APPM 4650 **Numerical Analysis I** **Fall 2005**

Instructor: Adam Norris, (303) 492–7566, adam@colorado.edu
Office Hours: TBA, or by appointment, in ECOT 217

Lectures: MTW from 11:00–11:50 PM in ECCR 151

Web page: (*http://amath.colorado.edu/courses/4650/*) It is your responsibility to check the web page on a regular basis. Here you will find current information on homework assignments and solutions. It also contains policies on illness, academic honesty, and special accommodations for religious holidays and documented special needs. The complete set of university policies an be found at *http://www.colorado.edu/policies/index.html*.

Text: "Numerical Analysis", 8^{th} ed., Burden, R. L. and Faires, J. D., Brooks/Cole Publ. Co., 2004

Important Dates:
Oct 5 — Drop/Add deadline without petition to the Dean
Oct 14 — Fall Break (Friday)
Nov 25 — Thanksgiving Break (Friday)
Dec 12 — Final exam (Monday), 1:30 – 4 PM

Grade Distribution:
40% Homework assignments
20% Midterm 1
20% Midterm 2
20% Final

Exams: Exams may be take-home and cumulative in nature.

Homework Policy: Homework will be assigned on a regular basis. Generally the problems will be from the text, but occasionally they will require you to fill in details from class discussions, or further explore a topic outside of class. Problems assigned during any given week will be due the following Wednesday. Your solutions should include the following:

- Clear, brief restatement of the problem and any important assumptions.
- Neat, detailed, step–by–step solution including sufficient comments to make the solution "read" well.
- Statement of the significant "physics" of the problem. What does the answer mean? Is it reasonable? If you don't know, say so, but don't bluff.

You are encouraged to work together on the assignments, however, the major portion should be done on your own. In all cases your submission should demonstrate that *you* understand the problem and its solution.

Course outline:
Root finding
Interpolation (polynomials)
Differentiation
Integration
Matricies and linear algebra
Roots & extremum problems for systems of equations

Academic honesty: Students are encouraged to work in groups, however, **all work turned in must be your own**. Violation of the CU Student Honor Code (*http://www.colorado.edu/academics/honorcode*) or the College of Engineering's Academic Honesty Advising Guidelines (*http://www.colorado.edu/engineering/ar_ugradadvising.html*) will result in a final course grade of F and a report to the College of Engineering or Arts and Sciences, a copy of which will be placed in the student's permanent file.