

Module designation	<i>Discrete Mathematics</i>
Semester(s) in which the module is taught	2
Person responsible for the module	<i>Muh. Fauzan, M.Sc.St</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory course</i>
Teaching methods	<i>150 minutes lectures and 180 minutes structured activities per week.</i>
Workload (incl. contact hours, self-study hours)	<i>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.</i>
Credit points	3
Required and recommended prerequisites for joining the module	<i>MAT6301 Logic and Sets</i>
Module objectives/intended learning outcomes	<p><i>After taking this course the students have ability to:</i></p> <p><i>CO1. Respecting other people's views, opinions, and original ideas.</i></p> <p><i>CO2. Understand the concepts about mathematical logic and principles in enumeration, combinatorics, generator functions, recurrence relations and graph theory modeling</i></p> <p><i>CO3. Solve the recurrence relation problem</i></p> <p><i>CO4. Apply generator function to solve the general problems.</i></p>
Content	<i>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.</i>
Examination forms	<i>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.</i>

Study and examination requirements

The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements 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:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO 1	a. Presentation b. Discussion	Observation	5% 10%
2	CO 2, CO 3, CO 4	a. Individual assignment b. Group assignment c. Quiz d. Midterm e. Final test	Written	10% 10% 20% 20% 25%
Total				100%

Reading list

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