Department of Mathematics
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Course	**Course Name**	**: Partial Differential Equations**
	Course Code	**: KM184503**
	Credit	**: 3**
	Semester	**: 5**

Description of Course
In this lecture, we will discuss about the understanding of partial differential equations, real problems in the form of partial differential equations as well as methods and related theorems to solve them.

Learning Outcome	
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
PLO 3	[C4] Students are able to analyze simple and practical problems in at least one field of analysis, algebra, modeling, system optimizations and computing sciences

Course Learning Outcome

1. Able to understand physic problems or natural phenomena form in partial differential equations, analyze and solve them
2. Be able to master the right methods to solve partial differential equations, analyze the characteristics and behavior of the system
3. Able to prove the existence and solvency of completion for the Liouville Strum problem
4. Able to cooperate in analyzing and completing natural phenomena in the form of partial differential equations
5. Able to communicate scientifically both orally and in writing

Main Subject
First order partial differential equation: existence and unity of solution, variable separation method, heat conduction equation, vibration and wave problems, Liouville Strum Problem, characteristic values and self-adjoint
Prerequisites
Ordinary Differential Equations
Reference
1. Howard Anton,1995. “Multivariables Calculus”, Jhon Wiley & Sons, Inc, Singapore . 2. Haberman, R.,“ Applied Partial Differential Equation”, 2003 3. Pinchover,Y., Rubinstein, J., An Introduction to Partial Differential Equations, Cambridge, 2005
Supporting Reference
1. Pulcell J.E., Rigdon S.E., Vargerg D,2000. “Calculus”, Prentice Hall, New Jersey. 2. Xiangmin,2009.”AppliedMultivariabel Calculus”.