MODULE HANDBOOK
DISCRETE MATHEMATICS

BACHELOR DEGREE PROGRAM
DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE AND DATA ANALYTICS

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

MODULE HANDBOOK
DISCRETE MATHEMATICS

Module name	**Discrete Mathematics**
Module level	Bachelor
Code	KM184304
Course (if applicable)	Discrete Mathematics
Semester	Fall (Gasal)
Person responsible for the module	Drs. Soetrisno, MIKomp
Lecturer	Drs. Soetrisno, MIKomp Drs, Bandung Arry Sanjoyo, MIKomp Drs. Daryono Budi Utomo, M.Si
Language	Bahasa Indonesia and English
Relation to curriculum	Bachelor degree program, **mandatory**, 3rd semester.
Type of teaching, contact hours	Lectures, <60 students
Workload	1. Lectures : 3 x 50 = 150 minutes per week. 2. Exercises and Assignments : 3 x 60 = 180 minutes (3 hours) per week. 3. Private learning : 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks)
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.
Mandatory prerequisites	Algorithms and Programming
Learning outcomes and their corresponding PLOs	Course Learning Outcome (CLO) after completing this module, CLO-1 : Students are able to understand discrete objects, analyze, construct an argument in discrete structure problems, and can apply them to solve discrete structured problems. CLO-2 : Students are able to explain the connection of basic concepts of discrete mathematics with other branches of science.
Content	This course discusses the problem of sets, relations and functions, introducing graphs, recurring relations, and introducing combinatorics. As a support for the data structure courses, graph theory, and combinatoric

	analysis. To measure student ability, evaluation is carried out in the form of quizzes, exams, and individual and group assignments
Study and examination requirements and forms of examination	• Assignment 1 & 2 • Mid-term examination • Final examination
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading lists	Main : 1. Kenneth H. Rosen, "Discrete Mathematics and Its Applications" 7th ed., McGraw-Hill, 2011 Supporting : 1. Grimaldi, R. P., "Discrete and Combinatorial Mathematics" 5th ed., Addison-Wesley Publ. Co., 2006. 2. Liu, C. L. and DP Mohepatra, "Elements of Discrete Mathematics", 3rd ed., McGraw-Hill Inc., 2008.