Module Description

Module name	Specific Topic in Big Data
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12143903
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	7th
Person responsible for the module	Dr. Amil Ahmad Ilham., ST., M.IT
Lecturer	1. Dr. Amil Ahmad Ilham., ST., M.IT 2. Iqra Aswad, S.T., M.T.
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is an elective course and offered in the 7th semester.
Type of teaching, contact hours	Teaching methods: [case study], [problem-based learning]. Teaching forms: [lecture], [tutorial] CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 136.00 hours in one semester, which consist of: - 40.00 hours for lecture, - 48.00 hours for structured assignments, - 48.00 hours for private study
Credit points	3 credit points (equivalent with 5.1 ECTS)
Requirements	Students have participated in at least 80% of the learning activities

according to the examination regulations	(Academic Regulations, Chapter VII)
Recommended prerequisites	-
Module objectives/intended learning outcomes	**Intended Learning Outcomes (ILO):** After completing this course, students are able to: **ILO 1:** Have the knowledge of fundamental in Computing Science that includes basic theory and concepts of computer science, Mathematics and Statistics, Programming Algorithm, Software Engineering, Information Management and Digital Resilience, also the advance topics 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. **ILO 7:** Perform a logical systematic procedure to solve problems, then communicate their ideas in a convincing and effective manner, either in written or orally, to propose solutions. **Course Learning Objective (CLO):** After completing this course, students can understand the concepts of descriptive analytics, predictive analytics and prescriptive analytics, and apply these concepts to propose solutions in Big Data cases. ILO 1 => CLO 1: Students can understand the concepts of descriptive analytics, predictive analytics and prescriptive analytics. ILO 3 => CLO 2: Students can apply multiple types of analytics in Big Data cases to gain knowledge from datasets. ILO 7 => CLO 3: Students can present the results of data analysis in a convincing and effective manner, either in written or orally.
Content	Students will learn about : 1. Managing Big Data 2. Data Acquisition and Preparation 3. Analyzing Data 4. Model Evaluation

	5. Scaling Data Analytics
Forms of Assessment	Assessment techniques: [observation], [performance], [written test]. Assessment forms: [quiz], [final term exam], [assignment], [presentation]. Quiz = 10%, Final term exam = 20%, Assignment = 50%, Presentation = 20% CLO 1 => ILO 1: 30% (Quiz and Final term exam: written test) CLO 2 => ILO 3: 50% (Assignment: performance) CLO 3 => ILO 7: 20% (Presentation: observation)
Study and examination requirements and forms of examination	**Study and examination requirements:** - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get a final grade. **Form of examination:** Written test
Media employed	Video conference, Slide presentation, Learning Management System (LMS).
Reading list	**Main :** 1. Danish Haroon, 2017, Python Machine Learning Case Studies, Apress, ISBN-13 (pbk): 978-1-4842-2822-7