MATH 5620/6865 NUMERICAL ANALYSIS II
PRELIMINARY SPRING 2010 SYLLABUS

Instructor: Fernando Guevara Vasquez.
Contact info: fguevara@math.utah.edu, 801-581-7467, LCB 212.
Office hours: MTW 9:30am-10:30am or by appointment.
Prerequisites: Math 5610 or instructor’s permission. Basic Matlab programming.

Hours: MTWF 8:35am-9:25am
Course website: [http://www.math.utah.edu/~fguevara/math5620_s10](http://www.math.utah.edu/~fguevara/math5620_s10)
Description: This is the continuation of Math 5610. Topics include.
  • Numerical solution of ordinary differential equations (Chap 5 and 11)
  • Numerical solution to partial differential equations (Chap 12)
  • Approximating Eigenvalues (Chap 9)
  • Numerical solution of non-linear systems of equations. Optimization. (Chap 10)
Grading:
  • Homeworks (40%): There will be between 6 and 8 homeworks.
  • Project (15%): To be announced in class.
  • Midterm (15%): Tentatively last week of February, in class. Exact date will be announced at least one week before.
  • Final (30%) Thursday May 6 2010, 8am-10am (per university’s final exam schedule)

Class format: One day of class (Tuesday) will be mostly used as a Q&A session or computer lab.

About programming: Programming is an important part of the homework for this class. You are strongly encouraged to use Matlab or the open source (free) alternative Octave. Please see the course website for: (a) how to get Matlab or Octave and (b) guidelines on how to present your numerical experiments and supporting code.

For graduate students: You can take this class as a graduate level class (Math 6865). The lectures are the same for everyone.
Other reference textbooks You are not required to buy these, but I will reference them throughout the class.


Students with Disabilities: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.