



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																											
Environmental Science	8320502033		T=2 P=0 ECTS=3.18	3	July 18, 2024																																											
AUTHORIZATION	SP Developer		Course Cluster Coordinator	Study Program Coordinator																																												
	Dr. Gde Agus Yudha Prawira Adistana, S.T., M.T.																																												
Learning model	Case Studies																																															
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)																																															
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 5%;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 2%;">1</td> <td style="width: 2%;">2</td> <td style="width: 2%;">3</td> <td style="width: 2%;">4</td> <td style="width: 2%;">5</td> <td style="width: 2%;">6</td> <td style="width: 2%;">7</td> <td style="width: 2%;">8</td> <td style="width: 2%;">9</td> <td style="width: 2%;">10</td> <td style="width: 2%;">11</td> <td style="width: 2%;">12</td> <td style="width: 2%;">13</td> <td style="width: 2%;">14</td> <td style="width: 2%;">15</td> <td style="width: 2%;">16</td> </tr> </table>														P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																																
Short Course Description	Students understand the meaning of environmental science, ecology, the role of humans in the universe, various global environmental issues, the environment as a resource, and quality of life; the concept of sustainable development (sustainable development) includes aspects: economic, socio-cultural, ecological. SDA renewable-unrenewable resources, Natural Resources: understanding pollution/environmental pollution; management and conservation, able to communicate the concept of a healthy environment and environmentally oriented development in order to solve critical natural resource problems related to threats to global environmental issues and environmental damage; Water Resources: Condition of water on earth, distribution/hydrological cycle, quality and water as a source of disease; Permsalhn, damage/pollution and prevention and water treatment; Soil Resources: properties and functions of soil; erosion and sediment; problems and damage/pollution and prevention and processing of land.																																															
References	Main :																																															
	1. <ul style="list-style-type: none"> · Philip Kristanto, 2002. <i>Ekologi Industri</i>. Yogyakarta: Andi · UU RI No 32 Tahun 2009. <i>Perlindungan dan Pengelolaan Lingkungan Hidup (PPLH)</i> · Soerjani, M, Ahmad R, dan Munir R., 1987. <i>Lingkungan: Sumberdaya Alam dan Kependudukan dalam Pembangunan</i>. Jakarta: UI Press. · Sugiharto, 1987. <i>Dasar-dasar pengelolaan Air Limbah</i>. Jakarta: UI Press. · Sumarwoto, Otto, 2004. <i>Atur Diri Sendiri</i> . Yogyakarta: Gadjah Mada Press. · Sumarwoto, Otto, 1990. <i>Analisis Dampak Lingkungan</i>. Yogyakarta:Gama Press. · Suripin, 2001. <i>Pelestarian Sumber Daya Tanah dan Air</i>. Yogyakarta: Andi · Tcobonoglous Goerge, Theisen Hillary, Vigit Samuel, 1993. <i>Integrated Solid Waste Management</i> . New York: Mc Graw Hill · Winanti T. 2004. <i>Dasar-dasar Teknik Lingkungan</i>. Buku ajar. 																																															
	Supporters:																																															
Supporting lecturer	Prof. Dr. Elizabeth Titiek Winanti, M.S. Dr. Nurmi Frida Dorintan Bertua Pakpahan, 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 can explain the meaning of environmental science, the environment, ecology, the role of humans in the universe, and the role of environmental science in Civil Engineering according to UURI No.31 of 2009	- Can explain the meaning of environmental science, - Can define the environment and ecology, - Can link the role of humans in the universe with the role of environmental science in Civil Engineering - Can explain UURI No.32 of 2009	Criteria: 1.Lecture Participation Assessment Criteria: 2.Attendance (absent = 0; present = 60) 0 - 60 Asking 0 – 10 Opinion 0 – 10 Consulting: inside/outside the classroom 0 – 10 Creativity/ideas 0 – 10 Total Score 0 – 100	Lectures, discussions and assignments 2 X 50			0%
2	Students can understand global and national environmental issues and be able to communicate their understanding of problems and solutions	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	Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%
3			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%
4			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%

5			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%
6			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%
7			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%
8			Criteria: 0-100 (each correct question gets 10 points)	Closed exam (closed book) 2 X 50			0%
9			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50			0%

10			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50		0%
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12			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50		0%
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14			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/Ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50		0%
15			Criteria: 1.Lecture Participation Assessment Criteria: 2.1. Absenteeism (absent = 0; present = 60) 0 - 60 3.2. Ask 0 – 10 4.3. Opinion 0 – 10 5.4. Consultation: inside/outside class 0 – 10 6.5. Creativity/Ideas 0 – 10 7.Total Score 0 – 100	Lectures, questions and answers, discussions and assignments 2 X 50		0%
16						0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

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** 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.
- 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.

