



**Universitas Negeri Surabaya
Vocational Faculty,
D4 Civil Engineering Study Program**

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date																																																																																																																																																							
CONSTRUCTION OF SOIL RETAINING WALLS	2230503037		T=3	P=0	ECTS=4.77	5	July 17, 2024																																																																																																																																																							
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator																																																																																																																																																								
			Puguh Novi Prasetyono, S.Pd., M.T.																																																																																																																																																								
Learning model	Case Studies																																																																																																																																																													
Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																																																																																																																																													
	Program Objectives (PO)																																																																																																																																																													
	PO - 1	Able to identify & explain the meaning, function, types & general theory of earth retaining construction. (CPL-4 & CPL-6)																																																																																																																																																												
	PO - 2	Able to identify & explain retaining walls. (CPL-4 & CPL-6)																																																																																																																																																												
	PO - 3	Able to analyze & evaluate the stability of retaining walls. (CPL-4, CPL-6, & CPL-7)																																																																																																																																																												
	PO - 4	Able to identify & explain mechanical stabilized eart / MSE. (CPL-4 & CPL-6)																																																																																																																																																												
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	PO - 6	Able to identify & explain sheet plaster / embedded walls. (CPL-4 & CPL-6)																																																																																																																																																												
	PO - 7	Able to analyze & evaluate the stability of sheet pile / embedded walls. (CPL-4, CPL-6, & CPL-7)																																																																																																																																																												
	PLO-PO Matrix																																																																																																																																																													
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Short Course Description	This course provides an understanding of the meaning and function of earth retaining construction, types and types of earth retaining construction as well as an understanding of lateral soil pressure for both sand and clay soils. As well as calculating the stability of soil retaining construction, both retaining wall construction, mechanical stabilized eart (MSE), and embedded wall construction																																																																																																																																																													

References		Main :					
		<ol style="list-style-type: none"> 1. Braja, M. Das 2019, "Principles Of Foundation Engineering", PWS-KENT: Boston 2. SNI 1726-2019 Perencanaan Ketahanan Gempa Untuk Gedung dan Non Gedung 3. SNI 8460-2017 Persyaratan Perancangan Geoteknik 4. Andayani, Nur., 2012, "konstruksi penahan tanah", Jurusan Teknik Sipil Unesa 5. Hardiyatmo, H.C. 2002, "Teknik konstruksi penahan tanah I", Penerbit Beta Offset, Yogyakarta 6. Hardiyatmo, H.C. 2002, "Teknik konstruksi penahan tanah II", Penerbit Beta Offset, Yogyakarta 7. Wahyudi herman, (1999), stabilitas konstruksi penahan tanah, Penerbit ITS, Surabaya 					
		Supporters:					
Supporting lecturer		Arik Triarso, S.Pd., M.T. Mochamad Firmansyah Sofianto, S.T., M.Sc., M.T. Siti Talitha Rachma, S.T., M.Sc.					
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	Understanding building types Understanding building parts Understanding building lines	<ol style="list-style-type: none"> 1. Accuracy of answers regarding: definition, function and types of earth retaining construction 2. 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time	Blended learning, using online applications, MPBM, 3 X 50 Discussion Questions and Answers			0%
2	Understanding the meaning of foundation Understanding the types of foundation Drawing a foundation plan	<ol style="list-style-type: none"> 1. Students are able to: Define the meaning of foundation 2. Explain the various types of foundations 3. Draw a foundation plan 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time Form of Assessment : Participatory Activities	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			5%
3	Understanding the meaning of foundation Understanding the types of foundation Drawing a foundation plan	<ol style="list-style-type: none"> 1. Students are able to: Define the meaning of foundation 2. Explain the various types of foundations 3. Drawing foundation plans 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time Form of Assessment : Participatory Activities	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			5%
4	Understand drawing foundations on building structures	Students are able to sketch foundation drawings according to building shape requirements	Criteria: Full marks are given if you can complete the assignment correctly within the specified time Form of Assessment : Participatory Activities	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			5%
5		<ol style="list-style-type: none"> 1. Students are able to: Explain the placement of columns 2. Explain the placement of blocks 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time Form of Assessment : Participatory Activities	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			5%

6	Understand the placement of blocks and columns Understand the shapes of walls Understand the conditions for brick bonding Apply various brick bond theories to drawings	<ol style="list-style-type: none"> 1.Students are able to: Explain the placement of columns 2.Explain the placement of blocks 3.Explain the shapes of walls 4.Explain the requirements for bonding bricks 5.Applying various types of brick bond theories to images 	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p> <p>Form of Assessment : Participatory Activities</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		5%
7	Understand determining the placement of beams and columns. Apply various brick bond theories to drawings	<ol style="list-style-type: none"> 1.Students are able to: Determine the placement of columns 2.Determine the placement of blocks 3.Applying various types of brick bond theories to images 	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p> <p>Form of Assessment : Participatory Activities</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		5%
8	UTS	UTS	<p>Criteria: UTS</p> <p>Form of Assessment : Test</p>	UTS 2 X 50		15%
9	Understand the various forms of stairs	Students are able to describe the various forms of stairs	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		0%
10		Students are able to describe the various forms of stairs	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		0%
11	Understanding things related to arches above door or window frames Applying various types of arches above door or window frames in the drawing Understanding the requirements for wood connections	<ol style="list-style-type: none"> 1.Students are able to explain the requirements for wood connections 2.Describe things related to arches above door or window frames 3.Draw an arc over a door or window frame 	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		0%
12	Understand the various types of doors and windows. Apply the various types of doors and windows in the picture. Understand the requirements for wood connections	<ol style="list-style-type: none"> 1.Students are able to: Explain the various types of doors and windows 2.Draw various doors and windows 3.Understand the requirements for wood joints 	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p>	Blended learning, using online applications, MPBM, 2 X 50 Discussion Questions and Answers		0%
13	Understand matters related to roof frame construction and roof shape	Students are able to explain things related to roof frame construction	<p>Criteria: Full marks are given if you can complete the assignment correctly within the specified time</p>	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions		0%

14	Understand things related to wooden, concrete, steel and galvalum trusses	<ol style="list-style-type: none"> 1.Students are able to: Explain things related to wooden horses 2.Explain things related to concrete trusses 3.Explain things related to steel horses 4.Explain things related to galvalum trusses 5.Drawing of steel and galvalume concrete wooden easels 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			0%
15	Understanding the meaning of the ceiling Understanding the function of the ceiling Knowing the types of ceiling covering materials Understanding the ceiling frame Applying the ceiling frame to the picture Knowing the various types of floor coverings/accessories Understanding the floor installation pattern Understanding things related to the floor structure Applying the installation pattern and the floor structure in the picture	<ol style="list-style-type: none"> 1.Students are able to: Explain the meaning of ceiling 2.Explain the function of the ceiling 3.Identify the types of ceiling covering materials 4.Explains the ceiling frame 5.Drawing of the ceiling frame 6.Identify various types of floor coverings/accessories 7.Understand floor installation patterns 8.Explain things related to floor structures 9.Drawing installation patterns and floor structures 	Criteria: Full marks are given if you can complete the assignment correctly within the specified time	Blended learning, using online applications, MPBM, questions and answers, and 2 X 50 discussions			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	30%
2.	Test	15%
		45%

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.