	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
Control and Automation Practicum	8320102231		T=2	P=0	ECTS=3.18	4	July 17, 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

	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	Application and use of electromagnetic components in the field of industrial automation. Understand working diagrams and electrical systems, understand the sequence of operations and understand K3 policies and procedures for operating production machines with electromagnetic control.
References	**Main :**
	1. Stephen L Herman. 2010. Electric Motor Control. Delmar, USA Tim. 2013. Tim. 2013. Modul Praktikum Pengaturan Elektromagnetik . Unesa.
	Supporters:
Supporting lecturer	Dr. Subuh Isnur Haryudo, S.T., M.T. Fendi Achmad, S.Pd., M.Pd.

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	Students are able to work according to the rules by paying attention to K3 and using equipment according to its function	1. Understand general laboratory rules. 2. Understand K3 guidelines. 3. Understand the correct use of laboratory equipment.		Lectures, discussions 2 X 50			0%
2	Students are able to design and create a series of electromagnetic switch working settings using push buttons and switches for several operating systems.	Assembling a series of working settings for electromagnetic switches using push buttons and switches for several operating systems.		MPL 2 X 50			0%
3	Students are able to design and make a series of electromagnetic switch work settings for temporary work and continuous work using a push button.	Assemble a series of electromagnetic switch work settings for temporary work and continuous work using a push button.		2 X 50			0%
4	Students are able to design and make a series of electromagnetic switch work settings for temporary work and continuous work using a push button.	Assemble a series of electromagnetic switch work settings for temporary work and continuous work using a push button.		2 X 50			0%
5	Students are able to design and create a series of electromagnetic switch work settings for sequential work	Assembling a series of electromagnetic switch work settings for sequential work.		2 X 50			0%
6	Students are able to design and create a series of electromagnetic switch work settings for sequential work	Assembling a series of electromagnetic switch work settings for sequential work.		2 X 50			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** 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.