



**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
SDAL CONSERVATION	8420502138		T=2 P=0 ECTS=3.18	2	January 3, 2023
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator
	Prof. Dr. Fida Rachmadiarti, M.Kes		Prof. Dr. Fida Rachmadiarti, M.Kes		Dr. Rinie Pratiwi Puspitawati, M.Si.

Learning model	Project Based Learning
----------------	------------------------

Program Learning Outcomes (PLO)	<b>PLO study program that is charged to the course</b>																			
	<b>PLO-7</b>	Able to demonstrate knowledge of biology at the molecular, cell and organism levels and their interactions with the environment.																		
	<b>PLO-12</b>	Able to demonstrate the ability to apply biological concepts and environmental issues with relevant technology in natural resource management																		
	<b>Program Objectives (PO)</b>																			
	<b>PO - 1</b>	Mastering the concept of Conservation of Natural Resources and the Environment																		
	<b>PO - 2</b>	Able to apply Natural Resources and Environmental Conservation concepts and technology in Conservation and Natural Resources management																		
	<b>PO - 3</b>	Able to apply transferable skills to develop environmental commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough"																		
	<b>PO - 4</b>	Able to design and carry out research in the field of Natural Resources and Environmental Conservation and able to process, analyze, interpret and document research data																		
	<b>PO - 5</b>	Able to communicate research results on Conservation of Natural Resources and the Environment in the form of scientific articles																		
	<b>PLO-PO Matrix</b>																			
	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">P.O</th> <th style="width: 15%;">PLO-7</th> <th style="width: 15%;">PLO-12</th> </tr> </thead> <tbody> <tr><td>PO-1</td><td></td><td></td></tr> <tr><td>PO-2</td><td></td><td></td></tr> <tr><td>PO-3</td><td></td><td></td></tr> <tr><td>PO-4</td><td></td><td></td></tr> <tr><td>PO-5</td><td></td><td></td></tr> </tbody> </table>		P.O	PLO-7	PLO-12	PO-1			PO-2			PO-3			PO-4			PO-5		
	P.O	PLO-7	PLO-12																	
	PO-1																			
	PO-2																			
	PO-3																			
PO-4																				
PO-5																				

**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
PO-1	✓				✓		✓									
PO-2									✓			✓				
PO-3			✓								✓				✓	
PO-4		✓				✓			✓		✓					
PO-5				✓										✓		✓

<b>Short Course Description</b>	This course discusses 1) The scope of conservation which includes: Definition, objectives, benefits and efforts to preserve natural resources and the environment; 2) Environmental ethics which includes: Definition, Paradigm and Principles of Environmental Ethics; 3) Natural resources which include: Definition, types and benefits of natural resources; 4) Local wisdom which includes: Understanding, approaches, challenges and local wisdom in community life in the future; 5) Management and problems of natural resources and the environment which includes: issues, problems and management of natural resources and the environment; 6) Awareness of conservation which includes awareness of the importance of conserving natural resources and the environment, as well as eco campuses and conservation campuses; 7) Regulation of natural resources and the environment. Lecture activities are carried out in the student center with discussions, observations, project assignments, and presentations by developing ecopreneurship characteristics. There are some tasks that are communicated in English.						
<b>References</b>	<b>Main :</b>		<ol style="list-style-type: none"> <li>1. Cluras, D. D. and Reganold, J.P. 2010. Natural Resources Conservation Future. Washington: Washington State University.</li> <li>2. Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Biologi Konservasi . Jakarta : Yayasan Obor Indonesia</li> <li>3. Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Buku Ajar Mahasiswa Konservasi Sumber Daya Alam dan Lingkungan. Surabaya: Unesa University Press.</li> <li>4. Faizah, U., Rachmadiarti,F., Prastiwi, Muji Sri., Kuntjoro, S. 2017. Buku Ajar Konservasi Sumber Daya Alam dan Lingkungan berbasis Problem Based Learning untuk melatih Sadar Konservasi. Surabaya: Airlangga University Press.</li> <li>5. Bicker, A., Sillitoe, P., &amp; Pottier, J. 2004. Development and Local Knowledge (New approaches to issues in natural resources management, conservation and agriculture). New York: Routledge.</li> <li>6. T. Burt &amp; D. Thompson. (2020). Ecology, Biodiversity and Conservation. In T. Burt &amp; D. Thompson (Eds.), Curious about Nature: A Passion for Fieldwork (Ecology, Biodiversity and Conservation, pp. li-iv). Cambridge: Cambridge University Press.</li> <li>7. Van Dyke, F. 1993. Conservation Biology. Boston: University of Arkansas, Inc.</li> <li>8. Sanggetha, J., Thangadurai, D., Goh, H.C., &amp; Islam, S. 2019. Biodiversity and Conservation (Characterization and Utilization of Plants, Microbes, and Natural Resources for Sustainable Development and Ecosystem Management). Canada: Apple Academic Press, Inc.</li> </ol>				
<b>Supporting lecturer</b>	Dr. Wisanti, M.S. Prof. Dr. Fida Rachmadiarti, M.Kes. Dr. Tarzan Pumomo, M.Si. Prof.Dr. Yuni Sri Rahayu, M.Si. Reni Ambarwati, S.Si., M.Sc. Dr. Ulfi Faizah, S.Pd., M.Si. Dwi Anggorowati Rahayu, S.Si., M.Si. Elma Sakinatus Sajidah, S.Si., M.Si., Ph.D. Fitriari Izzatunnisa Muhaimin, B.Sc., M.Sc.						
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	Proposing creative ideas in solving environmental problems in general	<ol style="list-style-type: none"> <li>1. Analyzing the background to conservation of natural resources and the environment</li> <li>2. Describe the meaning, goals and benefits of conservation</li> <li>3. Describe efforts to conserve natural resources and the environment</li> </ol>	<p><b>Criteria:</b> Student centered/Presentation /Discussion (2x50')</p> <p><b>Form of Assessment :</b> Participatory Activities</p>	Reference studies, discussions, LKM assignments on Conservation 2 X 50		<p><b>Material:</b> KSDAL Concept <b>Library:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i></p> <hr/> <p><b>Material:</b> Biodiversity Concepts <b>References:</b> <i>Van Dyke, F. 1993. Conservation Biology. Boston: University of Arkansas, Inc.</i></p> <hr/> <p><b>Material:</b> KSDAL Concept <b>Library:</b> <i>Faizah, U., Rachmadiarti, F., Prastivi, Muji Sri., Kuntjoro, S. 2017. Textbook on Conservation of Natural Resources and the Environment based on Problem Based Learning to train Conservation Awareness. Surabaya: Airlangga University Press.</i></p>	5%
---	---	--	---	--	--	---	----

2	Propose creative ideas in solving environmental problems in general	Propose written ideas related to natural resource conservation efforts	<b>Criteria:</b> LKM assessment rubric  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Presentation and discussion 2 X 50	Project based learning	<b>Material:</b> KSDAL Concept <b>Library:</b> Faizah, U., Rachmadiarti, F., Prastivi, Muji Sri., Kuntjoro, S. 2017. <i>Textbook on Conservation of Natural Resources and the Environment based on Problem Based Learning to train Conservation Awareness.</i> Surabaya: Airlangga University Press.  <b>Material:</b> KSDAL <b>Reference:</b> Bicker, A., Sillitoe, P., & Pottier, J. 2004. <i>Development and Local Knowledge (New approaches to issues in natural resources management, conservation and agriculture).</i> New York: Routledge.	10%
3	Apply environmental ethical principles	1.Explain environmental ethics 2.explain the principles of environmental ethics 3.Write an example of environmental ethics	<b>Criteria:</b> Student centered/Presentation /Discussion  <b>Form of Assessment :</b> Participatory Activities	Reference studies, observations, discussions and presentations 2 X 50	Reference studies, observations, discussions and presentations		5%
4	Applying environmental ethical principles in life	Propose written ideas regarding the importance of environmental ethics in the conservation of natural resources	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Reference studies, observations, discussions and presentations 2 X 50	Project based learning	<b>Material:</b> Environmental Ethics <b>References:</b> Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. <i>Student Textbook for Natural Resources and Environmental Conservation.</i> Surabaya: Unesa University Press.	7%

5	Develop effective ideas to overcome natural resource and environmental problems.	<ol style="list-style-type: none"> <li>1.Explain the meaning of natural resources</li> <li>2.Classify the types of SDA</li> </ol>	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities	Reference studies, observations, discussions and presentations 2 X 50	Reference studies, observations, discussions and presentations	<b>Material:</b> SDAL <b>Library:</b> Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. <i>Student Textbook on Natural Resources and Environmental Conservation</i> . Surabaya: Unesa University Press.	4%
6	Develop effective ideas to overcome natural resource and environmental problems	<ol style="list-style-type: none"> <li>1.Explain the types of natural resources that exist in the environment around students</li> <li>2.classify the types of natural resources that exist in the environment around students</li> <li>3.Develop effective ideas to overcome existing natural resource problems</li> </ol>	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Reference studies, observations, discussions and presentations 2 X 50	Project based learning	<b>Material:</b> Natural resources and the environment <b>References:</b> Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. <i>Student Textbook on Conservation of Natural Resources and the Environment</i> . Surabaya: Unesa University Press.	7%
7	Develop systematic ideas to preserve local community wisdom	<ol style="list-style-type: none"> <li>1.Explains the definition, approach and challenges of local wisdom</li> <li>2.Analyzing Indonesian culture and local wisdom that supports conservation</li> </ol>	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities	Reference studies, observations, discussions and presentations 2 X 50	Reference studies, observations, discussions and presentations	<b>Material:</b> Local Wisdom <b>Reference:</b> Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. <i>Student Textbook on Natural Resources and Environmental Conservation</i> . Surabaya: Unesa University Press.	2%
8	UTS	UTS	<b>Criteria:</b> UTS	UTS 2 X 50			0%
9	Develop systematic ideas to preserve local community wisdom	Proposing efforts to increase the role of local wisdom in supporting conservation	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Reference study, practice, discussion and presentation 2 X 50	Project based learning	<b>Material:</b> Local wisdom <b>Reference:</b> Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. <i>Student Textbook on Natural Resources and Environmental Conservation</i> . Surabaya: Unesa University Press.	9%

10	Develop effective ideas in accordance with the principles of natural resource and environmental management	1.describe examples of SDAL problems that occur in society 2.describe examples of SDAL management that occur in the community.	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment	Reference study, practice, discussion and presentation 2 X 50	Reference studies, practice, discussions and presentations	<b>Material:</b> SDAL <b>Library:</b> <i>Faizah, U., Rachmadiarti, F., Prastiwi, Muji Sri., Kuntjoro, S. 2017. Textbook on Conservation of Natural Resources and the Environment based on Problem Based Learning to train Conservation Awareness. Surabaya: Airlangga University Press.</i>	3%
11	Develop ideas for effective natural resource and environmental management in accordance with the principles of natural resource management	Develop ideas for effective natural resource and environmental management in accordance with natural resource management principles	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Reference study, discussion and presentation 2 X 50	Project based learning	<b>Material:</b> SDAL <b>Library:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i>	7%
12	Understand global and local conservation principles.	Explain the principles of global SDAL conservation	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment	Reference study, discussion and presentation 2 X 50		<b>Material:</b> Biological Conservation <b>References:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i>	3%
13		Explaining the eco campus movement and efforts to make it happen	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities	Reference study, discussion and presentation 2 X 50		<b>Material:</b> Conservation awareness <b>Reference:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i>	3%

14	Understand the principles of global and local natural resource conservation regulations.	Explain the principles of natural resource conservation globally and locally	<b>Criteria:</b> attached  <b>Form of Assessment :</b> Project Results Assessment / Product Assessment	Reference studies, discussions, observations and presentations 2 X 50	Project based learning	<b>Material:</b> Conservation Awareness <b>Literature:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i>	10%
15			<b>Criteria:</b> attached  <b>Form of Assessment :</b> Participatory Activities	Reference studies, discussions, observations and presentations 2 X 50	Reference studies, discussions, observations and presentations	<b>Material:</b> Environmental Regulations <b>References:</b> <i>Rachmadiarti, F., Faizah, U., Kuntjoro, S. 2017. Student Textbook on Natural Resources and Environmental Conservation. Surabaya: Unesa University Press.</i>	5%
16			<b>Form of Assessment :</b> Project Results Assessment / Product Assessment	offline 90 minutes			20%

#### Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	27%
2.	Project Results Assessment / Product Assessment	73%
		100%

#### Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.

