<table>
<tr><td>Module designation</td><td>Elementary Number Theory
Course code: 8420202222</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: Dr. Agung Lukito, M.S.
Teaching staff: Dr. Nia Wahyu Damayanti, M.Pd.; Dr. Mukhtamillatus Sadiyah, M.Pd.; Nina Rinda Prihartiwi, S.Pd., M.Pd.; Yulia Izza El Milla, 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 Elementary Number Theory course focuses on studying integers and their properties, the principle of mathematical induction, divisibility and its properties, number bases, prime numbers and their properties, the greatest common divisor (GCD) and its properties, the Euclidean algorithm, the least common multiple (LCM) and its properties, the relationship between GCD and LCM, congruences and their properties, and linear congruences and their properties through active learning using a combination of lectures, discussions, question-and-answer sessions, and assignments.</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-8</td><td>PLO-5</td><td>4</td></tr>
<tr><td>2</td><td>CLO-8</td><td>PLO-5</td><td>4</td></tr>
<tr><td>3</td><td>CLO-8</td><td>PLO-5</td><td>10</td></tr>
<tr><td>4</td><td>CLO-9</td><td>PLO-5</td><td>4</td></tr>
</table></td></tr>
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	5	CLO-10	PLO-5	4
	6	CLO-10	PLO-5	4
	7	CLO-1	PLO-5	10
	8	CLO-1	PLO-5	4
	9	CLO-5	PLO-6	4
	10	CLO-2	PLO-5	4
	11	CLO-6	PLO-6	4
	12	CLO-5	PLO-6	15
	13	CLO-2	PLO-5	3
	14	CLO-2	PLO-5	3
	15	CLO-6	PLO-6	3
	16	CLO-6	PLO-6	20

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). Elementary Number Theory & Its Applications (6th Ed.). Addison-Wesley.
2. Effinger, G. & Mullen, G. L. (2021). Elementary Number Theory. CRC Press.