UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION

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Bachelor of Education in Mathematics   **MODULE HANDBOOK**

Module name:	Computer Application
Module level,if applicable:	Undergraduate
Code:	MAA6206
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	3rd
Module coordinator:	Sahid, M.Sc
Lecturer(s):	Sahid, M.Sc; Sri Andayani, Dr.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format / class hoursperweekduring the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 90.67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Creditpoints:	2
Prerequisites course(s):	Information and Communication Technology (MAT6310)
Course outcomes:	After taking this course the students have ability to: CO1. Describe the features of a mathematical application software, both commercial and free CO2. Using mathematical application software to perform mathematical calculations, both arithmetic operations and calculation of mathematical functions from simple to complex

	CO3. Use the math application software to draw various graphs of mathematical functions in two dimensions (2D)
	CO4. Use the math application software to draw various graphs of mathematical functions in three dimensions (3D)
	CO5. Use mathematical application software to perform algebraic calculations
	CO6. Use the math application software to do calculus calculations
	CO7. Using the math application software for construct geometric objects
	CO8. Using LaTeX software to write mathematical expressions, from simple to complex mathematical expressions
	CO9. Using LaTeX software to produce mathematical documents
Content:	This course is about introduction of mathematical software - both commercial and free, comparison of features of mathematical software, and the use of several free mathematical software to solve mathematical problems and processing mathematical documents. In this course students learn to use some free math software that has the ability to solve mathematical problems in an analytical (exact) or numerical manner and for processing mathematical documents, for example Euler Maths Toolbox (EMT), Octave, Maxima, Scilab, GeoGebra, and LaTeX software. The use of free software is based on the fact that the Mathematics Education Department of UNY does not have commercial mathematical software that is legally licensed (the process of procuring such software is not easy) and the fact that free mathematical software has the ability is not inferior to commercial software.
Study/examachievements :	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 attitudeif they show it significantlycompared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of therequirements to pass the course. Students will pass from this course if at least have a good attitude.

No	CO	Assessment Object	Assessment Technique	Weight
		The final mark will be weight as follow:		
1	CO 1 sd CO 9	Student's answer	Verbal Quiz	20%
2	CO1-CO7	Student's work and answer	Written test	30%
3	CO8-CO9	Student's work	Final project course	50%
			Total	100%

Forms of media:	Board, LCD Projector, Laptop/Computer
Literature:	1. Panduan Penggunaan Software Euler Maths Toolbox (EMT), Euler Math Toolbox - An Introduction (Rene Grothmann, January 2017) dapat diunduh/dibaca dari situs EMT (www.euler-math-toolbox.de). 2. Panduan Penggunaan Software GeoGebra, dapat iunduh/dibaca dari situs GeoGebra (www.geogebra.org). 3. Panduan Penggunaan LaTeX, dapat diunduh/dibaca dari situs TUG (TeX User Group, www.tug.org) dan sumber-sumber Internet lain. 4. Pengantar LaTeX 2e, Petunjuk Pembuatan Dokumen Secara Efektif bagi Para Penulis (1999). oleh Sahid (Penerbit ANDI YOGYA).

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CO1		✓										
CO2				✓								
CO3				✓								
CO4						✓						
CO5						✓						
CO6						✓						
CO7							✓					
CO8							✓					
CO9							✓					