

MODULE HANDBOOK

Module Name	Algorithm and Data Structure	
Module level, if applicable	Undergraduate	
Code, if applicable	02143242012	
Subtitle, if applicable	-	
Courses, if applicable	-	
Semester(s) in which the module is taught	2	
Person responsible for the module	Rosihan Ari Yuana, S.Si, M.Kom	
Lecturer	Rosihan Ari Yuana, S.Si, M.Kom	
Language	Indonesian and English	
Relation to curriculum	Undergraduate degree program, compulsory course in 2nd 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	Students are able to mention and explain how to present algorithms
	2	Students are able to analyze the efficiency of an algorithm and compare it with other algorithms
	3	Students are able to explain various sorting algorithms and analyze their efficiency
	4	Students are able to explain various data search algorithms and analyze their efficiency
	5	Students are able to explain and apply recursive algorithms to solve computational problems

Content	This course contains material on compiling correct algorithms in various forms, discussing special form data structures (stack and queue) and dynamic data structures in programming and their implementation, as well as discussing several sorting algorithms, searching data.		
Study and examination requirements and forms of Examination	Forms of examination:		
	No	Course Learning Outcome	Examination
	1	Students are able to mention and explain how to present algorithms	Structured Task (5%) Presentation (5%) Written Test (10%)
	2	Students are able to analyze the efficiency of an algorithm and compare it with other algorithms	Structured Task (5%) Presentation (5%) Written Test (10%)
	3	Students are able to explain various sorting algorithms and analyze their efficiency	Structured Task (5%) Presentation (5%) Written Test (10%)
	4	Students are able to explain various data search algorithms and analyze their efficiency	Structured Task (5%) Presentation (5%) Written Test (10%)
	5	Students are able to explain and apply recursive algorithms to solve computational problems	Structured Task (5%) Presentation (5%) Written Test (10%)
Media employed	LCD, Whiteboard, Power Point Slide Presentation, Practical Guidance Video, websites, etc.		
Reading list	1. <i>Introduction to Design and Analysis Algorithm</i> , Pearson Addison-Wesley., By Anany Levitin, 2007 2. <i>Bertualang dengan STRUKTUR DATA di Planet Pascal</i> , By Sanjaya, Dwi, 2005		