	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
Construction Method*	8320502322		T=2	P=0	ECTS=3.18	5	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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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)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	Knowledge of carrying out construction work on buildings, roads, bridges, water structures, including the use of heavy equipment, as well as the role of occupational health safety in construction (K3). The basic definition of K3 is construction work accidents and direct and indirect costs resulting from work accidents; legal basis for K3 construction; construction K3 guidelines; and construction K3 management system (SMK3).
References	**Main :**

1. Andang Widjaja, 2013 Metoda Konstruksi dan K3, Surabaya: Penerbit Unesa Asiyanto, 2010, Metode Konstruksi proyek Jalan, Jakarta: Penerbit Universitas Indonesia Ridley, John, 2006, (terjemahan) Ikhtisar Kesehatan dan Keselamatan Kerja. Jakarta: ErlanggaSuma 19mur PK, 1976, Kecelakaan Akibat Kerja dalam Higene Perusahaan dan Keselamat Kerja, Gunung Agung, Jakarta.Suma 19mur PK, 1989, Keselamatan Kerja & Pencegahan Kecelakaan, CV. Haji Masagung, Jakarta.Tim Redaksi Fokusmedia, 2006, Himpunan Peraturan Perundang Undangan Ketenagakerjaan, Penerbit Fokusmedia, Bandung. Tunggal, Hadi Setia, 2000, Undang-Undang RI No. 21 Tahun 2000 Tentang Serikat Pekerja/ Buruh, Harvarindo , Jakarta

	Supporters:
Supporting lecturer	Dr. Ir. H. Soeparno, M.T. Heri Suryaman, S.Pd., 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	Knowledge of K3 laws as well as labor-employee relations and management according to work agreements.	1.1. Ability to predict worker behavior in implementing professional laws/regulations 2.2. implementation of an occupational health and safety management system (SMK3).	**Criteria:** 1.Score 4, if the report is made with good writing, the report data is correct, the data analysis is correct, the completeness of the report is good, and the collection time is on time 2.Score 3, if the report is made with good writing, the report data is correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is on time 3.Score 2, if the report is made with good writing, the report data is not correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is not on time 4.Score 1, if the report is made with poor writing, the report data is incorrect, the data analysis is incorrect, the completeness of the report is not good, and the collection time is not on time **Form of Assessment** : Participatory Activities, Tests	1. Discussion 2. Lecture 3. Field review Students discuss components of work equipment in accordance with occupational safety and health laws, and compare the application of K3 laws as well as labor-labor and leadership relations in the field 2 X 50			5%

2	Get to know activities that can endanger the health and safety (K3) of workers in construction activities, and know countermeasures	1. Ability to predict the need for K3 equipment during construction work 2. Ability to state the function of K3 equipment during construction work 3. Students are able to state the layout of K3 equipment in each room/workplace in the project environment	**Criteria:** 1. Score 4, if the report is made with good writing, the report data is correct, the data analysis is correct, the completeness of the report is good, and the collection time is on time 2. Score 3, if the report is made with good writing, the report data is correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is on time 3. Score 2, if the report is made with good writing, the report data is not correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is not on time 4. Score 1, if the report is made with poor writing, the report data is incorrect, the data analysis is incorrect, the completeness of the report is not good, and the collection time is not on time **Form of Assessment** : Participatory Activities, Tests	1. Discussion 2. Lecture 3. Assignment Students discuss components of work equipment in accordance with occupational safety and health laws, and see implementation in the field 2 X 50			0%

3	Get to know activities that can endanger the health and safety (K3) of workers in construction activities, and know countermeasures	1. Ability to predict the need for K3 equipment during construction work 2. Ability to state the function of K3 equipment during construction work 3. Students are able to state the layout of K3 equipment in each room/workplace in the project environment	**Criteria:** 1. Score 4, if the report is made with good writing, the report data is correct, the data analysis is correct, the completeness of the report is good, and the collection time is on time 2. Score 3, if the report is made with good writing, the report data is correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is on time 3. Score 2, if the report is made with good writing, the report data is not correct, the data analysis is not correct, the completeness of the report is not good, and the collection time is not on time 4. Score 1, if the report is made with poor writing, the report data is incorrect, the data analysis is incorrect, the completeness of the report is not good, and the collection time is not on time **Form of Assessment** : Participatory Activities, Tests	1. Discussion 2. Lecture 3. Assignment Students discuss components of work equipment in accordance with occupational safety and health laws, and see implementation in the field 2 X 50			0%

4	Students get to know the preparatory work in civil engineering buildings.	1.1. Students are able to understand HR mobilization planning. 2.2. Students are able to understand equipment mobilization planning. 3.3. Students are able to understand human resource management and tools 4.4. Students understand the implementation of surveying using land measuring instruments. 5.5. Students are able to mention the stages of construction preparation work (mobilization of human resources, tool resources, land clearing, kit preparation, and measurements)	**Criteria:** Full marks are obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Tests	1. Discussion 2. Lecture 3. Assignment 1 X 50			5%
5	Students are familiar with methods of carrying out sub-structure or foundation work in civil engineering buildings.	1.1. Students are able to state the sequence of foundation work, according to the work drawings. 2.2. Students are able to identify K3 preparation in foundation work. 3.3. Students understand the methods of implementing shallow foundations: river stone, local slabs.	**Criteria:** The maximum score (100) is obtained if you do all the questions correctly **Form of Assessment** : Practice/Performance, Test	Lectures, class discussions, field visits 2 X 50			0%
6	Students are familiar with methods of carrying out sub-structure work or shallow foundations in civil engineering buildings.	1.1. Students understand the method of implementing drilled foundations 2.2. Students understand the method of implementing pile foundations 3.3. Students are able to identify K3 preparation in deep foundation work.	**Criteria:** The maximum score (100) is obtained if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Practice/Performance, Tests	1. Discussion 2. Lecture 3. Assignment 2 X 50			0%
7	midterm exam	midterm exam	**Criteria:** midterm exam **Form of Assessment** : Test	midterm exam 2 X 50			0%

8	Students can get to know upper structural work: columns, beams and plates in civil engineering buildings.	1.1. Students are able to mention the preparation stages for carrying out the work of installing printed boards or formwork by measuring elevation and perpendicularity to columns. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Tests	1. Discussion2. Lecture3. Task 3 X 50			30%
9	Students can get to know upper structural work: columns, beams and plates in civil engineering buildings.	1. Students are able to mention the stages of assembling steel column construction. 2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Tests	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%
10	Students can get to know upper structural work: columns, beams and plates in civil engineering buildings.	1.1. Students are able to mention the stages of assembling steel column construction. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Tests	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			60%
11	Students can get to know the work of upper structures or structures or upper roof frames on buildings. Students can get to know the work of upper structures on bridges or highways:	1.1. Students are able to mention the preparation stages for the implementation of the bridge's upper structure (installation of girder supports, installation of bearings, and refinement of the tread plates. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Portfolio Assessment, Tests	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%

12	Students can get to know the work of upper structures or structures or upper roof frames on buildings. Students can get to know the work of upper structures on bridges or highways:	1.1. Students are able to mention the preparation stages for the implementation of the bridge's upper structure (installation of girder supports, installation of bearings, and refinement of the tread plates. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Portfolio Assessment, Tests	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%
13	Students can get to know the work of upper structures or structures or upper roof frames on buildings. Students can get to know the work of upper structures on bridges or highways:	1.1. Students are able to mention the preparation stages for the implementation of the bridge's upper structure (installation of girder supports, installation of bearings, and refinement of the tread plates. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Portfolio Assessment, Tests	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%
14	Students can get to know the work of upper structures or structures or upper roof frames on buildings. Students can get to know the work of upper structures on bridges or highways:	1.1. Students are able to mention the preparation stages for the implementation of the bridge's upper structure (installation of girder supports, installation of bearings, and refinement of the tread plates. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Form of Assessment** : Participatory Activities, Practice/Performance	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%
15	Students can get to know the work of upper structures or structures or upper roof frames on buildings. Students can get to know the work of upper structures on bridges or highways:	1.1. Students are able to mention the preparation stages for the implementation of the bridge's upper structure (installation of girder supports, installation of bearings, and refinement of the tread plates. 2.2. Students are able to identify construction K3 personnel and tools that are prepared for construction implementation.	**Criteria:** The maximum score is obtained if you do all the questions correctly **Forms of Assessment** : Participatory Activities, Portfolio Assessment, Practice / Performance	1. Discussion2. Lecture3. Tasks, or4. Field visits 2 X 50			0%

16			**Forms of Assessment** : Participatory Activities, Practice/Performance, Tests				0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	50%
2.	Test	50%
		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.