Department of Mathematics
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Course	**Course Name**	**: Vector Calculus**
	Course Code	**: KM184502**
	Credit	**: 2**
	Semester	**: 5**

Description of Course	
In this course is studied about vector space, algebra vector, differential and integral vector, gradient, divergence and curl of vector function, Green theorem and Stokes theorem.	
Learning Outcome	
PLO 1	[C2] Students are able to identify and explain foundations of mathematics that include pure, applied, and the basic of computing
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
Course Learning Outcome	
1. The student able to understand and use the differential and integral vector 2. The student able to determine the gradient, divergence and curl of vector function 3. The student able to prove Green, Stokes divergence theorem	
Main Subject	
Vector algebra, Vector Fields, Line Integrals, Line Integrals of Vector Fields, The Fundamental Theorem for Line Integrals, Independence of Path , Green's Theorem, The Curl and Divergence of a Vector Field, Parametric Surfaces	

and their Areas, Oriented Surfaces, Surface Integrals of Vector Fields, Stokes Theorem, The Divergence Theorem
Prerequisites
Multivariable Calculus
Reference
1. Howard Anton, IRL Bivens, Stephen Davis, "Multivariables Calculus", 9th Edition, John Wiley & Sons, Inc, Singapore, 2009
Supporting Reference
1. Purcell J.E., Rigdon S.E., Vargerg D. "Calculus", Prentice Hall, New Jersey, 2000