SYLLABUS CURRICULUM

COURSE	Course Name : MATHEMATICS II
	Course Code : KM184201
	Credit : 3 sks
	Semester : II

COURSE DESCRIPTION

LEARNING OUTCOMES

LO5	Understand the basic science and mathematics.

COURSE LEARNING OUTCOMES

Students are able to understand and know about techniques of integration and be able to applicate it in surface plane area, volume of revolution, area of a surface of revolution and center of gravity, polar coordinates, parametric function form and also analyze convergence infinite series.

MAIN SUBJECT

The focus of this course are as follows:
- Techniques of integration: partial integral, integral of trigonometric function, integral of partial fractions function.
- Numerical integration and Improper Integrals: numerical integration, Simpson rule, improper integral.
- Applications of definite integral: plane surface area, volume and area of a surface of revolution, center of gravity and physics application.
- Polar Coordinates: draw polar coordinates of a function in parametric form and be able to applicate techniques of integration in polar coordinates, parametric function.
- Sequence and infinite series: infinite sequence, infinite series, convergence test, Tayor series, Maclaurin series

PREREQUISITES

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REFERENCE

1. Tim Dosen Jurusan Matematika ITS,"Buku Ajar Kalkulus II" Edisi ke-5 Jurusan Matematika ITS, 2013
2. Anton, H. dkk, *Calculus,* 10-th edition, John Wiley & Sons, New York, 2012
3. Kreyzig, E, *Advanced Engineering Mathematics*, 10-th edition, John Wiley & Sons,

Singapore, 2011
4. Purcell, J, E, Rigdon, S., E., *Calculus,* 9-th edition, Prentice-Hall, New Jersey, 2006
5. James Stewart , Calculus, ed.7, Brooks/cole, 2012