Math 633 – Theory of Partial Differential Equations
Spring 2016

Syllabus

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Textbook: *Partial Differential Equations: an introduction*, 2nd edition, L.C. Evans. Another good reference text is *Introduction to Partial Differential Equations* by G.B. Folland. Previous editions of this course have also recommended *Partial Differential Equations* by Fritz John and also the books of the same name by Michael Taylor.

Material: This course is a continuation of Math 533 and serves as an introduction to the theory of more general categories of PDE. The goal of this course is to cover most of Chapters 5-6 in Evan's book, combined with selected topics from Chapter 7. In particular, we will discuss Sobolev spaces, existence and regularity theory for general elliptic equations, and some basic theory of general parabolic and hyperbolic equations.

Grades:	Problem Sets	35 %
	Midterm	25 %
	Presentation	10 %
	Exam	30 %

Problem sets will be assigned roughly once per week, to be turned in at the beginning of class on the due date. Late problem sets will not be accepted. You are allowed and encouraged to discuss problems with others, but your solutions must be written up independently. Solutions should be written clearly, in complete sentences. References to the text should include section or page numbers.

Each problem set will include assigned reading from the textbook. You will be responsible for understanding the material covered in the readings as well as that covered explicitly in class.

A midterm exam will be scheduled during the week of March 2, with the precise date to be announced.

The final exam is scheduled by the university to occur on May 4, 2016, at 10:30.

Updates to this document, along with announcements and problem sets, will be posted on my website, under teaching.