The Department of Mathematics
2017–18–B term

Course Name  Introduction to Partial Differential Equations
Course Number  201.1.0291
Office Hours  https://www.math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading


1Information may change during the first two weeks of the term. Please consult the webpage for updates
Course topics

1. The Fourier transform: convolutions, the inversion formula, Plancherel’s theorem, Hermite functions, tempered distributions. The Poisson summation formula. The Fourier transform in $\mathbb{R}^n$.


3. Classification of the second order PDE: elliptic, hyperbolic and parabolic equations, examples of Laplace, Wave and Heat equations.

4. Elliptic equations: Laplace and Poisson equations, Dirichlet and Neumann boundary value problems, Poisson kernel, Green’s functions, properties of harmonic functions, Maximum principle


Bibliography


