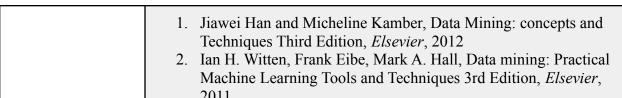
## **Module Description**

Module name	Data Mining
Module level, if applicable	Bachelor of Informatics
Code, if applicable	312D4224
Subtitle, if applicable	-
Course, if applicable	
Semester(s) in which the module is taught	6 <sup>th</sup>
Person responsible for the module	Dr. Indrabayu., ST., MT., M.Bus.Sys
Lecturer	Dr. Indrabayu., ST., MT., M.Bus.Sys Dr. Ir. Ingrid Nurtanio, M.T Elly Warni, ST., MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course for the Cloud Computing and Big Data research group and is offered in the 6 <sup>th</sup> semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [case study].  Teaching forms: [lecture], [tutorial], [practicum].  CH: 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 181.33 hours in one semester, which consist of: - 53.33 hours for lecture, - 64 hours for structured assignments, - 64 hours for private study.
Credit points	4 credit points (equivalent with 6.8 ECTS)

Requirements according to the examination regulations	Students must have attended all minimum 80% of classes and submitted all class assignments that are scheduled before the final tests.
Recommended prerequisites	Artificial Intelligence
Module objectives/intended learning outcomes	After completing the course, Students are able:
	Intended Learning Outcome (ILO):
	<b>ILO 2 :</b> Have the knowledge of advanced topics in Informatics specific
	fields of either Artificial Intelligence, Data Science, Computer Network,
	Cloud Computing, or Internet of Things.
	ILO 3: Apply the knowledge of computing and other related
	disciplines to analyze and identify solutions for any computing-based
	problem.
	<b>ILO 7 :</b> Communicate their ideas in a convincing and effective manner,
	either in written or orally, to propose solutions.
	Course Learning Objectives (CLO):
	After attending the Data Mining Course for 1 (one) semester, students
	have the knowledge of data mining, architecture, models, processes of
	data mining, preprocess data and linear and non-linear regression
	algorithms, classification, clustering, association and apply the
	knowledge to complete data mining case studies.
	CLO 1: Students have the knowledge of data mining, architecture,
	models, processes of data mining, preprocess data and linear and
	non-linear regression algorithms, classification, clustering and
	association.
	CLO 2: Students can apply the knowledge of data mining case studies
	(regression, classification, clustering, association).

	CLO 3: Students present data mining case studies and understand new
	directions of research and conduct data mining research.
Content	Students will learn about:  1. The basic concept of Data Mining 2. Data Mining Architecture, Model and Process 3. Data Preparation 4. Linear and non-linear regression 5. Classification 6. Clustering 7. Association 8. Data Mining Case Study
Forms of Assessment	Assessment techniques: [observation], [participation], [written test].  Assessment forms: [quiz], [midterm exam], [assignment], [presentation].  Quiz = 15%, Midterm exam = 25%, Assignment = 30%, Presentation = 30%  CLO 1 => ILO 2: 40% (Quiz and Mid term exam: written test)  CLO 2 => ILO 3: 30% (Assignment: participation)  CLO 3 => ILO 7: 30% (Presentation: observation)
Study and examination requirements and forms of examination	<ul> <li>Study and examination requirements: <ul> <li>Students must attend 15 minutes before the class starts.</li> <li>Students must switch off all electronic devices.</li> <li>Students must inform the lecturer if they will not attend the class due to sickness, etc.</li> <li>Students must submit all class assignments before the deadline.</li> <li>Students must attend the exam to get a final grade.</li> </ul> </li> <li>Form of examination: <ul> <li>Written test</li> </ul> </li> </ul>
Media employed	Video conference, slide presentation, Learning Management System (LMS)
Reading list	Main:



3. Daniel T. Larose, Discovering Knowledge in Data: an Introduction to Data Mining, *John Wiley & Sons*, 2005