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

Artificial Intelligence

Module name	**Kecerdasan Buatan**	
Module level	Master	
Code	MII5051	
Courses (if applicable)	**Kecerdasan Buatan (Artificial Intelligence)**	
Semester	Odd (ganjil)	
Contact person	Prof. Sri Hartati, M.Sc., Ph.D	
Lecturer	Prof. Sri Hartati, M.Sc., Ph.D	
Language	Indonesia	
Relation to curriculum	Master Program, compulsary, first semester.	
Type of teaching, contact hours	Magister degree program: lectures, < 30 students,	
Workload	1. LecturerL 3 x 50 = 150 minutes (2,5 hours) per week.	
	2. Exercises and Assignment: 3 x 60 = 180 minutes (3 hours) per week.	
	3. Private study: 3 x 60 = 180 180 minutes (3 hours) per week.	
Credit points	3 (credit points) SKS.	
Requirements according to the ujianination regulations	A student must have at least 75% of lecture to sit the exams.	
Recommended prerequisites	-	
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:	

CO	Description	Supported PLO
CO-1	Students are able to explain intelligent agents, description of PEAS and PAGE and are able to apply intelligent agent theory to solve real problems	PLO-2
CO-2	Students are able to formulate solutions with searching approach and are able to apply the search methods to solve it and are finally able to analyze the search methods in finding the solution	PLO-5 PLO-4
CO-3	Students are able to explain the method of knowledge representation towards known information and are able to apply and analyze how to represent knowledge for real problems.	PLO-2 PLO-5
CO-4	Students are able to explain the inference engine mechanism and apply it for real problems	PLO-3
CO-5	Students are able to explain the definition of NLP, NLP components and NLP applications and apply it for real problem	PLO-3 PLO-5
CO-6	Students are able to explain the definition of pattern recognition and pattern recognition applications and apply it for real problem	PLO-3 PLO-4

Content	In this lecture, students are given knowledge of artificial intelligence so they are able to analyze and design simple intelligent systems including documenting them in written form.

	As the outline, this course discusses the concepts, techniques and applications of artificial intelligence. The material discussed includes the Agent Definition; Various Agents; Description of PEAS; Description of PAGE; Definition of Knowledge; Logic; Rule; Frame; Semantic Network; Script; Informed search; Uninformed search; Inference engine. Definition of NLP; NLP component; NLP Application, Definition of Pattern Recognition; Pattern Recognition Component; Pattern Recognition Application.					
Study and ujianination requirements and forms of ujianination	Mid-terms examination and Final examination.					
Media employed	LCD, papan tulis, situs web, buku (sebagai referensi), dll.					
Asessments and Evaluation	CO	Metode	PLO yang didukung	Jenis	Prosentase	Jumlah
	CO-1	Soal UTS no.1	PLO-2	Sumatif	10%	10%
	CO-2	Soal UTS no. 2	PLO-5	Sumatif	10%	15%
		Tugas ke 1	PLO-4	Formatif	5%	
	CO-3	Soal UTS no. 3	PLO-2	Sumatif	15%	15%
		Tugas ke 2	PLO-5	Formatif	5%	
	CO-4	Soal UAS no. 1	PLO-3	Sumatif	15%	15%
	CO-5	Soal UAS no. 2	PLO-5	Sumatif	15%	20%
		Tugas ke 3	PLO-3	Formatif	5%	
	CO-6	Soal UAS no. 3	PLO-3	Sumatif	15%	20%
		Tugas ke 4	PLO-4	Formatif	5%	
Reading List	1	Russell, S. and Novig, P., *Artificial Intelligence: A Modern Approach*, 3rd Edition, Prentice Hall, 2009.				
	2	George F. Luger, *Artificial Intelligence: Structures and Strategies for Complex Problem Solving*, 6th Edition, Addison-Willy, ,2008.				
	3	Michael Negnivitsky, *Artificial Intelligence: A Guide to Expert Systems*, 2nd Edition, Addison Willy, 2004.				
	4	W. Firebaugh, *Artificial Intelligence: A Knowledge-Based Approach*, PWS-Kent Publishing Company, 2009.				