	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
Switching Technique	8320102193		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	Project Based Learning

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**
	PLO-13 Able to design circuits, devices and products in the electrical and electronics engineering expertise program (SSC3.1).
	Program Objectives (PO)
	PLO-PO Matrix
	<table><tr><td>P.O</td><td>PLO-13</td></tr></table>
	PO Matrix at the end of each learning stage (Sub-PO)
	<table><tr><td rowspan="2">P.O</td><td colspan="16">Week</td></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>

Short Course Description	This course focuses on understanding the switching or connection process in telecommunications equipment, both conventional circuit-based and packet-based and the signaling process. The switching process is a very important process in the telecommunications sector because this is where the process of connecting information, both voice, data and video, can be connected from one connection point to another connection point until finally the information can be received at the destination. Course characteristics Prerequisite Knowledge 1. Basic Telecommunication Engineering Prerequisite Skills Course Type 1. Types of Switching Techniques 2. Basic Hardware and Central Software Concepts 3. Analog and Digital Switching Concepts 4. Signaling in the Switching process

References	**Main :**	
	1. Pearce, J Gordon. 1981. Telecommunications switching. © Springer Science Business Media New York. Originally published by Plenum Press, New York in 1981. Zhengmao Li. 2018. Telecommunication 4.0 Reinvention of the Communication Network. Springer Science Business Media New York.	
	Supporters:	

Supporting lecturer	Dr. Edy Sulistiyo, M.Pd. Miftahur Rohman, S.T., M.T. Parama Diptya Widayaka, S.ST., M.T.

Week-	Final abilities of each learning	Evaluation		Help Learning, Learning methods, Student Assignments, **[Estimated time]**	Learning materials **[**	Assessment Weight (%)

(1)	stage (Sub-PO) (2)	Indicator (3)	Criteria & Form (4)	Offline (*offline*) (5)	Online (*online*) (6)	References] (7)	(8)
1				2 X 50			0%
2				2 X 50			0%
3				2 X 50			0%
4				2 X 50			0%
5				2 X 50			0%
6				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: 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.