

MODULE HANDBOOK

Module Name	Computer System Organization	
Module level, if applicable	Undergraduate	
Code, if applicable	02143142041	
Subtitle, if applicable	-	
Courses, if applicable	-	
Semester(s) in which the module is taught	5	
Person responsible for the module	Nurcahya Pradana Taufik Prakisyia (@staff.uns.ac.id)	
Lecturer	Nurcahya Pradana Taufik Prakisyia	
Language	Indonesian and English	
Relation to curriculum	Undergraduate degree program, compulsory course in 5th semester	
Type of teaching, contact hours	Undergraduate degree program, < 40 students	
Workload	Lectures: 2 x 50 = 100 minutes (1 hours 40 minutes) per week Exercise and Assignments: 2 x 60 = 120 minutes (2 hours) per week Private study: 2 x 60 = 120 minutes (2 hours) per week	
Credit points	2 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		
Module objectives/intended learning outcomes	After completing this module, a student is expected to:	
	No	Course Learning Outcome
		PLO
	1	Able to explain the differences in the architecture and organization of computer systems
	2	Able to understand architectural and organizational concepts of computer systems, how processors work, memory, registers, system buses, control units, assembly language, instructions. addressing and computer arithmetic.
	3	Able to analyze the influence of hardware and software elements to support computer system performance
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Content	This Computer Architecture and Organization course discusses the concept of the structure of the main functions in a computer system and the workings of the bus system, internal, external memory, and control units on a computer system. ● The concept of the structure and function of the main computer ● Introduction to Computer Organization ● Bus System ● Memory ● Storage Arrays ● Operation Support ● Input/Input and Output/Output ● Instruction Set ● Addressing Mode ● CPU Structure and Function ● The concept of the Bus system ● Data storage concept, internal/external memory ● Control unit concept		
Study and examination requirements and forms of Examination	Forms of examination:		
	No	Course Learning Outcome	PLO
	1	Able to explain the differences in the architecture and organization of computer systems	Essay Test (20%)
	2	Able to understand architectural and organizational concepts of computer systems, how processors work, memory, registers, system buses, control units, assembly language, instructions. addressing and computer arithmetic.	Essay Test (40%)
	3	Able to analyze the influence of hardware and software elements to support computer system performance	Essay Test(40%)
Media employed	LCD, Whiteboard, PowerPoint Slide Presentation, Practical Guidance Video, websites, etc.		
Reading list	1. Andrew S. Tanenbaum, Structured Computer Organization Fifth Edition, Pearson Prentice Hall 2005 2. Willam Stallings, Organisasi & Arsitektur Komputer Edisi keenam, Prentice Hall 2003 3. Syahrul, Organisasi dan Arsitektur Komputer, Andi offset 2010		