

**MODULE HANDBOOK**  
**Master Program in Computer Science**  
**Department of Computer Science and Electronics**  
**Faculty of Mathematics and Natural Sciences**  
**Universitas Gadjah Mada**

**Computer Network**

Module name	<b>Computer Network</b>		
Module level	Master		
Code	MII 6272		
Courses (if applicable)	Computer Network (Jaringan Komputer)		
Semester	Even (Genap)		
Contact person	Dr. Tri Kuntoro Priyambodo, M.Sc. Dr.-Ing. Reza Pulungan, S.Si., M.Sc. Dr.techn. Ahmad Ashari, M.Kom Dr. Moch, Edi Wibowo		
Lecturer	Dr. Tri Kuntoro Priyambodo, M.Sc. Dr.-Ing. Reza Pulungan, S.Si., M.Sc. Dr.techn. Ahmad Ashari, M.Kom Dr. Moch, Edi Wibowo		
Language	Indonesia		
Relation to curriculum	Master program, elective, 2 <sup>nd</sup> semester		
Type of teaching, contact hours	Master program : lectures, <17 student		
Workload	1. Lectures: 3×50 = 150 minutes (2.5 hours) per week 2. Exercises and Assignments: 3×60 = 180 minutes (3 hours) per week 3. Private study: 3×60 = 180 minutes (3 hours) per week		
Credit points	3 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	-		
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:		
	<b>CO</b>	<b>Description</b>	<b>Supported PLO</b>
	CO-1	Students can explain and design the development of computer networks.	PLO3, PLO4, PLO5, PLO9
	CO-2	Students can explain and identify the layers of computer networks.	PLO3, PLO4, PLO5

	CO-3	Students can explain and apply signal transmission technology	PLO2, PLO3, PLO4, PLO5		
	CO-4	Students can explain concepts and design communication protocols	PLO3, PLO4, PLO5, PLO6		
	CO-5	Students can explain the concept of data transmission security	PLO3, PLO4, PLO5, PLO6		
Content	At this time, communication information technology has become a foundation for the world community in carrying out their life activities. The use of communication information technology is not only for communication, but has also touched on the connection with information sources in relation to the management of office or business activities on a global scale. Communication information technology has even touched other aspects of life, specifically for entertainment and learning. The need for data and information that can be accessed today is inseparable from the role of communication information technology which is fundamentally supported by computer network technology. Therefore, students need to be introduced to the concepts of computer networks, topology, protocols, and standard organizations in computer networks. In addition to a basic understanding of computer networks, it is also necessary to know and understand the latest developments in computer network technology related to communication technology, communication media, protocols, and especially the use of computer networks in human life.				
Study and examination requirements and forms of examination	Mid-term examination Final examination Assignments				
Media employed	LCD, blackboard, websites, and books				
Assessments and Evaluation	<b>CO</b>	<b>Assessment Methods</b>	<b>Type</b>	<b>Percentage</b>	<b>Total</b>
	CO-1	Quiz	Formative	2%	10%
		Individual assignment	Formative	4%	
		Problem 1 of midterm exam	Summative	4%	
	CO-2	Individual assignment	Formative	5%	10%
		Problem 2 of midterm exam	Summative	5%	
	CO-3	Individual assignment	Formative	10%	30%
		Problem 3 of midterm exam	Summative	10%	
		Problem 1 of final exam	Summative	10%	
	CO-4	Quiz	Formative	5%	30%
		Individual assignment	Formative	5%	
		Group assignment	Formative	10%	
		Problem 2 of final exam	Summative	10%	
CO-5	Quiz	Normative	5%	20%	
	Group assignment	Normative	5%		
	Problem 3 of final exam	Formative	10%		
Reading List	<ul style="list-style-type: none"> <li>Tanenbaum, Computer Networks, 5th edition, Prentice Hall, Inc., New Jersey, 2012, ISBN 0130661023</li> </ul>				

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|  | <ul style="list-style-type: none"><li>• Kurose and Ross, Computer Networking: A Top-Down Approach, 6th edition, Prentice Hall, 2013, ISBN 0131365487.</li><li>• Tanenbaum, Computer Networks, 4th Edition, Prentice Hall, Inc., New Jersey, 2003, ISBN 0130661023</li></ul> |
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