MODULE HANDBOOK

Master Program in Computer Science Department of Computer Science and Electronics Faculty of Mathematics and Natural Sciences Universitas Gadjah Mada

Electronics

Module name	Electronics						
Module level	Master						
Code	MII 629	MII 6292					
Courses (if	Electronics (Elektronika)						
applicable)							
Semester	Even (Genap)						
Contact person	Dr. Yohanes Suyanto, M.Kom						
_	Dr. Danang Lelono, S.Si., M.T.						
Lecturer	Dr. Yohanes Suyanto, M.Kom						
	Dr. Danang Lelono, S.Si., M.T.						
Language	Indonesia						
Relation to	Master	Master program, elective, 2 nd semester					
curriculum							
Type of teaching,	Master	Master program: lectures, <17 student					
contact hours							
Workload	1. Lectures: $3 \times 50 = 150$ minutes (2.5 hours) per week						
	2. Exercises and Assignments: $3 \times 60 = 180$ minutes (3 hours) per week						
	3. Private study: $3 \times 60 = 180$ minutes (3 hours) per week						
Credit points	3 credit points (SKS)						
Requirements	A student must have attended at least 75% of the lectures to sit in the						
according to the	exams						
examination							
regulations							
Recommended	-						
prerequisites							
Learning outcomes	After completing this module, a student is expected to:						
and their							
corresponding PLOs							
	CO	Description	Supported PLO				
	CO-1	Students are able to analyze the basic	PLO3				
		concepts of Electronics					
	CO-2	Students are able to analyze and design	PLO4				
		electronics	1 LUT				
	CO-3	Students are able to apply the Electronic	PLO5				
		circuit					

CO-4	Students are able to develop and think logically and analytically to solve PLO6 problems faced professionally						
CO-5	Students are ab	PLO8					
CO-6	the requiremer components to	PLO9					
Electronics is the driving force of industrial tools, computer and communication instruments, medical instruments, household appliances and so on. The beginning of the last decade, there has been a massive revolution in the field of computer and communication technology and the explosion of a variety of user-friendly applications and ease of communication. The progress of computer and communication technology can be utilized in the world of education, especially in the framework of improving the teaching and learning process. For this reason, in electronics lecture, broadly discuss about analog electronics is needed to provide the ability to think in the field of analog electronics, so that by looking at the newly known electronic circuits, one can immediately think of the functions of each component in the circuit. Whereas digital electronics starting from the introduction of combinational AND, OR and NOT basic gates developed into a sequential flip-flop-based can ultimately be used as a provision for analyzing and designing digital circuits of enumerators, sliding registers, state diagrams, state reductions, and state determination. Mid-term examination Final examination Assignments							
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CO	Methods	PLO	Type	Percentage	Total		
CO-1	midterm exam	PLO3	Summative	6%	12%		
	final exam	PLO3	Summative	6%	12/0		
	Problem 2 of midterm exam	PLO4	Summative	6%	22%		
CO-2	Assignment 1	PLO4	Formative	5%			
	final exam	PLO4	Summative	6%			
	Assignment 5	PLO4	Formative	5%			
CO-3	Problem 3 of midterm exam	PLO5	Summative	6%	22%		
	CO-5 CO-6 Electror instrum beginnin comput friendly communin the For this is needed by looking the function of the function	CO-4 logically and an problems faced Students are about and analytically problems CO-5 Students are about the requirement components to electronic circulary the requirement components to electronic sist the driving form instruments, medical insubeginning of the last decade computer and communications and ecommunication technologing in the framework of For this reason, in electronic is needed to provide the aby looking at the newly know the functions of each constarting from the introduct developed into a sequentiary for analyzing and designing diagrams, state reductions Mid-term examination Final examination Final examination Assignments CO Assessment Methods Problem 1 of midterm examination Final examination Final examination Assignment 1 of final examination Final examin	CO-4 logically and analytically to so problems faced professionally Students are able to evaluate and analytically to solve elect problems CO-6 Students are able and capable the requirements of electron components to be implement electronic circuit design Electronics is the driving force of industriatinstruments, medical instruments, how beginning of the last decade, there has be computer and communication technology friendly applications and ease of communication technology can be utilized in the framework of improving the framework of improving the framework of improving the starting from the newly known electronic the functions of each component in the starting from the introduction of combined developed into a sequential flip-flop-base for analyzing and designing digital circuits diagrams, state reductions, and state determination Assignments LCD, blackboard, websites, and books Methods CO Assessment Supported PLO3 Problem 1 of midterm exam Problem 1 of midterm exam Problem 1 of midterm exam Problem 2 of midterm exam Problem 2 of midterm exam Problem 2 of final exam Problem 2 of final exam Assignment 1 PLO4 Problem 2 of final exam Assignment 5 PLO4 Problem 3 of PLO5	CO-4 logically and analytically to solve problems faced professionally Students are able to evaluate logically and analytically to solve electronic circuit problems Students are able and capable to analyze the requirements of electronic components to be implemented in electronic circuit design Electronics is the driving force of industrial tools, comput instruments, medical instruments, household appliate beginning of the last decade, there has been a massive recomputer and communication technology and the explosifiendly applications and ease of communication. The procommunication technology can be utilized in the world in the framework of improving the teaching at solve the functions of each component in the field of analysing at the newly known electronic circuits, one can the functions of each component in the circuit. Whe starting from the introduction of combinational AND, of developed into a sequential flip-flop-based can ultimatel for analyzing and designing digital circuits of enumerators diagrams, state reductions, and state determination. Mid-term examination Final examination Assignments LCD, blackboard, websites, and books CO Assessment Supported PLO3 Problem 1 of midterm exam Problem 1 of final exam Problem 2 of midterm exam Problem 2 of midterm exam Assignment 1 PLO4 Problem 2 of final exam Assignment 5 PLO4 Promative CO-3 Problem 3 of PLO5 Summative	CO-4 logically and analytically to solve problems faced professionally Students are able to evaluate logically and analytically to solve electronic circuit problems Students are able and capable to analyze the requirements of electronic components to be implemented in electronic circuit design Electronics is the driving force of industrial tools, computer and commu instruments, medical instruments, household appliances and so obeginning of the last decade, there has been a massive revolution in the computer and communication technology and the explosion of a variety friendly applications and ease of communication. The progress of computer of the last decade, there has been a massive revolution in the computer and communication technology and the explosion of a variety friendly applications and ease of communication. 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		Assignment 2	PLO5	Formative					
		Problem 3 of final exam	PLO5	Summative	6%				
		Assignment 6	PLO5	Formative	5%	1			
	CO-4	Problem 4 of midterm exam	PLO6	Summative	6%	- 22%			
		Assignment 3	PLO6	Formative	5%				
		Problem 4 of final exam	PLO6	Summative	6%				
		Assignment 7	PLO6	Formative	5%				
	CO-5	Assignment 4	PLO8	Formative	5%	10%			
	CO-3	Assignment 8	PLO8	Formative	5%				
	CO-6	Problem 5 of midterm exam	PLO9	Summative	6%	120/			
		Problem 5 of final exam	PLO9	Summative	6%	12%			
Reading List	• Ma	lvino, Albert &	Bates, David	J. 2016: Elect	tronic Princip	les, 8th			
	Edition, McGraw-Hill, New York.								
	• Shjiva, Sajjan G., 2010, Introduction to Logic Design, Third Edition								
Alabama									
	• Schultz, Mitchel E. 2007: Grob's Basic Electronics, 10th Edition, McGraw-Hill, Newyork								
	• Bis	Bishop, Owen, 2006: <i>Electronics</i> , 2 nd Edition, Elsevier, Tokyo							