MODULE HANDBOOK DESCRIPTION

Module designation	Pattern Recognition	
Code	FBD0001	
Semester(s) in which the module is taught	6 / third year	
Person responsible for the module	Cipta Ramadhani, S.T., M.Eng	
Language	Indonesian/English	
Relation to curriculum	Free elective for Computer Engineering	
Teaching methods	Lectures, Small Group Discussion, Case Base Method.	
Workload (incl. contact hours, self-study hours)	Contact Hours every week, each week of the 16 weeks/semester: (per week includes) • 2 x 50 minutes : Lecture • 2 x 60 minutes : Exercise and Assignment • 2 x 60 minutes : Self-learning Total study hours = 5 hours 40 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 understand the concept and application of Pattern Recognition through analysis and design. 2. Students are able to understand both supervised and unsupervised learning of pattern recognition through analysis and design. 3. Students are able to understand and analyze the concept Distance Measurement	PLO3 and PLO4
	4. Students are able to evaluate and preprocess data through analysis. 5. Students are able to develop feature selection techniques through analysis. 6. Students are able to create feature extraction methods through analysis.	PLO 3

	7. Students are encouraged to engage in long-life learning by designing projects on pattern recognition, which can be done throughout their lives.	PLO9
Content	The concept and application of pattern recognition, supervised and unsupervised learning of pattern recognition, preprocessing data, feature selection, feature extraction, distance measurement, and design project of pattern recognition.	
Examination forms	- Multiple choice examinations and Essay. - Presentation case study.	
Study and examination requirements	The final grade in the module is composed of: a. Per-meeting score = 5 % x 16 meeting = 80%. b. Exercise Report/ Homework/Portofolio = 20%. Students must have a final grade of 65% or higher to pass	
Reading list	1. J.P. Marques de Sa. Pattern Recognition: Concepts, Methods, and Applications. Springer. 2001. 2. R. O. Duda, P. E. Hart, D. G. Stork. Pattern Classification. Willey. 2001. 3. Christopher M. Bishop. Pattern Recognition and Machine Learning. Springer. 2006. 4. S. Theodoridis, K. Koutroumbas. Introduction to Pattern Recognition 4th edition. Elsevier. 2009.	