



**Universitas Negeri Surabaya
Vocational Faculty,
D4 Transportation Study Program**

**Document
Code**

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date		
Drawing Basic Techniques	99993940102032		T=0 P=2 ECTS=3.18	1	July 16, 2024		
AUTHORIZATION	SP Developer		Course Cluster Coordinator	Study Program Coordinator			
	Dr. Anita Susanti, S.Pd., M.T.			
Learning model	Project Based Learning						
Program Learning Outcomes (PLO)	PLO study program that is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
Short Course Description	Introduction to the types, functions and ways of using drawing tools; Various lines, letters, numbers and symbols and their functions; Explain the various types of 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.						
	References						
Supporting lecturer	Main :						
	1. Affandi, Achmad Irfan. 19.... Buku Ajar: Menggambar Teknik , Unesa Press Cahyaka, Hendra Wahyu. 19... Gambar Teknik. Unesa Press. S.C. Sharma. 1979. Engineering Drawing Part I. New York: Chand-Company Ltd., Ram Nagar.						
	Supporters:						
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)		
		(3)	(4)	(5)	(6)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Identify the types and functions of drawing tools, standard lines, letters, numbers and symbols.	<ul style="list-style-type: none"> - Identify types of drawing tools - Explain the function of drawing tools - Explain - standard lines, letters and numbers - Apply standard drawings of lines, letters and numbers 	Criteria: 5 Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, presentations. 6 X 50			5%
2	Analyze basic engineering plans, foundations, building cuts.	<ul style="list-style-type: none"> - Identify basic techniques for floor plans, foundations, building cuts. - Explain the basic techniques of floor plans, foundations, building cuts. - Analyze the basic techniques of floor plans, foundations, building cuts. 	Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, essays. 6 X 50			5%
3	Able to draw various Orthogonal Projections of simple building shapes	<ul style="list-style-type: none"> - Identifying images of orthogonal projections of simple building shapes - - Explaining orthogonal projections of simple building shapes - - Drawing orthogonal projections of simple building shapes 	Form of Assessment : Participatory Activities	Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			5%
4	Able to draw various Orthogonal Projections of simple building shapes	<ul style="list-style-type: none"> - Identifying images of orthogonal projections of simple building shapes - - Explaining orthogonal projections of simple building shapes - - Drawing orthogonal projections of simple building shapes 		Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
5	Able to draw various Pictorial Projections of simple building shapes	<ul style="list-style-type: none"> - Identifying Pictorial and Perspective Projection drawings of simple building shapes - - Explaining Pictorial and Perspective - - Drawing Pictorial and Perspective Projections 		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.	- Understand the application of sketch drawings and technical specifications for drawing floor plans - Identify the steps for drawing floor plans - Identify standard drawings of floor plans - Draw simple residential house plans according to the steps and standard drawings.		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.	- Identifying the principles of the law of equilibrium and soil conditions in foundation drawings - Identifying the steps for drawing foundations - Identifying standards for foundation drawings - Drawing foundations according to the steps and standard drawings		Lectures, discussions, questions and answers, and assignments, 6 X 50 presentations			0%
8	Understand the principles of statics and technical provisions in drawing simple residential roof construction according to the steps and drawing standards in AutoCAD format.	- Identifying the principles of statics and technical provisions for roof construction drawings - Identifying the steps for drawing roof construction - Identifying standards for roof construction drawings - Drawing simple residential roof construction according to the steps and standard drawings.		Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
9	UTS	UTS	Criteria: UTS	UTS 6 X 50			0%

10	Understand the principles of statics and technical provisions in longitudinal and cross section construction drawings in AutoCAD format	- Identifying the principles of statics and technical provisions for longitudinal and cross section construction drawings - Identifying steps and standards for section construction drawings - Drawing construction drawings for longitudinal and cross sections of Simple Residential Houses according to the steps and standard drawings.		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	- Identifying the principles of statics and technical provisions for longitudinal and cross section construction drawings - Identifying steps and standards for section construction drawings - Drawing construction drawings for longitudinal and cross sections of Simple Residential Houses according to the steps and standard drawings.		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.	- Identify the technical requirements for front and side view drawings - Identify the steps and standards for front and side view drawings - Draw the front and side views of a Simple Residential House according to the drawing steps and standards.		Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
13	Understand the technical provisions of Sanitation Plans in AutoCAD format.	- Identifying the technical provisions of the Sanitation Plan - Identifying the steps and standards of the Sanitation Plan - Drawing a Simple Residential Sanitation Plan according to the drawing steps and 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.	- Identifying technical provisions for Mechanical and Electrical Plans - Identifying steps and standards for Mechanical and Electrical Plans - Drawing Mechanical and Electrical Plans for Simple Residential Houses according to drawing steps and 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.	- Identifying technical provisions for Structural Details and Sanitation - Identifying steps and standards for Structural Details and Sanitation - Drawing Structural Details and Sanitation for Simple Residential Houses according to drawing steps and standards.		Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%
16	Understand the technical provisions of Structural Details and Sanitation in AutoCAD format.	- Identifying technical provisions for Structural Details and Sanitation - Identifying steps and standards for Structural Details and Sanitation - Drawing Structural Details and Sanitation for Simple Residential Houses according to drawing steps and standards.		Lectures, discussions, questions and answers, and assignments, presentations. 6 X 50			0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	15%
		15%

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.