HANDBOOK

BACHELOR OF INFORMATICS PROGRAM
DEPARTMENT OF INFORMATICS
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Module name	**Network Programming**
Module level	Undergraduate
Code	IF184602
Courses (if applicable)	**Network Programming**
Semester	6
Contact person	
Lecturer	**Tohari Ahmad, S.Kom, M.IT, Ph.D**
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; mandatory; 6th semester. 2. International undergraduate program; mandatory; 6th semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students
Workload	1. Lectures: 3 x 50 = 150 minutes (2 hours 30 minutes) per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks).
Requirements according to the examination	A student must have attended at least 80% of the lectures to sit in the exams.

regulations		
Mandatory prerequisites	Computer Networks	
	After completing this module, a student is expected to:	

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<tr><td rowspan="8">Learning outcomes and their corresponding PLOs</td><td>CO1 Students are able to understand and apply the concept of data transmission in network-based applications, by utilizing the TCP / UDP transport protocols.</td><td></td></tr>
<tr><td>CO2 Students are able to understand and apply application layer protocols, both general and specific in application programming.</td><td></td></tr>
<tr><td>CO3 Students are able to understand and apply the concept of concurrency in client-server communication programming in case studies.</td><td></td></tr>
<tr><td>CO4 Students are able to understand and apply the concepts of performance and capacity control to client-server communication models.</td><td></td></tr>
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<tr><td>Content</td><td colspan="2">Knowledge:
Mastering the concepts and principles of architecture, systems and the basics of computer networks based on logic systems.
Master the theoretical concepts and principles of network-based computing and the latest technologies related to it, in the fields of distributed computing and mobile computing, multimedia computing, high-performance computing and information and network security.
Mastering the principles of making an algorithm and various programming language concepts.
Specific Skill:
Able to apply computer architecture, operating system working principles to design, implement and manage network systems that have high performance, are safe, and efficient.
Able to apply network-based computing concepts, parallel computing, distributed computing to analyze and design computational problem-solving algorithms in various fields.
Able to design and analyze algorithms to solve problems effectively and efficiently based on strong programming principles, and be able to apply programming models that underlie various existing programming languages, and are able to choose a programming language to produce the appropriate application</td></tr>
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Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, whiteboard, websites, books (as references), etc.
Assessments and Evaluation	
Reading List	• W. Richard Stevens, Bill Fenner, Andrew M. Rudoff,"Unix Network Programming Vol.1 3rd Edition", Addision Wesley, 2003. • Nathan Yocom, John Turner, Keir Davis," The Definitive Guide to Linux Network Programming" ,Appress, 2004.Pustaka • Elliotte Rusty Harold," Java Network Programming 3rd Edition", O'Reilly Media, 2004. • Brandon Rhodes, John Goerzen, "Foundations of Python Network Programming", Appress, 2013.