



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

Document  
Code

**SEMESTER LEARNING PLAN**

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>	<b>SEMESTER</b>	<b>Compilation Date</b>																																	
Drawing Simple Buildings and Practicum	99992240104011		T=1 P=3 ECTS=6.36	1	July 17, 2024																																	
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>		<b>Study Program Coordinator</b>																																	
	.....		.....		Puguh Novi Prasetyono, S.Pd., M.T.																																	
<b>Learning model</b>	Project Based Learning																																					
<b>Program Learning Outcomes (PLO)</b>	PLO study program that is charged to the course																																					
	Program Objectives (PO)																																					
	PLO-PO Matrix																																					
		<table border="1" style="margin: auto;"> <tr> <td style="width: 100px; height: 30px;">P.O</td> </tr> </table>					P.O																															
P.O																																						
	PO Matrix at the end of each learning stage (Sub-PO)																																					
	<table border="1" style="margin: auto;"> <tr> <td rowspan="2" style="width: 50px; height: 30px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> <td style="width: 20px;">6</td> <td style="width: 20px;">7</td> <td style="width: 20px;">8</td> <td style="width: 20px;">9</td> <td style="width: 20px;">10</td> <td style="width: 20px;">11</td> <td style="width: 20px;">12</td> <td style="width: 20px;">13</td> <td style="width: 20px;">14</td> <td style="width: 20px;">15</td> <td style="width: 20px;">16</td> </tr> </table>					P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P.O	Week																																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																						
<b>Short Course Description</b>	Introduction to the types, functions and ways of using drawing tools; Various lines, letters, numbers and symbols and their functions; Explain the various Pictorial, Orthogonal and Perspective projections and their applications in civil engineering; Drawing a simple residential building structure, consisting of floor plan, foundation plan, roof plan, longitudinal section, cross section, front view, side view, sanitation plan, mechanical and electrical plan along with structural details, and simple residential sanitation using AutoCAD software.																																					
<b>References</b>	<b>Main :</b>																																					
	<ol style="list-style-type: none"> <li>1. Jurnal Dimensi Teknik Arsitektur Terakreditasi, Universitas Kristen Petra, Surabaya.</li> <li>2. Affandi, Achmad Irfan. 19.... Buku Ajar: Menggambar Teknik, Unesa Press</li> <li>3. Cahyaka, Hendra Wahyu. 19... Gambar Teknik. Unesa Press.</li> <li>4. S.C. Sharma. 1979. Engineering Drawing Part I. New York: Chand-Company Ltd., Ram Nagar.</li> <li>5. ...., 20.... Technical Drawing. ....</li> <li>6. Khrisbianto, Andi. 2009. AutoCAD 2010 To The Point. Jakarta: Elex Media Komputindo.</li> </ol>																																					
	<b>Supporters:</b>																																					
<b>Supporting lecturer</b>	Hendra Wahyu Cahyaka, S.T., M.T. Feriza Nadiar, S.T., M.T. Wahyu Dwi Mulyono, S.Pd., M.Pd.																																					
<b>Week-</b>	<b>Final abilities of each learning stage (Sub-PO)</b>	<b>Evaluation</b>		<b>Help Learning, Learning methods, Student Assignments, [ Estimated time]</b>		<b>Learning materials [ References ]</b>	<b>Assessment Weight (%)</b>																															
		<b>Indicator</b>	<b>Criteria &amp; Form</b>	<b>Offline ( offline )</b>	<b>Online ( online )</b>																																	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)																															

1	Identify the types and functions of drawing tools, standard lines, letters, numbers and symbols.	<ol style="list-style-type: none"> <li>1. Identify types of drawing tools</li> <li>2. Explain the function of drawing tools</li> <li>3. Explains the standards for lines, letters and numbers</li> <li>4. Apply standard images of lines, letters and numbers</li> </ol>	<b>Criteria:</b> <ol style="list-style-type: none"> <li>1. A score of 60 is obtained if you do all the questions correctly.</li> <li>2. A score of 40 is obtained if you are able to apply Line drawings, letters and numbers according to the standard.</li> </ol>	Lectures, discussions, questions and answers, presentations. 6 X 50			0%
2	Analyze basic engineering plans, foundations, building cuts.	<ol style="list-style-type: none"> <li>1. Identify basic techniques for plans, foundations, building cuts.</li> <li>2. Explains basic techniques for plans, foundations, building cuts.</li> <li>3. Analyze basic engineering plans, foundations, building cuts.</li> </ol>	<b>Criteria:</b> A score of 100 is obtained if you do all the questions correctly.	Lectures, discussions, questions and answers, essays. 6 X 50			0%
3	Able to draw various Orthogonal Projections of simple building shapes	<ol style="list-style-type: none"> <li>1. Identifying Orthogonal Projection images of simple building shapes</li> <li>2. Explaining Orthogonal Projections of simple building shapes</li> <li>3. Drawing Orthogonal Projections of simple building shapes</li> </ol>	<b>Criteria:</b> <ol style="list-style-type: none"> <li>1. A score of 60 is obtained if you do all the questions correctly.</li> <li>2. A score of 40 is obtained if you are able to draw an Orthogonal Projection of a simple building shape according to the steps.</li> </ol>	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
4	Able to draw various Orthogonal Projections of simple building shapes	<ol style="list-style-type: none"> <li>1. Identifying Orthogonal Projection images of simple building shapes</li> <li>2. Explaining Orthogonal Projections of simple building shapes</li> <li>3. Drawing Orthogonal Projections of simple building shapes</li> </ol>	<b>Criteria:</b> <ol style="list-style-type: none"> <li>1. A score of 60 is obtained if you do all the questions correctly.</li> <li>2. A score of 40 is obtained if you are able to draw Pictorial and Perspective Projections according to the steps.</li> </ol>	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%

5	Able to draw various Pictorial Projections of simple building shapes	<ol style="list-style-type: none"> <li>1. Identify Pictorial Projection and Perspective images of simple building shapes</li> <li>2. Explaining Pictorial and Perspective</li> <li>3. Drawing Pictorial and Perspective Projections</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw a simple residential house plan according to the steps and drawing standards.	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
6	Understand the application of sketch drawings and technical specifications in drawing simple residential house plans according to the steps and drawing standards in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Understand sketch drawing applications and technical specifications for floor plans</li> <li>2. Identify the steps for drawing a floor plan</li> <li>3. Identify floor plan drawing standards</li> <li>4. Draw a simple residential house plan according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw the foundation according to the steps and drawing standards	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
7	Understand the principles of the law of equilibrium and soil conditions in simple residential house foundation drawings according to the steps and standard drawings in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the principles of the law of equilibrium and soil conditions in foundation drawings</li> <li>2. Identify the steps for drawing a foundation</li> <li>3. Identify foundation drawing standards</li> <li>4. Draw the foundation according to the steps and drawing standards</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw the roof construction of a Simple Residential House according to the steps and drawing standards.	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
8	Understand the principles of the law of equilibrium and soil conditions in simple residential house foundation drawings according to the steps and standard drawings in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the principles of the law of equilibrium and soil conditions in foundation drawings</li> <li>2. Identify the steps for drawing a foundation</li> <li>3. Identify foundation drawing standards</li> <li>4. Draw the foundation according to the steps and drawing standards</li> </ol>	<b>Criteria:</b> A score of 20 is obtained if you are able to draw the longitudinal and cross section construction of a Simple Residential House according to the drawing steps and standards	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
9	U.S.S	-	<b>Criteria:</b> -	- 6 X 50			0%

10	Understand the principles of statics and technical provisions in longitudinal and cross section construction drawings in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the principles of statics and technical provisions for longitudinal and cross section construction drawings</li> <li>2. Identify the steps and standards of piece construction drawings</li> <li>3. Draw the longitudinal and cross section construction of a Simple Residential House according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> Perfect score if answered well and correctly	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
11	Understand the principles of statics and technical provisions in longitudinal and cross section construction drawings in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the principles of statics and technical provisions for longitudinal and cross section construction drawings</li> <li>2. Identify the steps and standards of piece construction drawings</li> <li>3. Draw the longitudinal and cross section construction of a Simple Residential House according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> Perfect score if answered well and correctly	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
12	Understand the technical provisions for front and side view drawings in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify technical requirements for front and side view images</li> <li>2. Identify the steps and standards for front and side view drawings</li> <li>3. Draw the front and side views of a simple residence according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> Perfect score if answered well and correctly	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%

13	Understand the technical provisions of Sanitation Plans in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the technical provisions of the Sanitation Plan</li> <li>2. Identify Sanitation Plan measures and standards</li> <li>3. Drawing a simple residential sanitation plan according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw a Mechanical and Electrical Plan for a Simple Residential House according to the steps and drawing standards.	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
14	Understand the technical provisions of Mechanical and Electrical Plans in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify the technical provisions of the Mechanical and Electrical Plan</li> <li>2. Identify Mechanical and Electrical Plan steps and standards</li> <li>3. Drawing Mechanical and Electrical Plans for a Simple Residential House according to the steps and drawing standards.</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw detailed structures and sanitation of a simple residential house according to the steps and drawing standards.	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
15	Understand the technical provisions of Structural Details and Sanitation in AutoCAD format.	<ol style="list-style-type: none"> <li>1. Identify technical provisions for structural details and sanitation</li> <li>2. Identify the steps and standards of Structural Details, and Sanitation</li> <li>3. Drawing structural details and sanitation of a simple residential house according to drawing steps and standards.</li> </ol>	<b>Criteria:</b> A score of 10 is obtained if you are able to draw detailed structures and sanitation of a simple residential house according to the steps and drawing standards.	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
16							0%

**Evaluation Percentage Recap: Project Based Learning**

No	Evaluation	Percentage
		0%

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 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.