MA 242: Partial Differential Equations

Credits: 3:0

Prerequisite courses: MA 241 (ODE)

First order partial differential equation and Hamilton-Jacobi equations; Cauchy problem and classification of second order equations, Holmgren's uniqueness theorem; Laplace equation; Diffusion equation; Wave equation; Some methods of solutions, Variable separable method.

Suggested books:

1. Fritz John, *Partial Differential Equations*, Springer (International Students Edition), 1971.
2. Prasad. P. and Ravindran, R., *Partial Differential Equations*, Wiley Eastern, 1985.
3. Renardy, M. and Rogers, R. C., *An Introduction to Partial Differential Equations*, Springer-Verlag, 1992.
4. Evans, L. C. Partial Differential Equations, AMS, 2010.
5. Gerald B. Folland, *Partial Differential Equations*, Prentice Hall of India, 2001.
6. McOwen, R. C. Partial Differential Equations: Methods and Applications, Pearson, 2002.