530. Mathematics of Finance *Spring 2012 Syllabus*

Professor: Robert Strain (strain at math.upenn.edu)
Course Web Page: `http://www.math.upenn.edu/~strain/12ma530/`

Class schedule: TH @ 10:30AM-Noon in DRL 4C6, attendance is *expected*.

First class, last class: January 12, April 24.

Brief course description: This course presents the basic mathematical tools to model financial markets and to make calculations about financial products, especially financial derivatives. Mathematical topics covered: stochastic processes, partial differential equations and their relationship. No background in finance is assumed.
Pre-reqs: Math 240, Stat 430.

Homework: Weekly, posted on the course blackboard website. Collaboration between students is encouraged, but you must write your own solutions, understand them and give credit to your collaborators. (In other words, put a list of the students with whom you collaborated on your homework.)
Late homework will not be accepted.
The two lowest homework scores will be dropped.

Grader: Jonathan Kariv (jkariv at math.upenn.edu)

Exams: There will be two in class exams. Exam attendance is *manditory*.
The first exam is on March 1.
The second exam is on April 24 (which is the last day of classes).

Evaluation: Your final grade is based on your level of participation in class (10%), the homework (30%), as well as the in class exams (30% and 30%).

Textbook: Jonathan Block. "Stochastic Processes and the Mathematics of Finance ", 2008. (Available on course website.)
Wilmott, Howison, Dewynne. "The Mathematics of Finanical Derivatives; A student introduction." *This text will also be on reserve at the Math/Physics/Astronomy Library in DRL.*