UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION
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Bachelor of Science in Mathematics **MODULE HANDBOOK**

Module name:	Discrete Mathematics
Module level,if applicable:	Undergraduate
Code:	MAT6317
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	3rd
Module coordinator:	Muh. Fauzan, M.Sc.St
Lecturer(s):	1. Sahid, M.Sc 2. Muh. Fauzan, M.Sc.St.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format / class hours perweek during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Creditpoints:	3
Prerequisites course(s):	Linear Algebra (MAT6301)
Course outcomes:	After taking this course the students have ability to: CO1. Respecting other people's views, opinions,and original ideas. CO2. Understand the concepts about mathematical logic and principles in enumeration, combinatorics, generator

<table>
<tr><td></td><td>functions, recurrence relations and graph theory modeling
CO3. Solve the recurrence relation problem
CO4. Apply generator function to solve the general problems.</td></tr>
<tr><td>Content:</td><td>This course discusses about the concepts of thinking with mathematical logic, theory and relation and induction of mathematics, enumeration principles, permutations, combinations, generating functions, recurrence relation and graph theory and its application in several fields.</td></tr>
<tr><td>Study/exam achievements:</td><td>CO1: Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitudeif they show it significantlycompared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of therequirements to pass the course. Students will pass from this course if at least have a good attitude.

The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO 1-CO 4</td><td>a. Individual assignment
b. Group assignment
c. Quiz
d. Mid Exam
e. Final Exam</td><td>Written test</td><td>15%
15%
10%
30%
30%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>Forms of media:</td><td>Board, LCD Projector, Laptop/Computer</td></tr>
<tr><td>Literature:</td><td>1. Rosen, Kenneth H. 1999. Discrete Mathematics and Its Application
2. CL. LIU. 1999. Discrete Mathematics. McGraw Hill
3. Jong Jek Siang, 2004. Matematika Diskrit dan Aplikasinya pada Ilmu Komputer. Andi Yogyakarta</td></tr>
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2				✓						
CO3						✓				
CO4					✓					