Multiple variable calculus

Module Name	Course Module
Module Level	Degree program
Code, if any	3115-206-3
Subtitles, if any	-
Course, if any	Multiple variable calculus
Semester(s) in which the module is taught	3 (Odd Semesters)
The person in charge of module	Dr. Ellis Salsabila M.Sc
Lecturer (s)	Dr. Ellis Salsabila M.Si, Leni Dhianty S.Pd, M.Pd, Dr. Anny Sovia
Language	Indonesian
Relation to Curriculum	This course is a compulsory course provided in the third semester
Type of teaching,contact hours	The teaching methods used in this course are: - Studying (that is, group material presentations, group discussions and class discussions) - Structured assignments (i.e. individual and group practice questions) The class size for the lecture is 30 students. Contact hours for lectures are 26.66 hours, assignments are 32.00 hours, and independent study is 32.00 hours.
Workload	For this course, students are required to meet the minimum 90.66 hours in one semester, consisting of: 26.66 hours for lectures, 32.00 hours for structured tasks, 32.00 hours for self study,
Credit Points	3.00 ECTS
Requirements according to the examination regulations	Students must attend all lectures and submit all individual and group assignments scheduled before the final exam.
Recommended prerequisites	Students must attend all lectures and submitted all individual and group assignments scheduled before the final exam.
	PLO 1. Able to uphold human values in carrying out duties based on religion, morals and ethics PLO 5. Able to master the basics of mathematical

Program intended learning outcomes

theoretical concepts, including mathematical logic, discrete mathematics, algebra, analysis and geometry as well as probability theory and statistics

Course Learning Outcomes(CLO) to be achieved in this course are:

CLO 1 : Mastering the concept of sequences of real numbers and being able to determine their convergence
CLO 2 : Mastering the concept of number series, function series (power series) and can determine their convergence and understand Taylor and MacLaurin series
CLO 3 : Mastering the concept of Scalar Field, Gradient, Directed Derivative and Vector Field
CLO 4 : Mastering Vector Valued Functions from R to Rn and Rn to Rm as well as their operation and function composition
CLO 5 : Mastering the concept of Limit, Continuity, Derivative and Integral of Vector Valued Functions
CLO 6 : Mastering the concept of line integrals and able to use Green's Theorem
CLO 7 : Mastering the concept of Surface Integral and able to use Gaussian Divergence Theorem and Stokes Theorem

The relationship between PLO and CLO in this course is described as follows:

CLO	PLO	
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1		
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Content	**Students will learn about:** 23. Sequence of Real Numbers 24. Row 25. Scalar Field, Gradient, Directed Derivative, Vector Field 26. Vector Valued Functions 27. Limit, Continuity, Derivative and Integral of Vector Valued Functions 28. Line Integral and Green's Theorem Surface Integral, Gauss and Stokes Divergence Theorem
Forms of Assessment	Assessment of the learning process according to the following components: assignment 30%, mid exam 35%, final exam 35%.
Study and examination requirements and forms of examination	**Study and exam requirements:** - Students must be present 15 minutes before class starts. - Students must turn off all electronic devices. - Students are required to notify the lecturer if they are absent from class due to illness, etc. - Students must turn in all classwork before the exam deadline. - Students must take an exam to get a final grade. **Examination form:** Exam form: face to face and written
Media employed	laptops, Internet, LCDs, Whiteboard,Zoom/Google Class/Ms. Teams, and LMS
Reading List	12. Purcell, Varberg Rigdon, 2008, Calculus, Ninth Edition, Prentice Hall 13. Multivariable Calculus, Wono Setya Budhi, ITB. 14. Kreyzsig, Erwin., Advanced Engineering Mathematics. (Trans.). Erlangga Publisher, Jkt. Spiegel, Murray R. Advanced Calculus. (trans). 3rd Edition

	Erlangga Publishcr, Jkt.