



MINISTRY OF HIGHER EDUCATION, SCIENCE, AND
TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNDERGRADUATE PROGRAM OF MATHEMATICS EDUCATION
Ketintang Campus, Jalan Ketintang, C8 C9 Building, Surabaya 60231
Phone: +62 895335466373, email: s1-pmat@unesa.ac.id
Website: <https://pendidikan-matematika.fmipa.unesa.ac.id/>

Undergraduate Program of Mathematics

Module Handbook

Module Name:	Matematika Diskrit/ Discrete Mathematics
Module Level:	Sarjana (S-1) / Undergraduate
Abbreviation, if applicable:	8420202004
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	2 nd / First year
Module Coordinator(s):	Prof. I Ketut Budayasa, Ph.D.
Lecturer(s):	Dr. Pradnyo Wijayanti, M.Pd. Nina Rinda Prihartiwi, S.Pd., M.Pd. Novita Vindri Harini, S.Pd., M.Pd.
Language:	Indonesia
Classification within the curriculum:	Compulsory course/ elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual Study/ 2 x 170 minutes = 340 minutes = 5.7 hours lectures
Workload:	16 weeks per semester consisting of: <ul style="list-style-type: none">• 1 hour lectures (1 x 50 minutes) per week,• 1 hours assignments (1 x 60 minutes) per week,• 1 hours individual study (1 x 60 minutes) per week, Total workload : 16 x 2 x 170 minutes = 5,440 minutes = 90,67 hours = 3.1 ECTS*
Credit Point:	2
Requirements:	N/A
Learning Goals:	PLO 5: Apply the basic principles of mathematics to solve simple mathematical problems PLO 6: Design, implement and evaluate mathematics learning using IT
Content:	The Discrete Mathematics course focuses on studying the concepts of basic counting rules, permutations, combinations, generating functions, recurrence relations, and the principle of inclusion-exclusion, and applying them to solve everyday problems through



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active learning using expository, question-and-answer, and assignment methods.

Study/exam achievements

- Students are considered competent and pass if the final score is at least 55 or C.
- Final score is calculated as follows:

Week	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)	Evaluation (%)
1	CLO-1	PLO-5	3
2	CLO-1	PLO-5	3
3	CLO-1	PLO-5	5
4	CLO-1	PLO-5	3
5	CLO-1	PLO-5	3
6	CLO-3	PLO-3	5
7	CLO-3	PLO-3	3
8	CLO-3	PLO-3	20
9	CLO-3	PLO-3	3
10	CLO-3	PLO-3	3
11	CLO-2	PLO-5	5
12	CLO-2	PLO-5	3
13	CLO-2	PLO-5	5
14	CLO-4	PLO-3	3
15	CLO-4	PLO-3	3
16	CLO-4	PLO-3	30
- Final index is defined as follow:

Index	Converted Score	Score Range
A	4.00	$85 \leq A \leq 100$
A-	3.75	$80 \leq A- < 85$
B+	3.50	$75 \leq B+ < 80$
B	3.00	$70 \leq B < 75$
B-	2.75	$65 \leq B- < 70$
C+	2.50	$60 \leq C+ < 65$
C	2.00	$55 \leq C < 60$
D	1.00	$40 \leq D < 55$
E	0.00	$0 \leq E < 40$



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Forms of Media	Slides and LCD projectors, whiteboard
Literature	<ol style="list-style-type: none">1. Rosen, K. H. 2011. Discrete Mathematics with Applications, 7th Edition. New York: Mc Graw-Hill.2. Budayasa, I. K. 2008. Matematika Diskret. Surabaya: Unesa University Press.3. Mattson, Jr. 1993. Discrete Mathematics with Applications. Singapore: John Wiley & Sons, Inc.
Note	Based on the regulation of the minister of education and culture of Indonesia number 3 of 2020 concerning national higher education standards, it is state 1 CU equals to 170 minutes per week. Therefore, in one semester (16 weeks, including midterm a final exam) $1 \text{ CU} = 170 \times 16 = 2.720$ minutes or 45.3 hours. Therefore, workhours in 144 CU $\times 45.3 \text{ hours} = 6.523,2$ hours. Unesa decided that 1 ECTS with 144 CU, $6.523,2/229 \text{ ECTS} = 28.48$ hours, so that $1 \text{ CU} = 1.59 \text{ ECTS}$