A. K. NANDA KUMARAN  
Department of Mathematics  
IISc

PROF. P. S. DATTI  
Department of Mathematics  
IISc

PRE-REQUISITES: Multi variable Calculus, Linear Algebra, ordinary Differential Equations

INTENDED AUDIENCE: Mathematics, Science and Engineering

COURSE OUTLINE: This is intended to be a first course on the subject Partial Differential Equations, which generally requires 40 lecture hours (One semester course). So, we plan to make this course in two parts – 20 hours each. We plan to offer the first part starting in January 2021 and second part may be in July 2021 or latest by 2022.

ABOUT INSTRUCTOR:  
A.K. Nandakumaran is a Professor at the Department of Mathematics, Indian Institute of Science, Bangalore.

P.S. Datti is a former faculty at TIFR-CAM, Bangalore.

COURSE PLAN:

Week 1: Introduction, Preliminaries
Week 2: First Order Equations Method of Characteristics
Week 3: First Order Equations Method of Characteristics (Cont'd)
Week 4: Classification
Week 5: Laplace and Poisson Equations
Week 6: Laplace and Poisson Equations (Cont'd)
Week 7: 1D Heat equation
Week 8: 1D wave equation