



MINISTRY OF EDUCATION AND CULTURE
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF NATURAL SCIENCES

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Undergraduate Programme in Science Education

Module Handbook

Module Name:	<i>Matematika Dasar</i> Basic mathematic						
Module Level:	Bachelor degree/Undergraduate Programme						
Course Code:	8420103086						
Abbreviation, if applicable:							
Courses included in the module, if applicable:	Not applicable						
Semester/term	1 / fourth year (senior)						
Module coordinator(s):	Dr. Rini Setianingsih, M.Kes.						
Lecturer(s):	Evangelista Lus Windyana Palupi., M.Pd.						
Language:	<i>Bahasa Indonesia</i> (Indonesian Language)						
Classification within the curriculum:	Compulsory / Elective						
Teaching format/class hours per week during the semester:	3 contact hours of lectures (Indonesia credit semester or <i>sks</i> *)						
Workload:	3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS**						
Credit point:	3 <i>sks</i> (4.77 ECTS)						
Requirements:	-						
Learning goals/competencies:	<p>Course Learning Outcomes (CLOs):</p> <ol style="list-style-type: none"> 1. Knowledge CLO-1: Explain the basic notions of mathematics as a deductive-axiomatic structure, structured thinking, reasoning, and rational-deductive logic, set, relationship, function, logic, quantor, conclusion, and validity of proof or conclusion. 2. Skill CLO-2: Mathematically state a statement problem in the form of a mathematical relation, function, or statement and solve it 3. Competency CLO-3: Prove mathematical statements using several suitable methods 						
Content:	System and deductive-axiomatic structure, logical operation, quantifier, making a conclusion, set theory, relation, function, and POSET.						
Attribute Soft skill:	Discipline, collaboration, responsibility, and argumentation in the natural classroom setting						
Study/exam achievements:	<p>Students are considered to be competent and pass if at least get 40% of the maximum final grade. The final grade (NA) is calculated based on the following weight:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: yellow;">Assessment Components</th> <th style="background-color: yellow;">Percentage Contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Assignment</td> <td style="text-align: center;">30%</td> </tr> </tbody> </table>	Assessment Components	Percentage Contribution	Participation	20%	Assignment	30%
Assessment Components	Percentage Contribution						
Participation	20%						
Assignment	30%						

	Mid-semester test	20%
	Final semester test	30%
	Total	100%
Learning Methods	Constructivism, student-centered approach, project-based learning, lecturing, discussion, and presentation (structured activities), and flip learning	
Form of Media:	LCD, PowerPoint slides, worksheets	
Literature (primary references):	<ol style="list-style-type: none"> 1. Stoll, R. R. 1979. Set Theory and Logic. New York: Dover Publication, Inc. 2. Masriyah, 2017. Dasar-Dasar Matematika, Surabaya: Unesa Press. 3. Yunus, M. 2007. Logika: Suatu Pengantar. Yogyakarta: Graha Ilmu. 4. Kunnen, K. 2009. The Foundation of Mathematics Vol 19. London: College Publications 	
Notes:	<p>*1 sks in learning process = three contact hours that 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.</p> <p>**1 sks = 1,59 ECTS</p>	