



**Universitas Negeri Surabaya**  
**Faculty of Engineering**  
**, Electrical Engineering Education Undergraduate 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>																
Advanced Electronic Circuits	8320102255		T=2 P=0 ECTS=3.18	4	July 17, 2024																
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>		<b>Study Program Coordinator</b>																
	.....		.....		Dr. Nur Kholis, S.T., M.T.																
<b>Learning model</b>	Case Studies																				
<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: 10%;">P.O</td> <td colspan="15"></td> </tr> </table>					P.O														
P.O																					
<b>Short Course Description</b>	understand FETs and their circuits understand OP-Amp circuits understand oscillators and power supplies																				
<b>References</b>	<b>Main :</b>																				
	1. A.P Malvino 1993, Elektronik prinsiples. singapore : Mcgraw-hillSchults, ME 1994. Electronic Devices.Singapore:Glencoe																				
	<b>Supporters:</b>																				
<b>Supporting lecturer</b>	Dr. Nur Kholis, 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	Able to understand the concept of FET components	- Explain the characteristics of FET - Explain how to provide FET bias.	<b>Criteria:</b> student activities in learning	Presentation, group discussion and reflection 2 X 50			0%														

2	Students are able to analyze FET circuits as amplifiers.	<ol style="list-style-type: none"> <li>1.Explain the meaning and function of common source, common drain, and common gate amplifiers.</li> <li>2. Calculating the value of electrical quantities in the FET circuit as an amplifier.</li> </ol>	<b>Criteria:</b> competency in analyzing questions	Presentation, discussion and practice 2 X 50			0%
3	Students are able to analyze FET circuits as amplifiers.	<ol style="list-style-type: none"> <li>1.Explain the meaning and function of common source, common drain, and common gate amplifiers.</li> <li>2. Calculating the value of electrical quantities in the FET circuit as an amplifier.</li> </ol>	<b>Criteria:</b> competency in analyzing questions	Presentation, discussion and practice 2 X 50			0%
4	Students understand the concept of Thyristors (DIAC, SCR, and TRIAC) which includes their characteristics and functions	<ul style="list-style-type: none"> <li>- Explain the characteristics and function of DIAC -</li> <li>- Explain the characteristics and function of SCR -</li> <li>- Explain the characteristics and function of TRIAC</li> </ul>	<b>Criteria:</b> student activities in learning	Presentation, discussion and practice 2 X 50			0%
5	Students understand the concept of Thyristors (DIAC, SCR, and TRIAC) which includes their characteristics and functions	<ul style="list-style-type: none"> <li>- Explain the characteristics and function of DIAC -</li> <li>- Explain the characteristics and function of SCR -</li> <li>- Explain the characteristics and function of TRIAC</li> </ul>	<b>Criteria:</b> student activities in learning	Presentation, discussion and practice 2 X 50			0%
6	Students are able to analyze the influence of RF on electronic circuits	<ul style="list-style-type: none"> <li>- Explain RF Transistor Amplifier -</li> <li>- Explain RF Amplifier FET.</li> </ul>	<b>Criteria:</b> ability to solve problems	Discussion, exercises and assignments 2 X 50			0%
7	Students are able to analyze the influence of RF on electronic circuits	<ul style="list-style-type: none"> <li>- Explain RF Transistor Amplifier -</li> <li>- Explain RF Amplifier FET.</li> </ul>	<b>Criteria:</b> ability to solve problems	Discussion, exercises and assignments 2 X 50			0%
8	UTS	UTS	<b>Criteria:</b> UTS	UTS 2 X 50			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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.**