



Universitas Negeri Surabaya
Faculty of Engineering
, Electrical Engineering Education Undergraduate Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																	
Electronic Components	8320102048		T=2 P=0 ECTS=3.18	4	July 18, 2024																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																	
		Dr. Nur Kholis, 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																					
		<table border="1" style="margin: auto;"> <tr> <td style="width: 10%;">P.O</td> <td colspan="16"></td> </tr> </table>					P.O															
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Short Course Description	Study electronic components which consist of passive components and active components which include: Resistors; Capacitor; Inductor; Diodes; Transistors and Transducers																					
	References																					
	<p>Main :</p> <p>1. Clemons John, Evangelisti Fred, Kerr Fred, and Klingensmith Charles, 1994, Introductory Electronic Devices and Circuits, Third Edition, New Jersey: Prentice Hall Career & Technology.</p> <p>Floyd Thomas L, 2001, Electronics Fundamentals, Fifth Edition, New Jersey: Prentice-Hall International, Inc.</p> <p>Malvino Albbert Paul, 1993, Electronic Principles, Fifth Edition. New York: Mc. Graw-Hill.</p> <p>Robert Boylestad and Louis Nashelsky, 1992, Electronic Devices and Circuit Theory, Fifth Edition, New Jersey: Prentice-Hall International, Inc.</p> <p>Supporters:</p>																					
Supporting lecturer	Dr. Agus Budi Santoso, M.Pd. 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 (<i>offline</i>)	Online (<i>online</i>)																	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)															

1	Students can find out the characteristics of various passive electronic components consisting of R; C and L	<ol style="list-style-type: none"> 1.Knowing the teristic characteristics of R 2.Find out the R value from the existing color code. 3.Mention the characteristics of C 4.Mention the various types of C 5.Function C 6.Knowing the characteristics of L 	Criteria: Oral test	Direct learning using lecture and discussion methods 2 X 50			0%
2	Students can find out the characteristics of various passive electronic components consisting of R; C and L	<ol style="list-style-type: none"> 1.Knowing the teristic characteristics of R 2.Find out the R value from the existing color code. 3.Mention the characteristics of C 4.Mention the various types of C 5.Function C 6.Knowing the characteristics of L 	Criteria: Oral test	Direct learning using lecture and discussion methods 2 X 50			0%
3	Students can find out the characteristics of various passive electronic components consisting of R; C and L	<ol style="list-style-type: none"> 1.Knowing the teristic characteristics of R 2.Find out the R value from the existing color code. 3.Mention the characteristics of C 4.Mention the various types of C 5.Function C 6.Knowing the characteristics of L 	Criteria: Oral test	Direct learning using lecture and discussion methods 2 X 50			0%
4	Know the characteristics of DIODE	<ol style="list-style-type: none"> 1.Draws the characteristic curve of a DIODE 2.Mention the function of a DIODE according to its characteristics. 3.Using DIODE in an electronic circuit 	Criteria: task completion	PresentationDiscussion 2 X 50			0%
5	Students are able to: Determine the legs of a transistor Describe the characteristics of a Transistor Know the function of a Transistor Refraction of a Transistor according to its function	Can determine the transistor leg practically Can describe the characteristic curve of the Transistor Using the Transistor according to its function Determining the refraction of the Transistor according to its function	Criteria: Achieving Learning Goals	Presentation, Discussion and Reflection 2 X 50			0%

6	Students are able to: Determine the legs of a transistor Describe the characteristics of a Transistor Know the function of a Transistor Refraction of a Transistor according to its function	Can determine the transistor leg practically Can describe the characteristic curve of the Transistor Using the Transistor according to its function Determining the refraction of the Transistor according to its function	Criteria: Achieving Learning Goals	Presentation, Discussion and Reflection 2 X 50			0%
7	Students are able to: Determine the legs of a transistor Describe the characteristics of a Transistor Know the function of a Transistor Refraction of a Transistor according to its function	Can determine the transistor leg practically Can describe the characteristic curve of the Transistor Using the Transistor according to its function Determining the refraction of the Transistor according to its function	Criteria: Achieving Learning Goals	Presentation, Discussion and Reflection 2 X 50			0%
8	MIDDLE SEMESTER EXAMINATION (UTS)	MIDDLE SEMESTER EXAMINATION (UTS)	Criteria: MIDDLE SEMESTER EXAMINATION (UTS)	MIDDLE SEMESTER EXAMINATION (UTS) 2 X 50			0%
9	Can know the characteristics of FET and can use it according to its character	Can determine FET electrodes. Can describe FET characteristics. Can determine FET refraction according to its function.	Criteria: Doing Practice Questions	Presentation, discussion and reflection 2 X 50			0%
10	Can know the characteristics of FET and can use it according to its character	Can determine FET electrodes. Can describe FET characteristics. Can determine FET refraction according to its function.	Criteria: Doing Practice Questions	Presentation, discussion and reflection 2 X 50			0%
11	Knowing the characteristics of OP-AMP Using OP-AMP as the main component of electronic circuits.	Knowing the characteristics of OP-AMP Calculating the gain of the basic OP-AMP circuit	Criteria: Report	Presentation, discussion and reflection 2 X 50			0%
12	Knowing the characteristics of OP-AMP Using OP-AMP as the main component of electronic circuits.	Knowing the characteristics of OP-AMP Calculating the gain of the basic OP-AMP circuit	Criteria: Report	Presentation, discussion and reflection 2 X 50			0%
13	Knowing the characteristics of OP-AMP Using OP-AMP as the main component of electronic circuits.	Knowing the characteristics of OP-AMP Calculating the gain of the basic OP-AMP circuit	Criteria: Report	Presentation, discussion and reflection 2 X 50			0%
14	Determine the function of sensors and transducers according to their characteristics	Knowing the differences between sensors and transducers Knowing the various types of sensors and transducers Determining the characteristics of sensors and transducers Functions of sensors and transducers according to their character	Criteria: Ability to answer questions	Direct Learning with 2 X 50 assignments			0%
15	Determine the function of sensors and transducers according to their characteristics	Knowing the differences between sensors and transducers Knowing the various types of sensors and transducers Determining the characteristics of sensors and transducers Functions of sensors and transducers according to their character	Criteria: Ability to answer questions	Direct Learning with 2 X 50 assignments			0%

16	Final exams	Final exams		Final Exam Semester 2 X 50			0%
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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.