



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

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date		
Basic Electrical Installation Practice	99992040102031		T=2 P=0 ECTS=3.18	3	July 17, 2024		
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator		
		Mahendra Widartono, 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: auto;"> <tr> <td style="width: 100px; height: 30px;">P.O</td> </tr> </table>					P.O
P.O							
Short Course Description	This course is an introduction to basic concepts for designing electrical power installations in industry using software (AutoCAD). First, students are introduced to various types of power installation equipment and equipment used in industrial installations, based on the specifications and conditions where the equipment is installed and the standards used by the installation equipment. This is intended so that students can design reliable, safe and economical installation systems in accordance with standards. Next, students will be trained to use AutoCAD to draw industrial installation designs according to the drawing notation used based on standards. Planning will be assisted using AutoCAD 2D software and the results of the design are expected to be in the form of technical drawings (Shop Drawing) as well as a list of plans for the use of materials to be installed (Bill of Quantity) for each student.						
	<p>References</p> <p>Main :</p> <ol style="list-style-type: none"> 1. SNI. 2000. PUIL 2000. Indonesia. 2. A. J. Watkins & R. K. Parton. 2004. Perhitungan Instalasi Listrik. Erlangga, Indonesia 3. Chandra, Handi. 2012. AutoCAD 2013 untuk Orang Awam. Maxikom, Indonesia 4. Moch. Machmud Rifadil. 2006. Gambar Teknik (Workshop). PENS, Indonesia <p>Supporters:</p>						
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	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make configuration plans for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Lectures, discussions and questions and answers 2 X 50			0%
2	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%

3	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%
4	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%

5	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%
6	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%

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8	Get to know the equipment and get to know the concept of basic electrical installation practices	<ul style="list-style-type: none"> - Explain the principles of configuration of single switches, series switches and sockets. - Make a configuration plan for single switches, series switches and sockets. - Mention the various types of electrical installation cables. 	<p>Criteria:</p> <ol style="list-style-type: none"> 1.The assessment criteria are carried out by looking at aspects: 2.1. Participation: carried out by observing student activities 3.(weight 2); 4.2. UTS: carried out with an assessment during the middle of the semester (weight 2); 5.3. UAS: carried out every semester to measure all indicators (weight 6.3); 7.4. Task: carried out on each indicator (weight 3). 8.Student Final Grade: 9.Participation Score (2)%2 Lever Score (3)%2 UTS Score (2)%2 UAS Score (3) divided by 10. 	Presentations, discussions, case studies and reflections 2 X 50			0%

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16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
		0%

Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.