



**UNIVERSITAS NEGERI YOGYAKARTA**  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
DEPARTMENT OF MATHEMATICS EDUCATION

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**Bachelor of Science in Mathematics**

**MODULE HANDBOOK**

Module name:	Integral Calculus
Module level,if applicable:	Undergraduate
Code:	MAT6307
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	2 <sup>nd</sup>
Module coordinator:	Dra. Endang Listyani, M.S
Lecturer(s):	1. Endang Listyani, MS.; 2. Atmini Dhoruri, MS.; 3. Ilham R, M.Sc
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format / class hours perweek during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Creditpoints:	3
Prerequisites course(s):	Differential Calculus (MAT6302)
course outcomes:	After taking this course the students have ability to: CO1. Showing respect for the other's opinion CO2. Develop knowledge of Integral Calculus in a systematic, critical, creative, and innovative way

	<p>CO3. Communicate ideas in solving problems related to Integral in writing or verbally</p> <p>CO4. understand the Integral concept for the basis of self-development in work and further study</p> <p>CO5. Exploring, generalizing and proving theorems related to Integral using logical reasoning</p>																				
Content:	The course contains discussion on Indefinite integral, definite integral, fundamental theorem of integral, applications of the integral, transcendent function, integration techniques, indeterminate forms, and improper integrals..																				
Study/exam achievements:	<p>CO1: Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO 2</td> <td>presentation</td> <td>Observation</td> <td>10%</td> </tr> <tr> <td></td> <td>CO 3, CO 4, CO 5,</td> <td>a. Individual assessment b. Group assessment c. Quiz d. Mid exam e..Final exam</td> <td>Written test</td> <td>10% 10% 20% 25% 25%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO 2	presentation	Observation	10%		CO 3, CO 4, CO 5,	a. Individual assessment b. Group assessment c. Quiz d. Mid exam e..Final exam	Written test	10% 10% 20% 25% 25%	Total				100%
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Forms of media:	Board, LCD Projector, Laptop/Computer																				
Literature:	<p>1. Varberg Dale dan Purcell E.J. (2001). Kalkulus Jilid 1 (Edisi VII), Batam: Interaksa Morrill, W.K. 1969. Analytic Geometry. Scranton, Pennsylvania : International textbook Company</p> <p>2. Stroud, usK.A. Engineering mathematics; with addition by</p>																				

	Dexter J. Booth. -5 <sup>th</sup> ed. 3. Leithold (2002) Kalkulus jilid 1, Jakarta: Erlangga
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**PLO and CO mapping**

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2			✓							
CO3				✓						
CO4					✓					
CO5						✓				