

## Universitas Negeri Surabaya Faculty of Engineering, Electrical Engineering Undergraduate Study Program

Document Code

Courses			CODE		Course	rse Family		Credit Weight		SEMESTER	Compilation Date		
Network & Data Communications Practice			2020102142					T=2	P=0	ECTS=3.18	4	July 18, 2024	
AUTHORIZATION			SP Developer				Course Cluster Coordinator			oordinator	Study Program Coordinator		
											Dr. Lusia Rakhmawati, S.T., M.T.		
Learning model		Case Studies											
Program	1	PLO study program that is charged to the course											
Outcome	) es	Program Objectives (PO)											
(PLO)		PLO-PO Matrix											
		P.O											
	PO Matrix at the end of each learning stage (Sub-PO)												
P.O Week													
				1 2	3 4	56	7	8	9	10	11 12	13 14	15 16
Short Course Descript	ion	This course presents the definition and scope of, among other things, basic concepts, components and elements as well as how to implement computer networks and mobile computing and their applications in the world of electricity. What is its role in designing and building computer networks and mobile computer systems, various kinds of resources, communicating, and being able to access information on various LAN, MAN and WAN network models?											
References		Main :											
<ol> <li>Agus Sumin, Pengantar Jaringan Komputer, Penerbit Gunadarma, Jakarta, 1995.</li> <li>Stallings, William, Data and Computer Communications, Macmillan Publishing Company, New York, 1993.</li> <li>Suryadi HS., Pengantar Komunikasi Data, Penerbit Gunadarma, Jakarta, 1993.</li> <li>E Comer, Douglas, Data and Communications Computer Network, Prentice Hall, 3rd Edition, 2000.</li> </ol>													
		Supporters:											
Supporti lecturer	ing	EPPY YUNDRA											
Week-	Fina eac stag	Final abilities of each learning stage		Evaluation			Help Learning, Learning methods, Student Assignments, [Estimated time]				Learning materials [ References	Assessment Weight (%)	
	(Sub-PO)		I	ndicator	Criteria &	Form	Offl offl	ine( ine)	C	online	( online )	1	
(1)		(2)		(3)	(4)		(!	5)			(6)	(7)	(8)

1	Students can understand data communication networks and computer communication architecture	<ol> <li>Students get to know computer network models</li> <li>Students can explain the aims and objectives of data communication networks</li> <li>Students can understand the meaning of computer communication architecture and explain well its use in building a communication system</li> </ol>	Criteria: The maximum score is 100, if done well and correctly	Lectures, discussions and assignments 2 X 50		0%
2	Students can understand data communication networks and computer communication architecture	<ol> <li>Students get to know computer network models</li> <li>Students can explain the aims and objectives of data communication networks</li> <li>Students can understand the meaning of computer communication architecture and explain well its use in building a communication system</li> </ol>	Criteria: The maximum assignment value is 100, if the results are accurate and correct	Lectures, discussions and experiments 2 X 50		0%
3	Students can understand the concept of multiplexing and multiplexing techniques	Students know, understand and understand and multiplexing and its functions in computer networks in detail. Students understand the purpose of these multiplexing techniques, both the modulation and demodulation processes to the basic circuits and their applications. Students understand the various multiplexing techniques	Criteria: The maximum score is 100, if the practice results are appropriate and correct	Lectures, discussions and experiments 2 X 50		0%
4	Students can understand the concept of multiplexing and multiplexing techniques	Students know, understand and understand and its functions in computer networks in detail. Students understand the purpose of these multiplexing techniques, both the modulation and demodulation processes to the basic circuits and their applications. Students understand the various multiplexing techniques	Criteria: The maximum score is 100, if the practice results are appropriate and correct	Lectures, discussions and experiments 2 X 50		0%

5	Students can understand the types and types of topology, media, computer network infrastructure	<ol> <li>Students know the types of topology, advantages and disadvantages of each type of topology.</li> <li>Students can find out the development of computer networks from those using cables to sensors (remote access)</li> <li>Students can understand the comparison of internetworking</li> </ol>	Criteria: The maximum score value is 100, if the experimental results work well	Lectures, discussions and experiments 2 X 50		0%
6	Students can understand the types and types of topology, media, computer network infrastructure	<ol> <li>Students know the types of topology, advantages and disadvantages of each type of topology.</li> <li>Students can find out the development of computer networks from those using cables to sensors (remote access)</li> <li>Students can understand the comparison of internetworking</li> </ol>	Criteria: The maximum score value is 100, if the experimental results work well	Lectures, discussions and experiments 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: Case Study

 No
 Evaluation

 Percentage

 0%

- 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.
- 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.
- 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.