Math 5630/6630 - Introduction to Numerical Analysis I

Fall 2005

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Office Hours: Tue., Th. 2:00–3:00, Mon. 8:00–10:00, and *and by appointment*. See the web for the most up-to-date office hours.

Text: A.QUARTERONI, R. SACCO, AND F. SALERI, *Numerical Mathematics*, Springer, New York, (second corrected printing) 2000.

Reference: T. A. DAVIS AND K. SIGMON, *MATLAB Primer*, Seventh Edition, Chapman & Hall/CRC, Boca Raton, 2005.

Coverage: Parts of Chapters 2, 6–9, 11, and if time permits 12. The topics we will consider are: Solutions of equations (in one and variable, and if time permits in several variables), interpolation and approximation, numerical differentiation and integration, and solution of ordinary differential equations (initial-value and if time permits two point boundary-value problems).

Homework: Homework (problems and computer assignments) will be assigned, graded, and will be counted towards the final grade.

Exams: There will be two one-hour exams (28% each) and a final exam (56%). Tests will be announced at least three days in advance. Make up tests will not be given unless a special circumstance exists. Tentative (one-hour exam) test dates are Tue. October 4 and Th. November 17.

Grading: The lowest one-hour exam score or one half of the final exam score will be dropped, the total of these scores will count as 84% of the final grade. Homework score will count as 16% of the final grade. Different exams will be given and homework will be assigned to the 5630 and 6630 sections.