UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Computer Science and Electronics

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Bachelor in Electronics and Instrumentation

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MODULE HANDBOOK

Module name	**Computer Network**
Module level	Undergraduate
Code	MII-2601
Courses (if applicable)	NA
Semester	Even
Contact person	Dr.techn. Ahmad Ashari, M.Kom.
Lecturer	Dr.techn. Ahmad Ashari, M.Kom.
Language	Bahasa Indonesia& English
Relation to curriculum	1. Undergraduate degree program, compulsory, 6th semester. 2. International undergraduate program, compulsory, 6th semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 30 students.
Workload	1. Lectures: 2 x 50 = 100 minutes per week. 2. Exercises and Assignments: 1 x 50 = 50 minutes per week. 3. Private study: 1 x 50 = 50 minutes per week.
Credit points	2 credit points (sks).
Requirements according to the Examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.
Recommended prerequisites	Discrete mathematics
Learning outcomes (course outcomes) and their corresponding PLOs	After completing this module, a student is expected to: CO1. Able to explain the basic concepts of computer network protocol, computer network architecture, network management and security CO2. Able to explain and identify the concept of data communication, asynchronous and synchronous networks, wireless and sensor networks

	CO3. Able to explain network management in scale of LAN, WAN, and MAN
	CO4. Able to explain concept and type of data traffic in the context of switching, routing, and other routing algorithms
	CO5. Able to explain and present OSI model reference, TCP/IP network protocol and its applications

PLO		CO1	CO2	CO3	CO4	CO5
Program Learning Outcome (PLO)	PLO1	√				
	PLO2		√			
	PLO3			√		
	PLO4				√	
	PLO5					√

Contents	1. Concept and understanding, computer network technology and method 2. Architecture and Components of computer network 3. Management of computer network 4. Computer network supporting technology and its application 5. Computer network security
Study andexamination requirements andforms of examination	The evaluation is done in 2 forms, namely: 1. Trial, either midterm or semester test, 2. Two tasks, including individual, 3. Two group assignments to be completed within a certain timeframe, and Assessment is done using benchmark assessment, with the aim of measuring the level of student understanding related to the target and class rank.
Media employed	e-learning Platform (ELOK), LCD, blackboard, and websites.

Assessments and Evaluation							
	Type	Percentage	CO1	CO2	CO3	CO4	CO5
	Tasks / Quizzes	10	√		√		
	Group Task 1	15		√			
	Midsem Test	25		√	√		
	Group Task2	15				√	
	FinalSem test	25				√	√
	Total	100					

Reading List	• William Stallings, Data and Computer Communication 8th Ed., Prentice Hall, 2007

	• Andrew S. Tanenbaum, Computer Network 4th Ed., Prentice Hall, 2003 • James F. Kurose and Keith W. Ross, Computer Networking: A Top-Down Approach Featuring the Internet, Addison-Wesley, 2000