ELECTRICAL ENGINEERING DEPARTMENT
ENGINEERING FACULTY
UNIVERSITY OF MATARAM

MODULE HANDBOOK DESCRIPTION

Module designation	*Artificial Intelligence*	
Code	*FBB0004*	
Semester(s) in which the module is taught	*6 / third year*	
Person responsible for the module	*A.S.Rachman, ST., MT.*	
Language	*Indonesian*	
Relation to curriculum	*Free elective for Electronics engineering*	
Teaching methods	*lectures, small group discussion, project & case base method.*	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: • Lectures: 3 x 50 minutes • Exercises and Assignments: 3 x 60 minutes • Self-study: 3 x 60 minutes. Total study hours = 8 hours 30 minutes/week.	
Credit points	*2 SKS (~3.2 ECTS)*	
Required and recommended prerequisites for joining the module	-	
Module objectives/ intended learning outcomes	*1. Students are able to differentiate analytical methods using artificial intelligence.*	*PLO3 (H)*
	2. Students are able to plan the choice of appropriate artificial intelligence techniques to solve simple engineering problems.	*PLO4 (M)*
	3. Students are able to implement and evaluate artificial intelligence methods and use them to solve problems in electrical engineering.	*PLO5 (L) , PLO9 (L)*
Content	*1. Kecerdasan buatan;* *2. artificial neural network (ANN);* *3. fuzzy logic;* *4. genetic algorithm (GA);* *5. ant colony optimization (ACO);* *6. support vector machine (SVM);* *7. deep learning*	

Examination forms	- *Case based* - *Project based*
Study and examination requirements	*The final grade in the module is composed of:* *a. Case I assessment: 20%* *b. Case II assessment: 20%* *c. Project based: 60%* *Students must have a final grade of 65% or higher to pass*
Reading list	1. *Stuart J. Russel and Peter Norvig 2012, Artificial Intelligence A Modern Approach, Prentice Hall.* 2. *David Poole and Alan Mackworth, 2010, Artificial Intelligence: Foundations of Computational Agents, Cambridge University Press, 2010.* 3. *Nils J. Nilsson, 2010, The Quest of Artificial Intelligence, , Cambridge University Press.* 4. *Timothy J. Ross, 2012, Fuzzy Logic with Engineering Applications, , John Wiley & Sons, 3rd Edition.* 5. *S.N. Sivanandam, S.N. Deepa, 2009, Introduction to Genetic Algorithms, , Springer, 2008*