MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

Module Handbook

Module Name :	*Teori Bilangan Elementer* Elementary Number Theory
Module level :	Bachelor degree/Undergraduate Program
Course Code :	4420102136
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not Applicable
Semester/Term	3rd/ Second year
Module coordinator(s)	Dwi Nur Yunianti, M.Sc
Lecturer(s):	Dr. R. Sulaiman, M.Si Dwi Nur Yunianti, M.Sc Rudianto Artiono, M.Si
Language:	Bahasa Indonesia (Indonesian Language)
Classification within the curriculum:	Compulsory/ ~~Elective~~
Teaching format/class hours per week during the semester:	2 contact hours of lectures (*sks* or credit unit*)
Workload :	2 x 50 minutes lectures, 2 x 60 minutes structured activity, and 2 x 60 minutes individual activity per week, 14 weeks per semester 79.33 total hours per semester ~ 3.18 ECTS**
Credit Unit:	2 credit unit (3.18 ECTS)
Requirements:	Foundation of Mathematics

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Learning goals/competencies:	**Knowledge (KNO-1):** Demonstrating mathematical knowledge and mathematical insight. CLO-1: Identify and explain solving simple problems using the concepts and properties of division, number base, prime numbers, GCD and LCM, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, congruence system linear CLO-2: Capable of thinking in a structured manner, reasoning, proving simply the characteristics of division, number base, prime numbers, GCD and LCM, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, linear congruence system. **Skill (SKI-1):** Formulating and solving fundamental mathematical problems. CLO-3: Develop some mathematical models of a problems by using concept of divisibility, congruence, and some theorem. **Competences (COM-1):** Proving mathematical statements by various methods. CLO-4: Proving some properties of congruence
Content	This course discusses about divisibility, number base, prime numbers, GCD and LCM, congruence, residual system, Euler's theorem, linear congruence, simultaneous linear congruence system, linear congruence system. Lecture activities are carried out in a student center with discussions, observations, and presentations

Attribute Soft skill:	Active communication; Discipline; Collaboration; Responsibility; and Argumentation in class
Study/exam achievements:	The final grade (*NA*) is calculated based on the following ratio:

Assessment Components	Percentage of contribution
Participation	20%
Assignment	30%

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<tr><td>Mid-semester test</td><td>20%</td></tr>
<tr><td>Final semester test</td><td>30%</td></tr>
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Grade conversion of 0-100 scale into 0-4 scale is set as below:
<table>
<tr><th>Letter</th><th>Number</th><th>Grade Interval</th></tr>
<tr><td>A</td><td>4,00</td><td>$85 \leq A \leq 100$</td></tr>
<tr><td>A-</td><td>3,75</td><td>$80 \leq A- < 85$</td></tr>
<tr><td>B+</td><td>3,50</td><td>$75 \leq B+ < 80$</td></tr>
<tr><td>B</td><td>3,00</td><td>$70 \leq B < 75$</td></tr>
<tr><td>B-</td><td>2,75</td><td>$65 \leq B- < 70$</td></tr>
<tr><td>C+</td><td>2,50</td><td>$60 \leq C+ < 65$</td></tr>
<tr><td>C</td><td>2,00</td><td>$55 \leq C < 60$</td></tr>
<tr><td>D</td><td>1,00</td><td>$40 \leq D < 55$</td></tr>
<tr><td>E</td><td>0,00</td><td>$0 \leq E < 40$</td></tr>
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<tr><td>Learning Methods :</td><td>Student-centered approach; project-based learning; lecturer and discussion; and presentations (structured activities)</td></tr>
<tr><td>Form of Media:</td><td>Power point slides; video; worksheets, and textbooks</td></tr>
<tr><td>Literature (primary references):</td><td>
1. Rosen, K. H. 2018. Elementary Number Theory and its Application (6th edition). New York: Addison – Wesley Publishing Company.
2. Sukirman. 2005. Pengantar Teori Bilangan. Yogyakarta: Hanggar Kreator Yogyakarta
3. Niven, Ivan, Herbert S. Zuckerman, Hugh L. Montgomery. 1991. An Introduction to The Theory of Numbers. Canada.John Wiley & Sons, Inc
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Notes:	*1 credit unit or *sks* in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.
	**1 credit unit or *sks* = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2019