HANDBOOK

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

Module name	**Operating System**
Module level	Undergraduate
Code	IF184402
Courses (if applicable)	**Operating System**
Semester	4
Contact person	**MH, BJ, HC, RM**
Lecturer	Ir. Muchammad Husni, M.Kom Bagus Jati S, PhD Henning Titi Ciptaningtyas, S.Kom, M.Kom Dr. Eng. Royyana Muslim I, S.Kom, M.Kom
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; mandatory; 4th semester. 2. International undergraduate program; mandatory; 4th semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students
Workload	1. Lectures: 4 sks x 50 = 200 minutes (3 hours 20 minutes) per week. 2. Exercises and Assignments: 4 x 60 = 240 minutes (4 hours) per week. 3. Private study: 4 x 60 = 240 minutes (4 hours) per week.
Credit points	4 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 Organization	
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:	
	CO1 Students are able to understand and apply the basic concepts of the operating system as a bridge between hardware and software.	
	CO2 Students are able to understand the process life cycle in the operating system and implement communication between processes in the operating system.	
	CO3 Students are able to understand and apply multi-process and multithreaded synchronization mechanisms.	
	CO4 Students are able to understand and apply the concept of memory management, several page replacement algorithms, paging mechanisms and segmentation.	
	CO5 Students are able to understand and apply several process scheduling algorithms.	
	CO6 Students are able to understand the connectedness of hardware I / O and software I / O	
	CO7 Students are able to understand and apply the File System (File System)	
	CO8 Students are able to understand the types of attacks and their security mechanisms on the operating system	
Content	Knowledge: • Mastering the concepts and principles of architecture, systems and the basics of computer networks based on logic systems Specific Skill: • Capable to apply computer architecture, operating system working principles to design, implement and manage network systems that have high performance, are safe, and efficient.	
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	William Stallings, Operating Systems: Internals and Design Principles, Prenctice Hall.