

 <b>UNESA</b>	<b>Universitas Negeri Surabaya</b> <b>Faculty of Engineering,</b> <b>Electrical Engineering Undergraduate Study Program</b>					<b>Document Code</b>	
<b>SEMESTER LEARNING PLAN</b>							
Courses	CODE	Course Family	Credit Weight		SEMESTER	Compilation Date	
Pulse Network	2020102167		T=2	P=0	ECTS=3.18	5	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator		
	.....		.....		Dr. Lusia Rakhmawati, 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						
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">P.O</div>					
Short Course Description	In this lecture students will learn pulse modulation and multiplexing, Logic gates, waveforms, capacitive (CR) circuits, and sitching diodes						
	References	Main :					
1. 1.david A bell," solid state pulse circuits"							
Supporters:							
Supporting lecturer	Adam Ridiantho Muhamad, S.T., M.T. Reza Rahmadian, S.ST., M.EngSc. Dr. Farid Baskoro, 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	introduction, brief explanation of the pulse series, explanation of the learning contract			2 X 50			0%

2	Students will study pulse modulation and multiplexing	1. Students will understand the types of pulse modulation 2. students will understand PAM modulation and demodulation 3. students will understand Time division multiplexing 4. students will understand PCM modulation and demodulation		discussion, question and answer, lecture 2 X 50			0%
3	Students will study pulse modulation and multiplexing	1. Students will understand the types of pulse modulation 2. students will understand PAM modulation and demodulation 3. students will understand Time division multiplexing 4. students will understand PCM modulation and demodulation		discussion, question and answer, lecture 2 X 50			0%
4	students will study wave generators	1. Students will understand the types of wave generators 2. Students will study the characteristics of pulse wave generators 3. Students will study the harmonic content of wave generation		Lectures, discussions and questions and answers 2 X 50			0%
5	students will study wave generators	1. Students will understand the types of wave generators 2. Students will study the characteristics of pulse wave generators 3. Students will study the harmonic content of wave generation		Lectures, discussions and questions and answers 2 X 50			0%
6							0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%

15							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.**