



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF SCIENCE EDUCATION

Jalan Colombo Nomor 1 Yogyakarta 55281

Telepon(0274)565411 Pesawat 217, (0274)565411(TU),fax (0274)548203

Laman :fmipa.uny.ac.id, E-mail :humas_fmipa@uny.ac.id

Bachelor of Education in Sciences

MODULE HANDBOOK

Module name:	Mathematics for Science
Module level, if applicable:	Undergraduate
Code:	IPA 6301
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	
Module coordinator:	Eminugroho Ratna Sari, S.Si, M.Sc.
Lecturer(s):	Eminugroho Ratna Sari, S.Si, M.Sc.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format / class hours per week 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 individual study per week for 16 weeks.
Credit points:	3
Prerequisites course(s):	-
course outcomes:	After taking this course the students have ability to: CO1. demonstrate collaborative attitude and independence to do individual or group assignments CO2. Communicate ideas in solving mathematical problems in writing or verbally CO3. explain numbers, limit, derivatives, integral and transcendent function CO4. understand derivatives and integral application
Content:	The course contains discussion on real numbers, function and

	how to graph, limit, derivatives, integral and transcendent function. It also discuss how to apply derivatives and integral in sciences problems.																				
Study / exam achievements:	<p>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">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>A. Purcell, Edwin J. dan Varberg, D. 1987. Kalkulus dan Geometri Analitis, Jilid 1. Edisi kelima. Penerjemah: I Nyoman Sulila, Bana Kartasasmita, dan Rawuh. Jakarta: Penerbit Erlangga.</p> <p>B. Purcell, Edwin J. dan Varberg, D. 1987. Kalkulus dan Geometri Analitis, Jilid 2. Edisi kelima. Penerjemah: I Nyoman Sulila, Bana Kartasasmita, dan Rawuh. Jakarta: Penerbit Erlangga</p>																				

PLO and CO mapping

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