Describe forest damage and efforts to prevent it	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%

10	Students are able to describe and analyze freshwater ecosystems	Students can: a. describe water ecosystems and b. analyze water quality c. designing a model of a water purifier d. make a practical report	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%
11	Students are able to describe and analyze seawater ecosystems	Students can: a. describe the marine ecosystem b. analyze water quality c. write a paper	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%
12	Students are able to observe agricultural or built ecosystems	Students can: a. describe built ecosystems and natural ecosystems b. observing built and natural plant ecosystems c. compare the physical, chemical and biological factors of the two ecosystems d. make a practical report	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, field observations, discussions and presentations 2 X 50			0%

13	Students are able to explain and apply environmental ethics	Students can: a. describe environmental ethics b. identify various types of ethics c. explain environmental ethics in Indonesia	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, discussions and presentations 2 X 50			0%
14	Students are able to analyze and communicate about pollution	Students can: a. describe public health b. conducting experiments on environmental pollution c. describe the impact of pollution on health	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, Practicums, discussions and Presentations 2 X 50			0%
15	Students are able to communicate environmentally sound development strategies	Students can: a. describe national development b. explain sustainable development c. explain environmentally sound development	Criteria: 1. Practical reports and products are assessed as ASSIGNMENTS with a weight of 30% 2. USS weight 20% 3. Students' activities and responses during learning activities, especially practicums, are assessed as Participation, weight 20% 4. US weight 30% 5. Essay questions are assessed together at USS 6. Performance questions are integrated during learning	Lectures, Discussions and Presentations 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.