

Math 614, 2001 SP / Bei Hu

0. Examples from engineering and industry.
1. Laplace equations: Green's identity, Fundamental solutions, maximum principles, Green's functions.
2. Parabolic equations: Heat equations, Fundamental solutions, maximum principles.
3. First order equations: Characteristic methods, Cauchy problems. Hamilton-Jacobi equations.
4. Real analytic solutions: Cauchy-Kowalevski theorem.
