

**UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE  
DEPARTMENT OF COMPUTER ENGINEERING  
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY**

Module name	<b>Operating Systems</b>	
Module level	Undergraduate	
Code	EC184304	
Courses (if applicable)	Operating Systems	
Semester	3 / Fall (Ganjil)	
Contact person	Dr. Supeno Mardi S.N., ST. MT.	
Lecturer	Dr. Supeno Mardi S.N., ST. MT.	
Language	Indonesia	
Relation to curriculum	Undergraduate degree program, mandatory, 3 <sup>rd</sup> semester.	
Type of teaching, contact hours	Lecture, < 60 students, 170 Minutes * 3 SKS	
Workload	<ol style="list-style-type: none"> <li>1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week.</li> <li>2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week.</li> <li>3. Private study: 3 x 60 = 180 minutes (3 hours) per week.</li> </ol>	
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.	
Mandatory prerequisites		
Learning outcomes and their corresponding PLOs	<p>CLO-1 Students are able to recognize and explain the operating system and its elements and structure.</p> <p>CLO-2 Students are able to explain scheduling techniques in the operating system.</p> <p>CLO-3 Students are able to explain the phenomenon of concurrency, synchronization and deadlock.</p> <p>CLO-4 Students are able to explain about memory management.</p> <p>CLO-5 Students are able to explain about the system files.</p>	<p>PLO-3 PLO-4</p> <p>PLO-3 PLO-4</p> <p>PLO-3 PLO-4</p> <p>PLO-3 PLO-4</p> <p>PLO-3 PLO-4</p>

	<p>CLO-6 Students are able to explain the security stages in the operating system.</p> <p>CLO-7 Students are able to explain the process scheduling model in a distributed system.</p>	<p>PLO-5 PLO-6</p> <p>PLO-5 PLO-6</p>
Content	<p>In this course, students will learn how the operating system works and the elements that make up an operating system. Topics include operating system history, operating system structure, scheduling, threads &amp; concurrency, synchronization, deadlock, memory management, I/O interfaces, disks &amp; filesystems, operating system security, and an introduction to distributed systems.</p>	
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> <li>• In-class exercises</li> <li>• Quiz 1 and 2</li> <li>• Assignment 1, 2, 3</li> <li>• Mid-term examination</li> <li>• Final examination</li> </ul>	
Media employed	<p>LCD, whiteboard, websites (myITS Classroom).</p>	
Assessments and Evaluation	<p>CO-1: Question no 1 in midterm exam (10%)  CO-2: Question no 2 in midterm exam (10%)  CO-3: Question no 3 in midterm exam (10%), quiz 1 (5%)  CO-4: Assignment 1 (5%), question no 4 in midterm exam (10%), Quiz 2 (5%)  CO-5: Question no 1 in final exam (10%), question no 2 in final exam (10%)  CO-6: Assignment 2 (5%), question no 3 in final exam (10%)  CO-7: Assignment 3 (5%), question no 4 in final exam (5%)</p>	
Reading List	<ol style="list-style-type: none"> <li>1. G Andrew S. Tanenbaum, "Modern Operating Systems", Third Edition.</li> <li>2. William-stallings, "Operating Systems: Internals and design principles", 6th-edition, Prentice-Hall.</li> </ol>	