

## 420. Ordinary Differential Equations

*Spring 2011 Syllabus*

**Professor:** Robert Strain (strain at math.upenn.edu)

**Course Web Page:** <http://www.math.upenn.edu/~strain/11ma420/>

**Class schedule:** MW @ 3-4:30 in DRL 3C8, attendance is *expected*.

**Brief course description:** After a review of the basic techniques for solving equations, the course will discuss several of the following topics: stability of linear and nonlinear systems, forcing, boundary value problems and orthogonal functions, numerical techniques, Laplace transform methods.

**Homework:** Weekly, posted on the course website. Collaboration between students is encouraged. Homework will not be collected or graded.

**Quiz:** There will be a weekly quiz Monday at the beginning of class. Quiz problems will be taken directly from the homework.

**Exams:** There will be two in class exams. Exam attendance is *mandatory*.  
*The first exam is on March 2.*  
*The second exam is on April 25 (which is the last day of classes).*

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

**Textbook:** "Differential Equations," 3rd Edition, by Paul Blanchard, Robert L. Devaney, Glen R. Hall *This text will also be on reserve at the Math/Physics/Astronomy Library in DRL.*

**Topics covered** (subject to change): Chapters 1-7.