Number Theory

Module Name	Course Module
Module Levels	Degree program
Code, if applicable	3115-036-2
Sub-titles, if applicable	-
Courses, if applicable	Number Theory
Semester(s) in which the module is taught	1 (Odd Semester)
Person responsible for the modules	Course Lecturer
Lecturer(s)	9. Dwi Antari Wijayanti, M.Pd 10. Dr. Anny Sovia, S.Sc., M.Pd.
language	Indonesian
Relations to Curriculum	This course is a study program course and is offered in semester 1.
Type of teaching, contact hours	The teaching methods used in this course are: - Studying (that is, investigative group, small group discussions, case studies, and video base learning) - Structured assignments (i.e., essays and case studies) - Project Based Learning The class size for college is 20 students. Contact hours for lectures are 26.66 hours, assignments at 32.00, and independent study at 32.00.
Workloads	For this course, students are required to meet the minimum 90.66 hours in one semester, consisting of: 26.66 hours for lectures, 32.00 hours for structured tasks, 32.00 hours for self study,
Credit Points	3 ECTS
Requirements according to the examination regulations	Students must attend all lectures and submit all individual and group assignments scheduled before the final exam.
Recommended prerequisites	Students must attend all lectures and submitted all individual and group assignments scheduled before the final exam.

<table>
<tr>
<td>Program intended learning outcomes</td>
<td>PLO 5. Able to master the basics of mathematical theoretical concepts including mathematical logic, discrete mathematics, algebra, analysis, and geometry, as well as the theory of probability and statistics.
PLO 6. Able to master the principles of mathematical modeling, linear programming, differential equations, and numerical methods

Course Learning Outcomes(CLO) to be achieved in this course are:
1. Able to analyze the validity of arguments based on logical rules and able to apply problem solving in mathematics and other fields.
2. Able to analyze the basic structure, parts and relationships between sets and able to apply in mathematics and other fields.
3. Able to analyze the basic structure and parts of a partial ordering set (poset) and able to apply it in mathematics and other fields

The relationship between PLO and CLO in this course is described as follows.
<table>
<tr><th rowspan="2">CLO</th><th colspan="2">PLO</th></tr>
<tr><th>5</th><th>6</th></tr>
<tr><td>1</td><td></td><td></td></tr>
<tr><td>2</td><td></td><td></td></tr>
<tr><td>3</td><td></td><td></td></tr>
</table>
</td>
</tr>
<tr><td></td><td></td></tr>
<tr>
<td>Content</td>
<td>Students will learn about:
14. Statement and its Structure,
15. Quantor, Arguments and Proof of the Validity of Arguments,
16. Quantum Argument,
17. Assemblies and Assemblies Operations,
Relations and Properties</td>
</tr>
<tr>
<td>Forms of Assessment</td>
<td>Assessment of the learning process according to the following components: assignment 30%,
mid exam 30%, final exam 40%.</td>
</tr>
<tr>
<td></td>
<td>Study and examination requirements:
• Students must be present 15 minutes before class starts.
• Students must turn off all electronic devices.</td>
</tr>
</table>

Study and examination requirements and forms of examination	• Students are required to notify the lecturer if they are absent from class due to illness, etc. • Students must turn in all classwork by the deadline. • Students must take an exam to get a final grade. **Form of examination:** Written exam: essay
media employed	Ms Teams, LMS, and power point presentations.
reading list	**References**
	6. Basic Introduction to Mathematics, Bachtiar Syarief, Bandung Ganesha Publisher 7. Symbolic Logic, Irving Copy 8. Set Theory, Schaum's Series Robert R. Stoll, Set Theory and Logics Leithold, 1991