



Universitas Negeri Surabaya
Faculty of Engineering,
Mechanical Engineering Education Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
Natural Resources Technology	8320302251		T=2 P=0 ECTS=3.18	6	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Ir. Wahyu Dwi Kurniawan, S.Pd., M.Pd.

Learning model	Case Studies
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Program Learning Outcomes (PLO)	PLO study program that 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

Short Course Description	This course discusses the characteristics of natural resources, concepts of natural resource management, rules and principles of economic and ecological approaches in natural resource management, analysis of the relationship between natural resources, development and the environment, and determining appropriate policies in natural resource management.
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References	<p>Main :</p> <ol style="list-style-type: none"> 1. Dahuri, Rokhmin, dkk. 2008. Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan Secara Terpadu. Jakarta: PT. Pradnya Paramita 2. Muhammad, Sahri. 2003. Ekonomi Sumberdaya dan Lingkungan. Sebuah Pengantar Untuk Kebijakan Pengembangan Green Industry . Malang: Bahtera Press 3. Muhammad, Sahri. 2003. Kebijakan Publik Sektor Perikanan dan Kelautan Pada Era Otonomi Daerah. Sebuah Pengantar Rekonstruksi Pengelolaan Sumberdaya Perikanan Secara Bertanggungjawab . Malang: Bahtera Press. 4. Ryding, S.O, dan W. Rast. 1989. The Control of Eutrophication of Lakes and Reservoirs. Paris: The Parthenon Publishing Group. 5. Michel, B. 2003. Pengelolaan Sumber Daya Alam (Terj. Setiawan B & D.H Rahni). UGM-Press, Yogyakarta. 6. Soerianegara, I, 1990. Pengelolaan Sumberdaya Alam. SPS - IPB, Bogor 7. Soerianegara, I. 1978. PSDA. SPS-IPG, Bogor 8. Suparmoko, M. 1998. Ekonomi sumberdaya dan lingkungan. PAU-Studi Ekonomi UGM Press, Yogyakarta 9. Michel ,T. 2003. Pengelolaan sumberdaya Alam. UGM Press, Yogyakarta 10. Soekotjo. 2002. AMDAL. Penerbit Universtas Terbuka, Jakarta 11. Winarno, G. 1998. Analisis mengenai dampak lingkungan. UGM-Press, Yogyakarta <p>Supporters:</p>
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Supporting lecturer	Dr. Mohammad Effendy, S.T., M.T.
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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	Explain the limitations, scope and concept of PSDA	<ol style="list-style-type: none"> 1.Explain the concept of PSDA 2.Explain the definition and scope of PSDA 3.Explains the basic concepts of PSDA in an integrated manner 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation, discussion 2 X 50			0%
2	Explain the characteristics of natural resources and their environment	<ol style="list-style-type: none"> 1.Identifying the characteristics of natural resources and the environment 2.Explain the components of resources 3.Explain environmental problems 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation, Discussion 2 X 50			0%
3	Describe the types and types of resources	<ol style="list-style-type: none"> 1.Explain the types and types of natural and built resources 2.Identify recoverable and unrecoverable resources 3.Explain aquatic, terrestrial, flora and fauna resources 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentations, discussions, assignments 2 X 50			0%

4	Explains resource utilization from an ecological, economic, management and humanities perspective	<ol style="list-style-type: none"> 1.Explain resource utilization from ecological and economic studies 2.Explain the use of resources from management and humanities studies 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 2 X 50			0%
5	Explain the relationship between population and natural resource utilization problems	<ol style="list-style-type: none"> 1.Explain population problems related to the use of natural resources 2.Explain various problems in the use of natural resources 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 2 X 50			0%
6	Explain the importance and function of management in PSDA	<ol style="list-style-type: none"> 1.Explain the management concept in PSDA 2.Explain the management function in PSDA 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 2 X 50			0%

7	Explain the concept of PSDA and the relationship between humans and natural resources	<ol style="list-style-type: none"> 1.Explain the concept of PSDA 2.Explain the relationship between humans and natural resources 3.Explain the role of AMDAL in PSDA 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion, Assignment 2 X 50			0%
8	-	-	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Giving a Subsummative written test-1 2 X 50			0%
9	Explain the benefits of PSDA inventory and planning	<ol style="list-style-type: none"> 1.Explain how to inventory natural resources 2.Explaining PSDA Planning 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion, Assignment 2 X 50			0%

10	Explain the relationship between PSDA and sustainable development	<ol style="list-style-type: none"> 1.Explain the concept of PSDA-based development 2.Explain the concept of sustainable development 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 2 X 50			0%
11	Explains the concept of conservation, monitoring and efforts to preserve natural resources	<ol style="list-style-type: none"> 1.Explain the concept of natural resource conservation 2.Explain the natural resource monitoring method 3.Explain natural resource conservation efforts 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 2 X 50			0%
12	Explain the concept of land/soil management and conservation	<ol style="list-style-type: none"> 1.Explain the concept of land resource management 2.Explain land conservation 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion, practice 3 X 50			0%

13	Explain the management system for forest natural resources and mining/mineral materials	<ol style="list-style-type: none"> 1.Explain the forest natural resource management system 2.Explain the natural resources management system for mining/mineral materials 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion, practice 3 X 50			0%
14	Explaining Water PSDA in an integrated manner	<ol style="list-style-type: none"> 1.Explaining wetland PSDA 2.Explaining river/lake PSDA 3.Explaining Coastal and marine PSDA 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion, practice 3 X 50			0%
15	Explains the development of information systems, science and technology to support PSDA in an integrated manner	<ol style="list-style-type: none"> 1.Explaining the development of the PSDA information system 2.Identifying PSDA Science and Technology Development 	Criteria: <ol style="list-style-type: none"> 1.Practical reports and products are assessed as ASSIGNMENTS with weight 2.30% 3.USS weight 20% 4.Students' activities and responses during learning activities, especially practicums, are assessed as participation, with a weight of 20% 5.US weight 30% 6.Essay questions are assessed together at USS 7.Performance questions are integrated during learning 	Presentation and discussion 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.