



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Undergraduate Physics Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date																																										
Optical Communication Systems	4520102195		T=2 P=0 ECTS=3.18	6	July 17, 2024																																										
AUTHORIZATION	SP Developer		Course Cluster Coordinator		Study Program Coordinator																																										
		Prof. Dr. Munasir, S.Si., M.Si.																																										
Learning model	Project Based Learning																																														
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)																																														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 5%;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 2%;">1</td> <td style="width: 2%;">2</td> <td style="width: 2%;">3</td> <td style="width: 2%;">4</td> <td style="width: 2%;">5</td> <td style="width: 2%;">6</td> <td style="width: 2%;">7</td> <td style="width: 2%;">8</td> <td style="width: 2%;">9</td> <td style="width: 2%;">10</td> <td style="width: 2%;">11</td> <td style="width: 2%;">12</td> <td style="width: 2%;">13</td> <td style="width: 2%;">14</td> <td style="width: 2%;">15</td> <td style="width: 2%;">16</td> </tr> </table>														P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																															
Short Course Description	Carrying out studies of fiber-optic communication systems, namely fiber-optics, optical transmitters, optical detectors, analog and digital transmission design aspects, to global and local optical networks. Knowledge of the structure, materials and fabrication of optical fibers, signal degradation in optical fibers, splicing, coupling, ability to calculate link budgets and understand the concept of multiplexing in optical systems, WDM technology, as well as optical amplifiers, local and global optical network architecture and applications.																																														
References	Main :																																														
	<ol style="list-style-type: none"> 1. Gerd Keiser, Optical Fiber Communications, McGraw-Hill, 2005. 2. Joseph C. Palais, Fiber Optic Communications, , Prentice-Hall, 2005. 3. Robert J.Hoss, Fiber Optic Communications Design Handbook, Prentice Hall, 1990. 4. John Crissp, 2001, Introduction toFiber Optic , 2nd Edition, NewnesOxford 																																														
	Supporters:																																														
Supporting lecturer	Dzulkifliih, S.Si., M.T. Dr. Rohim Aminullah Firdaus, S.Pd, M.Si																																														
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 describe the basics of optical communication	<ol style="list-style-type: none"> 1.Explain the basic principles of fiber optic communications by identifying commercial services that use fiber optics today 2.Explain the basic principles of light as a medium for transmitting information 3.Explains the material items that will be received in one learning semester and their distribution 	Criteria: null	Learning Approach/Method/Model/Strategy Presentation, group discussion, and reflection 2 X 50			0%
2	Able to describe the basics of optical communication	<ol style="list-style-type: none"> 1.Explain the basic principles of fiber optic communications by identifying commercial services that use fiber optics today 2.Explain the basic principles of light as a medium for transmitting information 3.Explains the material items that will be received in one learning semester and their distribution 	Criteria: null	Learning Approach/Method/Model/Strategy Presentation, group discussion, and reflection 2 X 50			0%
3	Able to describe the basics of optical communication	<ol style="list-style-type: none"> 1.Explain the basic principles of fiber optic communications by identifying commercial services that use fiber optics today 2.Explain the basic principles of light as a medium for transmitting information 3.Explains the material items that will be received in one learning semester and their distribution 	Criteria: null	Learning Approach/Method/Model/Strategy Presentation, group discussion, and reflection 2 X 50			0%
4	Able to describe the basics of optical communication	<ol style="list-style-type: none"> 1.Explain the basic principles of fiber optic communications by identifying commercial services that use fiber optics today 2.Explain the basic principles of light as a medium for transmitting information 3.Explains the material items that will be received in one learning semester and their distribution 	Criteria: null	Learning Approach/Method/Model/Strategy Presentation, group discussion, and reflection 2 X 50			0%

5	Able to describe the basics of optical communication	1.Explain the basic principles of fiber optic communications by identifying commercial services that use fiber optics today 2.Explain the basic principles of light as a medium for transmitting information 3.Explains the material items that will be received in one learning semester and their distribution	Criteria: null	Learning Approach/Method/Model/Strategy Presentation, group discussion, and reflection 2 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: 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** 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.
- 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.

