	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Undergraduate Physics Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Natural Resources Conservation	4520102107	Compulsory Study Program Subjects	T=2	P=0	ECTS=3.18	2	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Prof. Dr. Munasir, S.Si., M.Si.

Learning model	**Project Based Learning**

Program Learning Outcomes (PLO)

PLO study program which is charged to the course

PLO-11	Design and conduct experiments in physics learning by applying scientific methods
PLO-15	Solve problems in physical systems comprehensively using mathematics and computational tools.

Program Objectives (PO)

PO - 1	Have mastery of the principles of conservation, natural resources and the environment. (PLO1 - knowledge) 2. Master the concept of KSDAL application and relevant technology in managing natural resources and the environment. (PLO2 – knowledge) 3. Able to solve problems in the community in an effort to apply KSDAL knowledge. (PLO6 - generic skills) 4. Able to realize independent character and care about the environment through KSDAL lectures to develop ecopreneurship. (PLO 8-Specific Attribute
PO - 2	Mastering KSDAL application concepts and relevant technology in managing natural resources and the environment. (PLO2 – knowledge)
PO - 3	Able to solve problems in the community in an effort to apply KSDAL knowledge. (PLO6 - generic skills)

PLO-PO Matrix

P.O	PLO-11	PLO-15
PO-1		
PO-2		
PO-3		

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																

Short Course Description

Discusses: natural resources and the environment, biological natural resource problems at local, national and global levels, conservation and management of biological and non-biological natural resources at local, national and global levels, environmental paradigms and ethics, urban natural resource management through observation, discussion and presentation.

References

Main :

1. Cluras, D. D. and Reganold, J.P. 2010. Natural Resources Conservation Future. Washington: Washington State University.
2. Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Biologi Konservasi . Jakarta : Yayasan Obor Indonesia
3. Rachmadiarti,F., Fauziah, U., Kuntjoro, S. 2017. Konservasi Sumber Daya Alam dan Lingkungan. Surabaya: Unesa University Press.
4. Fauziah, U., Rachmadiarti,F., Rachmadiarti,F., Kuntjoro, S. 2017. Konservasi Sumber Daya Alam dan Lingkungan. Surabaya: Unesa University Press.

Supporters:

Supporting lecturer	Dra. Winarsih, M.Kes. Woro Setyarsih, S.Pd., M.Si. Guntur Trimulyono, S.Si., M.Sc. Dr. Muhammad Satriawan, M.Pd. Muhammad Habibbulloh, M.Pd. Dr. Oka Saputra, 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	Students are able to explain natural resources and the environment (SDAL)	· Explain the meaning of SDA and L · Identify SDAL in the environment · Explain the benefits of SDAL	**Criteria:** Active, responsive, timely participation in completing tasks **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference study, discussion and presentation 2 X 50		**Material:** Scope of conservation which includes: Background, definition, objectives, benefits and efforts to conserve natural resources and the environment (SDAL). **References:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	5%
2	Proposing creative ideas in solving general environmental problems	• Propose written ideas related to natural resource conservation efforts	**Criteria:** Responsive, creative, innovative, logical, timely **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Efforts to conserve natural resources and the environment (SDAL) **References:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	5%
3	Applying environmental ethical principles in life	• Explain environmental ethics, • describe the principles of environmental ethics. • write examples of environmental ethics	**Criteria:** Responsive, creative, innovative, logical, timely **Form of Assessment** : Participatory Activities	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Environmental Ethics which includes: Definition, Paradigm and Principles of Environmental Ethics; **References:** *Fauziah, U., Rachmadiarti, F., Rachmadiarti, F., Kuntjoro, S. 2017. Conservation of Natural Resources and the Environment. Surabaya: Unesa University Press.*	5%
4	Applying environmental ethical principles in life	• Propose written ideas regarding the importance of environmental ethics in the conservation of natural resources	**Criteria:** attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Environmental Ethics which includes: Definition, Paradigm, and Principles of Environmental Ethics **References:** *Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Conservation Biology. Jakarta: Indonesian Obor Foundation*	5%

5	Develop effective ideas to overcome natural resource and environmental problems.	• Explain the meaning of natural resources	**Criteria:** Attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Natural resources which include: Definition, types and benefits of Natural Resources **References:** *Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Conservation Biology. Jakarta: Indonesian Obor Foundation*	5%
6	Develop effective ideas to overcome natural resource and environmental problems.	• Explain the types of natural resources that exist in the environment around students	**Criteria:** Attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Natural resources which include: Definition, types and benefits of Natural Resources **References:** *Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Conservation Biology. Jakarta: Indonesian Obor Foundation*	5%
7	Students are able to implement conservation of natural resources and the environment at the local level, on campus and in the surrounding environment	· Identify SDAL at the local, campus and surrounding environment · Explain the factors that influence and impact SDAL exploration on the local, campus and surrounding environment	**Criteria:** Attached **Form of Assessment** : Participatory Activities	Reference studies, observations, discussions and presentations 2 X 50		**Material:** Local wisdom which includes: Definitions, approaches, challenges and local wisdom in people's lives in the future. **Reference:** *Rachmadiarti, F., Fauziah, U., Kuntjoro, S. 2017. Conservation of Natural Resources and the Environment. Surabaya: Unesa University Press.*	5%
8	UTS	UTS	**Criteria:** UTS **Form of Assessment** : Portfolio Assessment, Test	UTS 2 X 50			10%
9	Students are able to explain paradigms and apply environmental ethics	· explain the environmental ethics paradigm · apply environmental ethics	**Criteria:** attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference study, practice, discussion and presentation 2 X 50		**Material:** Local wisdom which includes: Definition, approach, challenges and local wisdom in community life in the future. **Reference:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	5%

10	Develop effective ideas in accordance with natural resource and environmental management principles	• describe examples of SDAL problems that occur in the community. • describe examples of SDAL management that occur in the community.	**Criteria:** Attached **Form of Assessment** : Participatory Activities	Reference study, practice, discussion and presentation 2 X 50		**Material:** Management and problems of natural resources and the environment which includes: issues, problems and management of natural resources and the environment **Reference:** *Rachmadiarti, F., Fauziah, U., Kuntjoro, S. 2017. Conservation of Natural Resources and the Environment. Surabaya: Unesa University Press.*	5%
11	Develop ideas for effective natural resource and environmental management in accordance with natural resource management principles	· Explain the management of non-biological SDAL · Propose ideas for managing non-biological SDAL	**Criteria:** Attached **Form of Assessment** : Participatory Activities	Reference study, discussion and presentation 2 X 50			5%
12	Understand global and local conservation principles.	Mastering the principles of global SDAL conservation	**Criteria:** Attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference study, discussion and presentation 2 X 50		**Material:** Level of biodiversity (community/habitat, species, genetics) and conservation efforts. **References:** *Indrawan, Mochamad., Primack, Richard B., Supriatna, Jatna. 2007. Conservation Biology. Jakarta: Indonesian Obor Foundation*	5%
13	Students are able to explain the management of urban natural resources	· Explain urban SDAL management	**Criteria:** Attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference study, discussion and presentation 2 X 50		**Material:** Eco campus movement and efforts to make it happen **Reference:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	5%
14	Students are able to design urban natural resource management	· Designing urban SDAL management	**Criteria:** Attached **Form of Assessment** : Participatory Activities	Reference studies, discussions, observations and presentations 2 X 50		**Material:** Material Chapters 1 - 6 **References:** *Fauziah, U., Rachmadiarti, F., Rachmadiarti, F., Kuntjoro, S. 2017. Conservation of Natural Resources and the Environment. Surabaya: Unesa University Press.*	5%
15	Students are able to communicate ideas/research results regarding local natural resource management	· Communicate ideas/research results on local SDAL management	**Criteria:** Attached **Form of Assessment** : Participatory Activities, Portfolio Assessment	Reference studies, discussions, observations, project assignments, and 2 X 50 presentations		**Material:** Material Chapters 1 - 6 **References:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	5%

16			**Criteria:** Responsive, creative, innovative, logical, timely **Forms of Assessment** : Project Results Assessment / Product Assessment, Portfolio Assessment, Practice / Performance	Presentation, Exhibition, Demonstration 2x50 minutes		**Material:** Material Chapters 1 - 6 **References:** **Material:** Material Chapters 1 - 6 **References:** *Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.*	20%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	47.5%
2.	Project Results Assessment / Product Assessment	6.67%
3.	Portfolio Assessment	34.17%
4.	Practice / Performance	6.67%
5.	Test	5%
		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** 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.