



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																	
Microprocessor Practicum	2020101138		T=1 P=0 ECTS=1.59	6	July 18, 2024																																	
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																	
		Dr. Lusia Rakhmawati, 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																																					
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="width: 100px; height: 20px;">P.O</td></tr> </table>					P.O																															
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	PO Matrix at the end of each learning stage (Sub-PO)																																					
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="width: 50px; height: 20px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td><td style="width: 20px;">2</td><td style="width: 20px;">3</td><td style="width: 20px;">4</td><td style="width: 20px;">5</td><td style="width: 20px;">6</td><td style="width: 20px;">7</td><td style="width: 20px;">8</td><td style="width: 20px;">9</td><td style="width: 20px;">10</td><td style="width: 20px;">11</td><td style="width: 20px;">12</td><td style="width: 20px;">13</td><td style="width: 20px;">14</td><td style="width: 20px;">15</td><td style="width: 20px;">16</td> </tr> </table>					P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																						
Short Course Description	This course is a practical activity from the microprocessor course. Practical activities include assembly programming, use of PPI, PIT and PIC modules. After taking this course, students are expected to be able to create thematic applications using microprocessor modules.																																					
References	Main :																																					
	1. Brey, Barry B. 2003. Mikroprosesor Intel, 6th Edition. New Jersey: The Pearson Education. 2. Setiawan, Rachmad. 2006. Mikroprosesor 8088. Yogyakarta: Graha Ilmu.																																					
	Supporters:																																					
Supporting lecturer	Arif Widodo, S.T., M.Sc. L. Endah Cahya Ningrum, 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	Able to understand basic instructions on a microprocessor	1.Understand basic microprocessor instructions 2.Shows the basic instruction workflow of a microprocessor 3.Analyze the workflow of basic microprocessor instructions		Model: DiscoveryMethod: DiscussionApproach: Constructivist 1 X 50			0%																															

2	Able to write programs in assembly language	1.Understand assembly language 2.Modifying example programs in assembly language 3.Create simple programs using assembly language		Model: Problem based learning Method: Demonstration Approach: Scientific 1 X 50			0%
3	Able to write programs in assembly language	1.Understand assembly language 2.Modifying example programs in assembly language 3.Create simple programs using assembly language		Model: Problem based learning Method: Demonstration Approach: Scientific 1 X 50			0%
4	Able to create functions using assembly language	1.Able to understand JMP instructions 2.Able to understand CALL instructions 3.Able to understand ORG instructions		Model: Problem based learning Method: Demonstration Approach: Scientific 1 X 50			0%
5	Able to create functions using assembly language	1.Able to understand JMP instructions 2.Able to understand CALL instructions 3.Able to understand ORG instructions		Model: Problem based learning Method: Demonstration Approach: Scientific 1 X 50			0%
6							0%
7							0%
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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** 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.