



MODULE HANDBOOK DESCRIPTION

Module designation	<i>Artificial Intelligence</i>	
Code	<i>FBD3211</i>	
Semester(s) in which the module is taught	<i>6 / third year</i>	
Person responsible for the module	<i>A.S.Rachman, ST., MT.</i>	
Language	<i>Indonesian</i>	
Relation to curriculum	<i>Elective for Computer Engineering</i>	
Teaching methods	<i>lectures, small group discussion, project & case base method.</i>	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: <ul style="list-style-type: none"> • 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	<i>2 SKS (~3.2 ECTS)</i>	
Required and recommended prerequisites for joining the module	-	
Module objectives/intended learning outcomes	<i>1. Students are able to differentiate analytical methods using artificial intelligence.</i>	<i>PLO3 (H)</i>
	<i>2. Students are able to plan the choice of appropriate artificial intelligence techniques to solve simple engineering problems.</i>	<i>PLO4 (M)</i>
	<i>3. Students are able to implement and evaluate artificial intelligence methods and use them to solve problems in electrical engineering.</i>	<i>PLO5 (L), PLO9 (L)</i>
Content	<ol style="list-style-type: none"> <i>1. Kecerdasan buatan;</i> <i>2. artificial neural network (ANN);</i> <i>3. fuzzy logic;</i> <i>4. genetic algorithm (GA);</i> <i>5. ant colony optimization (ACO);</i> <i>6. support vector machine (SVM);</i> <i>7. deep learning</i> 	

Examination forms	<ul style="list-style-type: none"> - <i>Case based</i> - <i>Project based</i>
Study and examination requirements	<p><i>The final grade in the module is composed of:</i></p> <ul style="list-style-type: none"> <i>a. Case I assessment: 20%</i> <i>b. Case II assessment: 20%</i> <i>c. Project based: 60%</i> <p><i>Students must have a final grade of 65% or higher to pass</i></p>
Reading list	<ol style="list-style-type: none"> <i>1. Stuart J. Russel and Peter Norvig 2012, Artificial Intelligence A Modern Approach, Prentice Hall.</i> <i>2. David Poole and Alan Mackworth, 2010, Artificial Intelligence: Foundations of Computational Agents, Cambridge University Press, 2010.</i> <i>3. Nils J. Nilsson, 2010, The Quest of Artificial Intelligence, , Cambridge University Press.</i> <i>4. Timothy J. Ross, 2012, Fuzzy Logic with Engineering Applications, , John Wiley & Sons, 3rd Edition.</i> <i>5. S.N. Sivanandam, S.N. Deepa, 2009, Introduction to Genetic Algorithms, , Springer, 2008</i>