Partial Differential Equations
V63.0263, Spring 2010
Instructor: Robert Kohn, kohn@cims.nyu.edu
TA: Hala Al Hajj Shehadeh, hala@cims.nyu.edu
Lectures: Mon/Wed 9:30-10:45, WWH 312
Recitations: Thurs 8-9:15, 145 Fourth Avenue room 204

Prerequisite: ODE (or permission of the instructor).

Requirements: There will be regular homework assignments, a midterm exam, and a final exam. They will be weighted equally (1/3 HW, 1/3 midterm, 1/3 final) for the grade.

Office hours: Professor Kohn's office hours are Mondays and Tuesdays 2:30-3:30.

Textbook: Walter Strauss, *Partial Differential Equations: An Introduction*, John Wiley & Sons. The 2nd edition was published in 2007, but the it's OK if you have the first edition. The list price of the 2nd edition is high, but you can get it used (e.g. through Amazon) for under $50.

Additional sources: There are plenty of good books on PDE! An inexpensive one published by Dover is: S.J. Farlow, Partial Differential Equations for Scientists and Engineers (Dover, 1993, about $15).

Semester Plan

Wed 1/20	Section 1.2 (first order linear pde)
1/25, 1/27	Sections 2.1, 2.2 (1D linear wave eqn)
2/1, 2/3	Sections 2.3, 2.4, 2.5 (1D linear heat eqn)
2/8, 2/10	Sections 4.1-4.3 (separation of variables)
Wed 2/17	Sections 5.1, 5.2 (intro to Fourier series)
2/22, 2/24	Sections 6.1-6.3 (2D linear Laplace eqn)
3/1, 3/3	catch up and review
3/8, 3/10	*Midterm exam on Monday 3/8.*

In the second half-semester we'll cover additional topics from Strauss's book. Details to be announced later after we see how things go.