



Universitas Brawijaya
Faculty of Mathematics and Natural Sciences
Department of Statistics / Bachelor Statistics Study Programme

Module Handbook

Module Name:	Database (MAS62131)	
Module Level:	Bachelor	
Abbreviation, if applicable:	-	
Sub-heading, if applicable:	-	
Courses included in the module, if applicable:	-	
Semester/term:	4th / Second Year	
Module Coordinator(s):	Dwi Ayu Lusia, S.Si., M.Si.	
Lecturer(s):	Dwi Ayu Lusia, S.Si., M.Si. Fais Al huda, S.Kom., M.Kom. Anggi Gustiningsih H, S.Kom., M.Kom.	
Language:	Indonesian	
Classification within the curriculum:	Compulsory course	
Teaching format / class per week during semester:	2 × 50 minutes + 100 minutes laboratory session	
Workload:	1.67 hours lectures, 2 hours structural activities, 2 hours individual studies for 16 weeks + 1.67 hours laboratory session, 2 hours structural activities, 2 hours individual studies for 8 weeks and total 136 hours per semester 4.50 ECTS	
Credit Points:	3	
Requirements:	Basic Programming (MAS61131)	
Learning goals / competencies:	General Competence (Knowledge):	
	ILO1	The students are able to master basic scientific concepts and statistical analysis methods applied on computing, social science, humanities, economics, industry and life science.
	ILO2	The students are able to arrange and/or choose an efficient data collection/ data generated design that applies in surveys, experiments or simulations.
	ILO3	The students are able to manage, analyze, and complete the real case using statistical method on computing, social humanities, economics, industry and life science that helped by software, then present and communicate the results.
	ILO4	The students are able to master at least two statistical softwares, including based on open source.

	ILO5	The students are able to apply logical, critical, systematic, and innovative thinking independently when applied to science and technology that contain humanities values, based on scientific principles, procedures and ethics with excellent and measurable results.
	ILO6	The students are able to take appropriate decisions to solve the problems expertly, based on the information and data analysis.
	ILO7	The students are able to improve and develop a job networks, then supervise and evaluate the team's performance they lead.
	ILO8	The students are able to apply and internalize the spirit of independence, struggle, entrepreneurship, based on values, norms, and academic ethics of Pancasila in all aspects of life.
	Specific Competence:	
	M1	Students understand the concept of database (ILO1, ILO2, ILO5, ILO6, ILO8)
	M2	Students are able to model database systems (ILO1, ILO2, ILO3, ILO5, ILO6, ILO7, ILO8)
	M3	Students are able to make normal forms of database relations logic design (ILO1, ILO2, ILO3, ILO5, ILO6, ILO8)
	M4	Students are able to design systems (ILO2, ILO3, ILO4, ILO5, ILO6, ILO7, ILO8)
	M5	Students are able to make reports in the system and export them (ILO2, ILO3, ILO4, ILO5, ILO6, ILO7, ILO8)
Contents:	1	Concept of Database
	2	Database System Model
	3	Normal Forms of Logic Design Database Relations
	4	Designing a System
	5	Make Reports and export reports
Soft skill attribute:	Responsible, independently, and discipline	
Study/exam achievement:	Final score (NA) is calculated as follow: 20% Assignments, 30% Quizzes, 20% Midterm Exam, 20% Final Exam, 10% Laboratory Session Final index is defined as follow: A : > 80 - 100 B+ : > 75 - 80 B : > 69 - 75	

	C+ : > 60 - 69 C : > 55 - 60 D+ : > 50 - 55 D : > 44 - 50 E : 0 - 44
Forms of media:	Software (Python, BOA constructor, MySQL), whiteboard
Learning methods:	Lecture, assessments, and discussion
Literature:	Main:
	1. D. M. Kroenke, Database Processing: Dasar-Dasar, Desain, dan Implementasi, 9 ed., vol. 2. Jakarta: Erlangga, 2005.
	2. K. K. Hudaya, Pemrograman Desktop Database Python-mysql Dengan Boa Constructor. Yogyakarta: ANDI, 2013.
	Support:
	1. A. Nugroho, Perancangan dan implementasi sistem basis data, vol. 2011. Yogyakarta: ANDI, 2011.
2. R. Elmasri dan S. B. Navathe, Fundamentals of Database Systems, 6th ed. 2011. Boston: Addison-Wesley	
Notes:	