	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
Basic Electronic Circuits	8320102242		T=2	P=0	ECTS=3.18	3	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Nur Kholis, 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	This course is a core electronics course that studies the basics of semiconductors, diodes, MOSFET transistors and BJTs.
References	**Main :**
	1. T.L. Floyd.2011.Electronic Devices 9th Edition.Prentice Hall 2. S. Sedra and K. C. Smith.2011.Microelectronic Circuit 6th Edition.Oxford University Press
	Supporters:
Supporting lecturer	Dr. Nur Kholis, S.T., M.T. L. Endah Cahya Ningrum, S.Pd., M.Pd. Parama Diptya Widayaka, S.ST., 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	Know the scope of the Basic Electronics lecture; able to understand the use of electronic circuits in solving electronic circuit analysis problems and engineering problems	Ability to explain the atomic structure and electrical properties of semiconductor materials		Lectures, Discussions and Questions and Answers 2 X 50			0%
2	Able to describe and explain the physical structure of a PN Diode junction and describe the IV characteristics of a diode circuit	Ability to complete diode circuit analysis equations and describe IV characteristic graphs		Lectures, Discussions and Questions and Answers 2 X 50			0%
3	Can analyze diode application circuits as rectifiers, voltage multipliers and calmers using the principles or theory of electrical circuit analysis	ability to analyze rectifier, voltage multiplier, limiter and clamper circuits		Lectures, Discussions and Questions and Answers 2 X 50			0%
4	Can analyze special purpose diode application circuits such as Zener diodes, LEDs, Photodiodes, Varakto and Schottky diodes using the principles/theories of electrical circuit analysis	Ability to analyze special purpose diode circuits		Lectures, Discussions and Questions and Answers 2 X 50			0%
5	Able to describe and explain the physical structure, operation, and describe the IV characteristics of a bipolar junction transistor (BJT) circuit	Ability to understand and describe BJT cross sectional area, IV characteristics, and BJT operation in simple circuits		Lectures, Discussions and Questions and Answers 2 X 50			0%
6	Can analyze the JT pre-voltage circuit using the principles or theory of electrical circuit analysis	BJT pre voltage circuit analysis capability		Lectures, Discussions and Questions and Answers 2 X 50			0%
7	Able to understand and analyze small signal amplifier circuits with single BJT transistors	Ability to analyze small signal amplifier circuits using a single BJT		Lectures, Discussions and Questions and Answers 2 X 50			0%
8	UTS	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: 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** 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.