<table>
<tr><td>Module designation</td><td>Discrete Mathematics
Course code: 8420202004</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>Semester 2 (First year)</td></tr>
<tr><td>Person responsible for the module</td><td>Coordinator: Prof. I Ketut Budayasa, Ph.D.
Teaching staff: Dr. Pradnyo Wijayanti, M.Pd.; Nina Rinda Prihartiwi, S.Pd., M.Pd.; Novita Vindri Harini, S.Pd., M.Pd.</td></tr>
<tr><td>Language</td><td>Indonesian</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lectures, tutorial assignments, and individual study
Media and tools: Slides and LCD projectors, whiteboard</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(Estimated) total workload: 2 CU × 170 minutes × 16 weeks = 5,440 minutes = 90.67 hours (≈ 3.18 ECTS)
Contact hours: lectures, 2 × 50 minutes per week × 16 weeks = 26.67 hours (class hours per week: 340 minutes = 5.67 hours, including structured activities)
Private study including examination preparation: structured assignments, 2 × 60 minutes per week × 16 weeks = 32.00 hours; independent study, 2 × 60 minutes per week × 16 weeks = 32.00 hours (total 64.00 hours)</td></tr>
<tr><td>Credit points</td><td>2 CU (3.18 ECTS)
1 CU = 170 minutes per week × 16 weeks = 45.3 hours; 1 ECTS = 28.48 hours (144 CU = 229 ECTS), so 1 CU = 1.59 ECTS (UNESA Rector's Decree No. 736/HK/KM/2023).</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>None</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Programme learning outcomes (PLO) addressed:
PLO-5: Apply the basic principles of mathematics to solve simple mathematical problems.
PLO-6: Demonstrate mathematical knowledge and insight.</td></tr>
<tr><td>Content</td><td>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 active learning using expository, question-and-answer, and assignment methods.</td></tr>
<tr><td>Examination forms</td><td>Final score is calculated from the weekly assessment scheme below (CLO/PLO addressed and weight of each assessment):
<table>
<tr><th>Week</th><th>CLO</th><th>PLO</th><th>Weight (%)</th></tr>
<tr><td>1</td><td>CLO-1</td><td>PLO-5</td><td>3</td></tr>
<tr><td>2</td><td>CLO-1</td><td>PLO-5</td><td>3</td></tr>
<tr><td>3</td><td>CLO-1</td><td>PLO-5</td><td>5</td></tr>
<tr><td>4</td><td>CLO-1</td><td>PLO-5</td><td>3</td></tr>
<tr><td>5</td><td>CLO-1</td><td>PLO-5</td><td>3</td></tr>
<tr><td>6</td><td>CLO-3</td><td>PLO-6</td><td>5</td></tr>
<tr><td>7</td><td>CLO-3</td><td>PLO-6</td><td>3</td></tr>
<tr><td>8</td><td>CLO-3</td><td>PLO-6</td><td>20</td></tr>
<tr><td>9</td><td>CLO-3</td><td>PLO-6</td><td>3</td></tr>
</table></td></tr>
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	10	CLO-3	PLO-6	3
	11	CLO-2	PLO-5	5
	12	CLO-2	PLO-5	3
	13	CLO-2	PLO-5	5
	14	CLO-4	PLO-6	3
	15	CLO-4	PLO-6	3
	16	CLO-4	PLO-6	30

Study and examination requirements

Students are considered competent and pass if the final score is at least 55 or C.

Final index (grade conversion):

Index	Converted score	Score range (A = final score)
A	4.00	85 ≤ A ≤ 100
A-	3.75	80 ≤ A < 85
B+	3.50	75 ≤ A < 80
B	3.00	70 ≤ A < 75
B-	2.75	65 ≤ A < 70
C+	2.50	60 ≤ A < 65
C	2.00	55 ≤ A < 60
D	1.00	40 ≤ A < 55
E	0.00	0 ≤ A < 40

Reading list

1. Rosen, K. H. 2011. Discrete Mathematics with Applications, 7 th 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.