



**Universitas Negeri Surabaya  
Vocational Faculty,  
D4 Electrical Engineering Study Program**

Document Code

**SEMESTER LEARNING PLAN**

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
AC Electrical Circuit Practice	2030502325		T=0	P=2	ECTS=3.18	2	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Mahendra Widyartono, S.T., M.T.

Learning model	Case Studies
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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	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th colspan="16">Week</th> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> </table>	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Week																																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																			

Short Course Description	Practice circuits by calculating instantaneous values, average values, effective current and voltage values, AC circuit analysis, power triangle, delta to star transformation, reluculation, polyphase, and transient
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References	Main :	
		<ol style="list-style-type: none"> <li>1. Sudarmono. 1993. T heorema Jaringan. Surabaya: University Prees IKIP Surabaya.</li> <li>2. Theraja, B.I. 1979. Electrcal Technology. New Delhi: S. Chand &amp;Cendany. Ltd.</li> <li>3. Budiono Mismail. 1994. Rangkaian Listrik , UNIPRESS Unibraw.Malang</li> <li>4. Scaum, 1998, Rangkaian Litrik I, Erlangga, Jakarta.</li> </ol>
	Supporters:	

Supporting lecturer	Widi Aribowo, S.T., M.T. Mahendra Widyartono, S.T., M.T.
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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 prepare practical material for the next meeting	<p>1.Recall the material taught in the previous semester.</p> <p>2.Explains the material that will be discussed during 1 semester</p>	<p><b>Criteria:</b></p> <p>1.The assessment criteria are carried out by looking at aspects:</p> <p>2.Participation: carried out by observing student activities (weight 2) UTS: carried out with assessments during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End:</p> <p>3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10.</p>	Lecture, question and answer 3 X 50			0%
2	Students can investigate phase differences in circuits with R load, L load and C load	Investigate phase differences in circuits with R load, L load and C load	<p><b>Criteria:</b></p> <p>1.The assessment criteria are carried out by looking at aspects:</p> <p>2.Participation: carried out by observing student activities (weight 2) UTS: carried out with assessments during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End:</p> <p>3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10.</p>	presentation, discussion, practicum, reflection 3 X 50			0%

3	Students can investigate phase differences in circuits with R load, L load and C load	Investigate phase differences in circuits with R load, L load and C load	<b>Criteria:</b> 1.The assessment criteria are carried out by looking at aspects: 2.Participation: carried out by observing student activities (weight 2) UTS: carried out with assessments during the middle of the semester (weight 2) UAS: carried out every semester to measure all indicators (weight 3) Assignments: carried out on each indicator (weight 3) Value Student End: 3.Participation Score (2) x Assignment Score (3) x UTS Score (2) x UAS Score (3) divided by 10.	presentation, discussion, practicum, reflection 3 X 50			0%
4	Students can investigate phase differences in the R, L and CM series circuits. Students can investigate the voltage of each element in the R, L and CM series circuits. Students can investigate the amount of power in the R, L and C series circuits.	1.Investigate the phase differences in the R, L and C series circuits 2.Investigate the voltage of each element in the R, L and C series circuit 3.Investigate the amount of power in the R, L and C series circuits		Discussions, assignments, exercises, 3 X 50			0%
5	Students can investigate phase differences in the R, L and CM series circuits. Students can investigate the voltage of each element in the R, L and CM series circuits. Students can investigate the amount of power in the R, L and C series circuits.	1.Investigate the phase differences in the R, L and C series circuits 2.Investigate the voltage of each element in the R, L and C series circuit 3.Investigate the amount of power in the R, L and C series circuits		Discussions, assignments, exercises, 3 X 50			0%
6							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** 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.**