

Module designation	IF260 Operating System		
Semester(s) in which the module is taught	4		
Person responsible for the module	I Made Astawa		
Language	English & Indonesian		
Relation to curriculum	Compulsory		
Teaching methods	Lecture, Demonstration		
Workload (incl. contact hours, self-study hours)	<p>Total workload: 136.08 hours</p> <p>Theory</p> <ul style="list-style-type: none"> - 23.34 hours of synchronous lecture. - 56.04 hours of Self-study and assignments - 11.34 hours related to exam and self study <p>Lab</p> <ul style="list-style-type: none"> - 23.35 hours of lab module (and in-class assistance) - 16.34 hours of self-lab and assignments - 5.67 hours related to exam and self study 		
Credit points	3 SKS (5.04 ECTS)		
Required and recommended prerequisites for joining the module	<p>Required:</p> <ul style="list-style-type: none"> - CE332 Computer Architecture & Organization 		
Module objectives/intended learning outcomes	<p>Course Learning outcome</p> <p>Students can outline the relation between hardware and operating systems to apply the problem solving principles in operating systems.</p>	<p>Related ELOs</p>	
		<p>ELO</p> <p>J</p>	<p>Performance Indicator</p> <p>Understand the principles of computer system elements and their inner workings to solve engineering problems.</p>
Content	<p>This course covers the basics of modern operating systems internal operations. It includes process and threads, interprocess communications, CPU scheduling, deadlock memory management, file systems, multiprocessors, and security. The lecture course is supplemented with lab sessions using UNIX-based operating systems.</p> <p>Specifically, this course contain these topics:</p> <ol style="list-style-type: none"> 1. Introduction to operating systems 2. Introduction to hardware 3. Basic concepts of operating system 4. Processes dan threads 		

	<ul style="list-style-type: none"> 5. Interprocess communications 6. CPU scheduling 7. Deadlock 8. Memory management 9. Input/Output 10. Organizations of file systems and directories 11. Multiprocessor systems 12. Security systems
Examination forms	Written test, Project
Study and examination requirements	<p>Total score ≥ 55 must be satisfied.</p> <p>The total score is the weighted average of the assignments (30%), the midterm exam (30%), and the final exam (40%).</p>
Reading list	<ul style="list-style-type: none"> 1. Andrew S. Tanenbaum, Herbert Bos. Modern Operating Systems. Fourth Edition, 2015.