

Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Bachelor of Science Education Study Program

Document Code

Courses			CODE				Co	urse I	amil	v		redi	it We	iaht		0	SEMES	TFP		`om·	oilation	
Courses										Č	reui	IL VVC	igiit		,	PEIVIES	HER		ate	Jilation	•	
Natural Resources and Environmental Conservation			842010207	6							T	=2	P=0	EC.	TS=3.	18	4	1	J	uly 1	.8, 2024	4
AUTHORIZA [*]	TION		SP Develop	er						Cou	rse C	lus	ter C	oord	inato	r S	Study Program Coordinato			dinator		
																	Pro	f. Dr. E	Erma	ın, M	l.Pd.	
Learning model	Project Based L	earning	9																			
Program Learning	PLO study program that is charged to the course																					
Outcomes (PLO)	PLO-5	Demonstrate scientific, critical, and innovative attitudes in integrated science learning, laboratory activities, and professional-related tasks																				
	PLO-11	Desigr data	Design and conduct research about learning of integrated science, and acquire, analyze, and interpret the research data																			
	PLO-15	Demonstrate knowledge related to science education research																				
	Program Object	Program Objectives (PO)																				
	PO - 1	Mastering the concept of Conservation of Natural Resources and the Environment																				
	PO - 2		Able to apply Natural Resources and Environmental Conservation concepts and technology in Conservation and Natural Resources management																			
	PO - 3		Able to apply transferable skills to develop environmental commitment in an effort to realize the character of "Faith, Smart, Independent, Honest, Caring and Tough"																			
	PO - 4		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																			
	PO - 5	Able to communicate research results on Natural Resources and Environmental Conservation																				
	PLO-PO Matrix																					
			P.O		PL	O-5		F	PLO-1	.1		PL	.0-15	5								
			PO-1																			
			PO-2																			
			PO-3																			
			PO-4																			
			PO-5																			
	PO Matrix at th	e end o	of each lea	rninç	sta	ge (Sı	ub-F	PO)														
				1																		
			P.O		1	П		1		1		1	eek	- 1	1			ı		-		
				1	2	3	4	5	6	7	8	9	1	.0	11	12	13	14	15	5	16	

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																

Short Course Description

Discusses: 1) The scope of conservation which includes: Definition, objectives, benefits and efforts to conserve natural resources and the environment (SDAL) 2) Environmental ethics which includes: Definition, Paradigm and Principles of Environmental Ethics 3) Resources nature which includes: Definition, types and benefits of Natural Resources 4) Local wisdom which includes: Definition, approach, 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) Conservation awareness which includes awareness of the importance of conservation of natural resources and the environment, eco campus and conservation campus. Lecture activities are carried out through discussions, observations, project assignments, and presentations.

References

- Main:
 - 1. Cluras, D. D. and Reganold, J.P. 2010. Natural Resources Conservation Future. Washington: Washington State University.
 - 2. Hamzah, S. 2010. Pendidikan Lingkungan. Sekelumit Wawasan Pengantar. Bandung: PT RefikaAditama.
 - 3. Indrawan, M Primack, R.B Supriatna, J. 2007. Biologi Konservasi. Jakarta: Yayasan Obor Indonesia.
 - 4. Iskandar, Z.I. 2012. Psikologi Lingkungan. Teori dan Konsep. Bandung: PT Refika Aditama.
 - 5. Keraf, A.S. 2010. Etika Lingkungan Hidup. Jakarta: Penerbit BukuKompas.
 - 6. Marfai, M.A. 2013. Pengantar Etika Lingkungan dan Karifan Lokal. Yogyakarta: Gadjah Mada University Press.
 - 7. Mitchell, B Setiawan, B Rahmi, D.H. Pengelolaan Sumber daya dan Lingkungan. Yogyakarta: Gadjah Mada University Press.
 - 8. Suparmoko, M. 2013. Ekonomi Sumber Daya Alam dan Lingkungan. Suatu Pendekatan Teoritis. Yogyakarta: BPF.
 - 9. Van Dyke, F. 1993. Conservation Biology. Boston: University of Arkansas, Inc.

Supporters:

Supporting lecturer

Dr. Wisanti, M.S.

Dr. H. Sunu Kuntjoro, S.Si., M.Si. Dr. Hasan Subekti, S.Pd., M.Pd. Ahmad Qosyim, S.Si., M.Pd. Fikky Dian Roqobih, S.Pd., M.Pd.

Week-	Final abilities of each learning stage	Evalu	uation	Learı Studer	elp Learning, ning methods, nt Assignments, stimated time]	Learning materials	Assessment Weight (%)	
	(Sub-PO)	Indicator	Criteria & Form	Offline (offline)	Online (online)	[References]		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	Students can: analyze the meaning of conservation, conservation goals, benefits of conservation, and efforts to conserve natural resources and the environment at local and global levels Create creative and innovative ideas in solving environmental problems	Explain the meaning of conservation, the goals and benefits of conservation related to the articles in Chapter 1. Present solutions to conservation efforts for natural resources and the environment in general based on the paper assignments produced	Criteria: Attached in the textbook Form of Assessment: Participatory Activities	Reference studies, observations, project assignments, discussions and presentations 2 X 50		Material: Definition and objectives of conservation Reference: Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington: Washington State University. Material: Benefits of conservation Reference: Hamzah, S. 2010. Environmental Education. A Bit of Introductory Insight. Bandung: PT RefikaAditama. Material: Conservation efforts References: Indrawan, M Primack, RB Supriatna, J. 2007. Conservation Biology. Jakarta: Indonesian Obor Foundation.	0%	

2	Students can: analyze the meaning of conservation, conservation goals, benefits of conservation, and efforts to conserve natural resources and the environment at local and global levels Create creative and innovative ideas in solving environmental problems	Explain the meaning of conservation, the goals and benefits of conservation related to the articles in Chapter 1. Present solutions to conservation efforts for natural resources and the environment in general based on the paper assignments produced	Criteria: Attached in the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Definition, goals and benefits of conservation Reference: Van Dyke, F. 1993. Conservation Biology. Boston: University of Arkansas, Inc. Material: Conservation efforts References: Mitchell, B Setiawan, B Rahmi, DH Resource and Environmental	5%
					Management. Yogyakarta: Gadjah Mada University Press.	
3	Students can: Apply the principles of environmental ethics in life Make problem-solving decisions based on survey data on community ethics towards Natural Resources and the environment	Explain the environmental ethics paradigm related to the article in Chapter 2. Applying environmental ethics Explain solutions to improve environmental ethics in society based on the resulting paper assignment. Implement environmental ethics	Criteria: Attached in the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50		5%
4	Students can: Apply the principles of environmental ethics in life Make problem-solving decisions based on survey data on community ethics towards Natural Resources and the environment	Explain the environmental ethics paradigm related to the article in Chapter 2. Applying environmental ethics Explain solutions to improve environmental ethics in society based on the resulting paper assignment. Implement environmental ethics	Criteria: Attached to the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Environmental Ethics Reference: Keraf, AS 2010. Environmental Ethics. Jakarta: BukuKompas Publishers. Material: Environmental Ethics Reference: Marfai, MA 2013. Introduction to Environmental Ethics and Local Wisdom. Yogyakarta: Gadjah Mada University Press.	5%

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5	Students can: Classify the types of natural resources found in the local and global environment Analyze issues regarding the relationship between natural resources and the environment - Develop effective ideas to overcome natural resource and environmental problems	Explain the meaning of SDAL. Identify SDAL in the surrounding environment. Explain the benefits of SDAL. Explain the solution to excessive use of natural resources in society based on the resulting paper assignment.	Criteria: attached in the textbook Form of Assessment : Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Understanding SDAL Reference: Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.	5%
					Material: SDAL Management References: Mitchell, B Setiawan, B Rahmi, DH Resource and Environmental Management. Yogyakarta: Gadjah Mada University Press.	
6	Students can: Classify the types of natural resources found in the local and global environment Analyze issues regarding the relationship between natural resources and the environment Develop effective ideas to overcome natural resource and environmental problems	Explain the meaning of SDAL. Identify SDAL in the surrounding environment. Explain the benefits of SDAL. Explain the solution to excessive use of natural resources in society based on the resulting paper assignment.	Criteria: Attached in the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: SDAL Utilizers Reference: Cluras, DD and Reganold, JP 2010. Natural Resources Conservation Future. Washington: Washington State University.	5%
7	Students can: Identify local wisdom found in both local and global environments Analyze the benefits of local wisdom for natural resource and environmental conservation efforts - Develop systematic ideas for preserving local community wisdom		Criteria: Attached to teaching materials Forms of Assessment: Participatory Activities, Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Environmental Ethics and Local Wisdom Reference: Marfai, MA 2013. Introduction to Environmental Ethics and Local Wisdom. Yogyakarta: Gadjah Mada University Press.	10%
8			Criteria: Form of Assessment: Participatory Activities, Tests	UTS 2X50'		5%
9	Students can: Identify local wisdom found in both local and global environments Analyze the benefits of local wisdom for natural resource and environmental conservation efforts - Develop systematic ideas for preserving local community wisdom	Explain the meaning, approach, challenges and local wisdom in community life in the future. Explain the solution to the decline of local wisdom in the community based on the paper assignment produced. Applying local wisdom.	Criteria: Attached to the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Local Wisdom and its relation to conservation Reference: Marfai, MA 2013. Introduction to Environmental Ethics and Local Wisdom. Yogyakarta: Gadjah Mada University Press.	5%

10	Students can: Describe examples of natural resource and environmental problems as well as examples of their management that occur in society Develop effective ideas in accordance with the principles of natural resource and environmental management	Explains the management and problems of natural resources and the environment which includes: issues, problems and management of natural resources and the environment; Explain solutions for managing natural resources in the community based on the resulting paper assignment.	Criteria: Attached to the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: SDAL Managemer References Mitchell, B Setiawan, B Rahmi, DH Resource au Environmen Managemer Yogyakarta: Gadjah Mac University Press.	: nd tal t.
11	Students can: Describe examples of natural resource and environmental problems as well as examples of their management that occur in society Develop effective ideas in accordance with the principles of natural resource and environmental management	Explains the management and problems of natural resources and the environment which includes: issues, problems and management of natural resources and the environment; Explain solutions for managing natural resources in the community based on the resulting paper assignment.	Criteria: Attached to the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Environmen Problems Reference: Iskandar, ZI 2012. Environmen Psychology: Theories an Concepts. Bandung: P Refika Aditama. Material: Environmen Managemer Efforts Reference: Suparmoko, 2013. Economics Natural Resources athe Environmen A Theoretic. Approach. Yogyakarta: BPF.	tal d T tal tal t M. of
12	Students can: Apply an attitude of conservation awareness in social life - Play an active role in the Unesa eco campus movement, and have entrepreneurial insight to increase productivity and develop a career in the field of conservation.	Explains conservation awareness which includes awareness of the importance of conserving natural resources and the environment, eco campus and conservation campus. Explain solutions for implementing eco campuses and conservation campuses based on the resulting paper assignments.	Criteria: Attached to the textbook Form of Assessment: Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Conservatio conscious behavior References Van Dyke, F 1993. Conservatio Biology. Boston: University o Arkansas, Ir Material: Conservatio conscious behavior Reference: Iskandar, ZI 2012. Environmen Psychology. Theories an Concepts. Bandung: P Refika Aditama.	c.

13	Students can: Apply an attitude of conservation awareness in social life - Play an active role in the Unesa eco campus movement, and have entrepreneurial insight to increase productivity and develop a career in the field of conservation.	Explains conservation awareness which includes awareness of the importance of conserving natural resources and the environment, eco campus and conservation campus. Explain solutions for implementing eco campuses and conservation campuses based on the resulting paper assignments.	Criteria: Attached to the textbook Forms of Assessment: Participatory Activities, Project Results Assessment / Product Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Conservation conscious behavior Reference: Iskandar, ZI 2012. Environmental Psychology. Theories and Concepts. Bandung: PT Refika Aditama.	10%
14	Students are able to design solutions to SDAL conservation problems on the Unesa campus based on the results of their project assignments.	Communicating solutions/research results on SDAL management within the Unesa campus. Emerging conservation awareness and implementing it.	Criteria: Attached to teaching materials Form of Assessment: Participatory Activities, Practical Assessment	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Material: Efforts to solve conservation problems Reference: Hamzah, S. 2010. Environmental Education. A Bit of Introductory Insight. Bandung: PT RefikaAditama. Material: SDAL Management References: Mitchell, B Setiawan, B Rahmi, DH Resource and Environmental Management. Yogyakarta: Gadjah Mada University	10%
15	Students are able to design solutions to SDAL conservation problems in temporary residence/boarding areas, at least covering areas of the sub-district based on the results of their project assignments.	Communicate solutions/research results on SDAL management in the boarding house area. The emergence of conservation awareness and implementing it.	Criteria: Attached to the textbook Form of Assessment: Participatory Activities	Reference studies, observations, project assignments, discussions and presentations 2 X 50	Press. Material: Local conservation Reference: Hamzah, S. 2010. Environmental Education. A Bit of Introductory Insight. Bandung: PT RefikaAditama.	10%
16	Students are able to design solutions to natural resource conservation problems in their home area, at least covering the entire district, based on the results of their project assignments.	Communicate solutions/research results on SDAL management in the area of origin. The emergence of conservation awareness and implementing it.	Criteria: Attached to the textbook Form of Assessment: Participatory Activities	Reference studies, observations, project assignments, discussions and presentations 2 X 50		10%

Evaluation Percentage Recap: Project Based Learning

	No	Evaluation	Percentage
	1.	Participatory Activities	37.5%
ſ	2.	Project Results Assessment / Product Assessment	55%
ſ	3.	Practical Assessment	5%
ſ	4.	Test	2.5%
			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.

- 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.
- 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.