	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
Drawing a Residential House (3D)	8320502128		**T=2**	**P=0**	**ECTS=3.18**	6	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Gde Agus Yudha Prawira Adistana, S.T., 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

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	Designing a floor plan for a 2-story residence, drawing the foundation plan, cross section, longitudinal section, stair structure and roof of the residence in 3 dimensions.
References	**Main :**

1. (1) Buku Ajar Menggambar Cad, Agus Wiyono, 2011
   (2) Menggambar Bangunan tingkat lanjut Direktorat PSMK, Dikbud
   (3) Gambar Teknik Bangunan Jilid 2, Suparno, Departemen Pendidikan Nasional.
   (4) Ernest Neufert, Sunarto Tjahjadi, Erlangga, 1996

	Supporters:
Supporting lecturer	Hendra Wahyu Cahyaka, S.T., M.T. Krisna Dwi Handayani, S.T., M.MT., M.T.

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 draw 2D 2-story residential houses (plan, views, sections, foundation plans, beam plans, ring balk plans, roof plans) and draw 3D	An introduction to how to design a 2-story residential house	**Criteria:** Can draw 2D	Lectures, discussions, questions and answers and 4 X 50 Exercises			0%
2	Drawing the foundation	Explains drawing foundation plans for a 2-story residential house	**Criteria:** Able to draw foundation plans	Lectures, discussions, questions and answers and assignments 4 X 50			0%
3	Able to draw beam and column plans for a 2-story residential house	Explains the steps for drawing beam and column plans for a 2-story residential house	**Criteria:** Correctness of construction and notation	Lectures, discussions, questions and answers and assignments 4 X 50			0%
4	Draw column beam plans	Explains the steps for drawing beam and column plans for a 2-story residential house	**Criteria:** Get a score of 100 if the beam and column plans are drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
5	Able to draw a roof plan for a 2-story residential house	Explain the steps for drawing a roof plan for a 2-story residential house	**Criteria:** Get a score of 100 if the roof plan drawing is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
6	Able to draw a roof plan for a 2-story residential house	Explain the steps for drawing a roof plan for a 2-story residential house	**Criteria:** Get a score of 100 if the roof plan drawing is drawn correctly	Lectures, discussions, questions and answers and assignments 2 X 50			0%
7	Able to draw a 2-story residential house	Explains the steps for drawing a 2-story residential house	**Criteria:** Get a score of 100 if the roof plan drawing is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
8	Get to know: How to edit 3-dimensional image objects	Explain the various commands for editing images of 3-dimensional objects	**Criteria:** Get a score of 100 if the practice image is drawn correctly	Lectures, discussions and questions and answers. exercise 2 X 50			0%
9	Able to design and draw 3 dimensions of a 2-story residential house	Explains the steps for drawing a 3-dimensional 2-story residential house	**Criteria:** Get a score of 100, if the image is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
10	Able to design and draw residential home equipment	Explains how to draw in 3 dimensions the completeness of a 2-story residential house (frames, doors and windows, plasterboard)	**Criteria:** Get a score of 100 if the door frame is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%

11	Able to design and draw residential home equipment	Explains how to draw in 3 dimensions the completeness of a 2-story residential house (frames, doors and windows, plasterboard)	**Criteria:** Get a score of 100 if the door frame is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
12	Able to design and draw 3-dimensional roofs of 2-story residential houses	Explains how to draw a 3-dimensional roof of a 2-story residential house	**Criteria:** Get a score of 100, if the roof image is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
13	Able to design and draw 3-dimensional roofs of 2-story residential houses	Explains how to draw a 3-dimensional roof of a 2-story residential house	**Criteria:** Get a score of 100, if the roof image is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
14	Able to design and draw 3D stairs for a 2-story residence	Explains how to draw 3-dimensional stairs for a 2-story residence	**Criteria:** Get a score of 100 if the ladder image is drawn correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
15	Able to render 3D 2-story residential houses	Explains how to render 3D images of residential houses	**Criteria:** Gets a score of 100, if the image is rendered correctly	Lectures, discussions, questions and answers and assignments 4 X 50			0%
16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
		0%

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.