

	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																																									
Electric Power Transmission Systems	8320103176		T=3	P=0	ECTS=4.77	5	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																																															
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">P.O</div>																																														
	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="padding: 5px;">P.O</td> <td colspan="16" style="padding: 5px;">Week</td> </tr> <tr> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">5</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">7</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">9</td> <td style="padding: 5px;">10</td> <td style="padding: 5px;">11</td> <td style="padding: 5px;">12</td> <td style="padding: 5px;">13</td> <td style="padding: 5px;">14</td> <td style="padding: 5px;">15</td> <td style="padding: 5px;">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	Understanding and study of: SKKNI for Electric Power Transmission, basic concepts of alternating current electric power systems, transmission line parameters, load and power flow calculations on transmission lines, transmission line construction, reactive compensation on transmission lines and transient analysis and maintenance of transmission lines .																																															
References	Main :																																															
	<ol style="list-style-type: none"> 1. Artono Arismunandar & Sususmu Kuwahara. 1975. Buku Pegangan Teknik Tenaga Listrik Jilid I . Jakarta: PT. Pradnya Paramita. Artono Arismunandar& Sususmu Kuwahara. 1975. Buku Pegangan Teknik Tenaga Listrik Jilid II . Jakarta: PT. Pradnya Paramita. Artono Arismunandar& Sususmu Kuwahara. 1975. Buku Pegangan Teknik Tenaga Listrik Jilid III . Jakarta: PT. Pradnya Paramita. Departemen Energi dan Sumber Daya Mineral. 2004. Sosialisasi Standar Latih Kompetensi (SLK) Tenaga Teknik Ketenagalistrikan Bidang Transmisi Tenaga Listrik. Jakarta: Pusat Diklat Energi dan Ketenagalistrikan. Djliteng Marsudi (2002).Pembangkitan Energi Listrik . Jakarta: Penerbit Erlangga. Djliteng Marsudi (2006). Operasi Sistem Tenaga Listrik . Jakarta: Penerbit Graha Ilmu. Gross, A. Charles. (1990). Power System Analisis , New York: John Wiley & Sons. Hutauruk. (1985) Transmisi Daya Listrik. Jakarta: Erlangga. Stam H. N. C. 1993. Keselamatan dan Kesehatan di Tempat Kerja . Penebar Swadaya: Jakarta. Standar Nasional Indonesia. 2000. Persyaratan Umum Instalasi Listrik 2000 . Jakarta: Yayasan PUIL. William D. Stevenson Jr . (1994). Element of Power System Analysis Fourth Edition , New York: McGraw-Hill. 																																															
	Supporters:																																															
Supporting lecturer	Prof.Dr. Tri Wrahatnolo, M.Pd., M.T. Unit Three Kartini, S.T., M.T., Ph.D.																																															

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							0%
2							0%
3							0%
4							0%
5							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: 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.

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.