

MODULE HANDBOOK
Master Program in Computer Science
Department of Computer Science and Electronics
Faculty of Mathematics and Natural Sciences
Universitas Gadjah Mada

Big Data Analysis

Module name	Big Data Analysis		
Module level	Master		
Code	MII 6838		
Courses (if applicable)	Big Data Analysis (Analisa Big Data)		
Semester	Even (Genap)		
Contact person	Dr. Azhari SN, MT. Dr. Mardhani Riasetiawan, MT.		
Lecturer	Dr. Azhari SN, MT. Dr. Mardhani Riasetiawan, MT.		
Language	Indonesia		
Relation to curriculum	Master program, elective, 2 nd semester		
Type of teaching, contact hours	Master program : lectures, 12 student (class A) and 9 student (class B)		
Workload	1. Lectures: 3×50 = 150 minutes (2.5 hours) per week 2. Exercises and Assignments: 3×60 = 180 minutes (3 hours) per week 3. Private study: 3×60 = 180 minutes (3 hours) per week		
Credit points	3 credit points (SKS)		
Requirements according to the examination regulations	-		
Recommended prerequisites	-		
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:		
	CO	Description	
	Supported PLO		
	CO-1	Able to define the characteristics and understanding of big data.	PLO2
	CO-2	Able to understand the concept of big data technology	PLO3
	CO-3	Able to understand and use big data technology for data processing	PLO4
CO-4	Able to implement big data analysis algorithms	PLO4	
CO-5	Able to implement data visualization and processing results	PLO5	
Content	The course of Big Data Analysis introduces students to the technologies and		

	algorithms used to process and analyze large data. This course will introduce students to the characteristics, processing technology and analysis of Big Data. Some Big Data processing algorithms will also be presented along with their implementation. The course is presented with structure and subject matter of Big Data, Big Data Ecosystem, Processing, Algorithm on Big Data, Data Visualization and Assignment
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, blackboard, websites, and e-learning.
Assessments and Evaluation	LO1: Task 1 (2.5%) and Problem 1 in MidSem Test (5%) LO2: Problem 2 in MidSem (5%), Problem 3 in MidSem (10%), Problem 4 in MidSem (10%) LO3 : Task 2 (2.5%), Task 3(2.5%), and Task 4 (2.5%). LO4 : Problem 1 in FinalTest (10%), Problem 2 in FinalTest (10%), Problem 3 in FinalTest (10%) LO5 : Problem 4 in FinalTest (5%), and Task 6 (5%).
Reading List	WA: Leskovec, J., Rajaraman, A., Ullman, J.D., 2014, <i>Mining Massive Datasets</i> , Cambridge University Press. AA: Big Data Administrator Module, Kelompok Kerja Big Data UGM. 2016 AB: Karau, Konwinski, Wendell, dan Zaharia, 2015, <i>Learning Spark</i> , O'Reilly AC: Data Analytics: Practical Guide to Leveraging the Power of Algorithms, Data Science, Data Mining, Statistics, Big Data, and Predictive Analysis to Improve Business, Work, and Life, March 10, 2017, <u>Arthur Zhang</u>