



UNIVERSITAS NEGERI PADANG
FACULTY OF MATHEMATICS AND NATURAL SCIENCES MATHEMATICS
DEPARTMENT, MATHEMATICS STUDY PROGRAM
Main Campus Universitas Negeri Padang.
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Bachelor of Science in Mathematics

MODULE HANDBOOK

Module name:	Introduction to Foundation of Mathematics
Module level, if applicable:	Bachelor
Code:	MAT1.62.2003
Subheading, if applicable:	-
Classes, if applicable:	Introduction to Foundation of Mathematics
Semester:	2 nd (second)
Module coordinator:	Head of Algebra Expertise Group
Lecturer(s):	Dr. Arnellis, M.Si and Dra Dewi Murni, M.Si.
Language:	Indonesian Language and English
Classification within the curriculum:	Compulsory course in the first year (2 nd semester) Bachelor Degree
Teaching format / class hours per week during the semester:	<ol style="list-style-type: none">Lectures : Cooperative learning with methods such as presentations, group and class discussion. (3 x 50 minutes = 150 minutes)Structured assignment : Weekly individual written assignment. (3 x 60 minutes = 180 minutes)Individual study. (3 x 60 minutes = 180 minutes)
Workload:	Total workload is 136 hours per semester, which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual study for 16 weeks per semester, including mid exam and final exam.
Credit points:	3 SKS = 4.53 ECTS
Prerequisites course(s):	None

Course outcomes:	<p>After taking this course the students have ability to:</p> <p>CO1. Solve mathematics problem using concept of proposition, arguments, quantifiers, sets, functions and relations</p> <p>CO2. Prove the validity of the statement using the validity rules of the argument</p> <p>CO3. Prove the properties or theorems of set, functions and relations</p>
Content:	<ol style="list-style-type: none"> 1. Proposition, truth table, tautologies, converse, inverse and contrapositive. 2. Arguments and conclusion rules 3. Quantifiers and rules of quantifiers 4. Set 5. Function 6. Relation 7. Equivalent, countable, and denumerable set
Study/exam achievements:	<p>The final mark will be weighted as follows The assessment consists of final exam (30 %), mid term exam (30%), assignment and exercise (35 %), and attendance (5%).</p> <p>Final and mid term exams are in the form of a closed book essay written test (120 minutes). Weekly tasks (fixing specific problems) come in two flavors: group and individual. While exercises are provided in the classroom at each class meeting.</p> <p>Presentations, held in the classroom after collecting the group task, are focused on the performance of group members.</p>
Form of Media	White-board, Laptop, LCD Projector, E-Learning
Literature	<ol style="list-style-type: none"> 1. Sibley (2009). Foundation of Mathematics. John Wiley. 2. Seymour Lipschutz (1991), Set Theory, Schaum's. Outline 3. Sukirman (2006). Logika dan Himpunan. Hanggar Kreator. 4. Yaya S. Kusumah (1986), Logika Matematika 5. Elementer, Bandung : Tarsito

PLO and CO Mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1			✓							
CO2				✓						
CO3				✓						