UNESA	**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
Low Rise Building Construction	8320502074		T=2 P=0 ECTS=3.18	2	July 18, 2024

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

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	This course provides understanding and mastery of theories in low-rise building construction which includes foundations, beams, roofs, stairs, gutter construction, rooms, cutain walls, baths, septic tanks, sanitary ware and partition walls. Students' abilities/skills in applying theory in the form of working drawings (graphics) are a very important supporting element in this course. Lectures are held through an expository approach in the form of lectures and questions and answers followed by discussion and reflection activities which are complemented by the use of LCD, OHP, and an inquiry approach, namely partial/structured completion of individual assignments.
References	**Main :**

1. Francis D.K. Ching. 2008. Ilustrasi Konstruksi Bangunan. Jakarta. Erlangga
2. Hendra Wahyu Cahyaka. 2005. Menggambar Struktur Bangunan II. Surabaya. Unesa
3. Mochamad Jasir. 2003. Konstruksi Bangunan Umum I. Surabaya : Unesa
4. Sudijono. 2004. Konstruksi Bangunan Umum II. Surabaya : Unesa
5. Sugihardjo BAE. Dasar dasar Ilmu Bangunan, Supplement. Yogyakarta, : R.Sugihardjo BAE
6. Sugihardjo BAE. Dasar dasar Ilmu Bangunan, Jilid II. Yogyakarta, : R.Sugihardjo BAE

Supporters:	
Supporting lecturer	INDIAH KUSTINI Hendra Wahyu Cahyaka, S.T., 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	Understand the various forms of stairs	Students are able to describe the various forms of stairs		Lecture Question and Answer Discussion 2 X 50			0%

2	Stair structure and stair requirements	1. Students are able to: Describe the parts of a ladder 2. Describe the arrangement of the stairs 3. Explain the requirements for stairs		Lecture Question and Answer Discussion 2 X 50			0%
3	Understand the placement of beams and columns	1. Students are able to: Explain the placement of columns 2. Explain the placement of blocks	**Criteria:** Understand the placement of columns and beams	Lecture Question and answer Discussion and drawing 2 X 50 sketches			0%
4	Understand the various types of ring balks	Students are able to explain the placement of the ring balk	**Criteria:** Understand the material correctly	Lecture Question and Answer Discussion 2 X 50			0%
5	Understand matters related to roof frame construction and roof shape	Students are able to explain things related to roof frame construction	**Criteria:** Understand the material well	Lecture Question and Answer Discussion 2 X 50			0%
6	Understand things related to steel and galvalume concrete wooden trusses	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:** Understand the material correctly	Lecture Question and Answer Discussion Drawing Workshop 2 X 50			0%
7	Understand the various types of foundations	1. Students are able to: Understand the types and placement of foundations 2. Understand detailed foundation sketches	**Criteria:** Understand the material correctly	Lectures, Questions and Answers, Discussions, 2 X 50 Drawing Workshop			0%
8	Understand the types of curtain walls	1. Able to make a sketch of a curtain wall plan 2. Able to explain the various uses of curtain walls	**Criteria:** Understand the material well	Lecture, Question and answer, Discussion, 2 X 50 sketch practice			0%
9	UTS	UTS	**Criteria:** Get a score of 100 if you answer all the questions correctly	Test 2 X 50			0%
10	Understand the various forms of gutter construction. Apply various forms of gutter construction to the image	1. Students are able to: Explain the various forms of gutter construction 2. Draw various forms of gutter construction	**Criteria:** Score 100, if all questions are answered correctly or sketched correctly	Lectures, questions and answers, discussions, drawing 2 X 50 sketches			0%
11	Understanding partition wall construction Applying partition wall construction in the picture Knowing the materials for making partitions	1. Students are able to: Explain partition wall construction 2. Drawing of partition wall construction 3. Identify the materials used to make partitions	**Criteria:** Understand the material well	Lectures, Questions and answers, Discussions, 2 X 50 sketch drawing workshops			0%
12	Understanding bathroom construction requirementsUnderstanding the types of bathroomsDry bathroomsWet bathroomsWet Dry bathrooms Applying the theory of various types of bathrooms to the picture	1. Students are able to: Explain the requirements for bathroom construction 2. Explain the types of bathrooms 3. Dry bathroom 4. Wet bathroom 5. Wet Dry Bathroom 6. Drawing of dry, wet and wet dry bathrooms	**Criteria:** Understand the material well	Lectures, Questions and Answers, Discussions, 2 X 50 Drawing Workshop			0%

13	Understanding the meaning of a septic tank. Understanding the requirements for a septic tank	1. Students are able to: Understand the meaning of septic tank 2. Explain bathroom construction requirements	**Criteria:** Understand the material well	Lecture, Question and Answer, Discussion 2 X 50			0%
14	Knowing the materials for making septic tanks Understanding things related to control tanks Applying knowledge about materials for making septic tanks and control tanks in the picture	1. Students are able to: Identify the materials for making septic tanks 2. Explain matters related to tub control 3. Draw the materials for making a septic tank and control tank in the picture	**Criteria:** Understand the material well	Lecture, Question and Answer, Discussion 2 X 50			0%
15	Knowing the materials of sanitary ductsKnowing sanitary supplies/equipmentUnderstanding sanitary networksUnderstanding partition wall constructionApplying partition wall construction in the drawingKnowing the materials for making partitions	1. Students are able to: Identify sanitary sewer materials 2. Identify sanitary equipment/equipment 3. Explain the sanitation network 4. Explain partition wall construction 5. Drawing of partition wall construction 6. Identify the materials used to make partitions	**Criteria:** Understand the material well	Lecture, Question and Answer, Discussion 2 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

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.