

UNIVERSITAS NEGERI PADANG FACULTY OF MATHEMATICS AND NATURAL SCIENCES MATHEMATICS DEPARTMENT, MATHEMATICS STUDY PROGRAM Main Campus Universitas Negeri Padang. Jalan Prof. Dr. Hamka Air Tawar Padang, Sumatera Barat Telepon: +62 751 7053902, Fax: +62 751 7055628 Email: humas@unp.ac.id

Bachelor of Science in Mathematics

MODULE HANDBOOK

Module name:	Introduction to Measurable and Integrable					
Module level, if applicable:	Bachelor					
Code:	MAT2.62.8001					
Subheading, if applicable:	-					
Classes, if applicable:	Introduction to Measurable and Integrable					
Semester:	8 th (eighth)					
Module coordinator:	Head of Analysis Expertise Group					
Lecturer(s):	Muhammad Subhan, M.Si.					
Language:	Indonesian Language and English					
Classification within the	Elective course in the fourth year (8 th semester) Bachelor					
curriculum:	Degree					
Teaching format / class hoursperweekduring the semester:	 a. Lectures : Cooperative learning with methods such as expository, drill, and discussion. (3 x 50 minutes = 150 minutes). b. Structured assignment : Weekly individual written assignment. (3 x 60 minutes = 180 minutes). c. Individual study (3 x 60 minutes = 180 minutes). 					
Workload:	The total workload is 136 hours per semester, which consists of 150 minute lectures, 180 minute structured activities, and 180 minutes of self-study. In total, there are 16 weeks per semester, including midterm and final exams.					
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Prerequisites course(s):	A few secondations this second the starburt have shill to take					
	CO1 Interpret fundamental concepts measurable					
Course outcomes:	CO2. Apply integrable functions CO3. Use basic integrable to positivity and linearity					

Content:	Sigma-Algebra, Measurable Sets, Measurable Functions,							
	Measures, Measure Spaces, Integral, Integrable Functions,							
	Monotone Convergence Theorem, Fatou's Lemma, Integrable							
	Functions, Positivity and Linearity of Integral, Lebesque							
	Dominated Convergence Theorem, Lebesque Space (Lp),							
	Modes of Convergence, Decomposition of Measures,							
	Generation of Measures.							
Study / Exam Achievement	The final grade will be weighted as follows:							
	The assessment consists of a final exam (35%) , a midterm exam (30%) , and student activities (35%) .							
	The final and midterm exams are essay tests with a closed book (120 minutes).							
	Quizzes, homework, exercises, discussions, and presentations are examples of student activities.							
Forms of media:	White Board, laptop, Projector, e-learning via							
	elearning2.unp.ac.id, and zoom meeting.							
Literature:	 Royden, H.L., "Real Analysis", 4th ed., Mac Millan Pub. Comp, New York, 2010 Bartle, R. 1995. The Elements of Integration and Lebesgue Measure 1st Edition. Nielsen, A. 1997. An Introduction to Integration and Measure Theory. 							

PLO and CO mapping

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