Math 146 C. Ordinary and Partial Differential Equations

Text: *An introduction to Partial Differential Equations*, by Y. Pinchover and J. Rubinstein, Cambridge University Press, 2006.

Reference: Partial Differential Equations, by W. Strauss.

Week 1-2

Selection sections of Chapter 1 and 2: Introduction and first order equations; classification of PDEs, PDEs as mathematical models natural processes, characteristic method.

Week3-4

Chapter 5: separation of variables

Week 5-6

Chapter 7: elliptic equations

Week 7

Parts of Chapter 8, Green's functions

Week 8-10

Parts of Chapter 9, equations in high dimensions, including Laplace equation, heat equation, wave equation, eigenvalue problems