MA533 Partial Differential Equations

FALL 2011

Instructor	P. D. Hislop
Office:	753 POT 257-5637 or hislop@ms.uky.edu
Text:	L. C. Evans, *Partial Differential Equations*, American Mathematical Society, 1998.
Class Meetings:	MWF 3:00–3:50AM CB 241
Office Hours:	MWF 4-5, and by appointment
COURSE MATERIAL AND INFORMATION	www.ms.uky.edu/∼hislop

Grading Policy

We will have one midterm exam in class (100 points), one final (100 points), and occasional homework (100 points) giving 300 points total. Homework will be posted on the course web page: *http : //www.ms.uky.edu/ hislop/* and you will have at least 10 days for each assignment. We will cover chapter 2, section 3.2, section 4.1, and section 4.6, in Evans.

Item	Date	Total Points
Homework		100 points
Mid-term Exam (approximately 14 October)	in class	100 points
Final Exam: 12 Dec. 1:00-3:00 PM		100
TOTAL		300

The minimum cut-offs for letter grades are: A 270-300; B 240-269; C less than 240. If your final total of all scores is within one of these intervals you are guaranteed to receive the corresponding letter grade or higher.

Course Content

This course is an introduction to partial differential equations (PDE). We will study the four basic PDEs: transport, elliptic, parabolic, and hyperbolic. Each PDE has solutions with characteristic properties and more or less general methods of solutions tempered to each type of PDE. We will mostly concentrate on linear PDEs. We will also review vector calculus, the theory of ordinary differential equations, and the solution method of separations of variables, as needed.

There are other good books that I recommend:
Fritz John: *Partial differential equations*. Springer, 1982.
Gerald B. Folland: *Introduction to partial differential equations*. Princeton University Press, 1995.