

Math 620, Fall 2006, Tentative Schedule:

Date	Section/Topic
Th 8/31/06	First Day Handout; §1.1 – Basic Concepts and Taylor’s Theorem
Tu 9/5/06	§2.1 – Floating-Point Numbers and Roundoff Errors
Th 9/7/06	§2.2 – Absolute and Relative Errors: Loss of Significance
Tu 9/12/06	§2.3 – Stable and Unstable Computations: Conditioning
Th 9/14/06	§2.3 – Stable and Unstable Computations: Conditioning
Tu 9/19/06	§3.1 – Bisection Method
Th 9/21/06	§3.2 – Newton’s Method
Tu 9/26/06	§3.2 – Newton’s Method for Nonlinear Systems
Th 9/28/06	§3.4 – Fixed Points and Functional Iteration
Tu 10/3/06	§3.6 – Homotopy and Continuation Methods
Th 10/5/06	§6.1 – Polynomial Interpolation
Tu 10/10/06	§6.2 – Divided Differences
Th 10/12/06	§6.1 – Chebyshev Polynomials
Tu 10/17/06	MIDTERM EXAM
Th 10/19/06	§6.4 – Spline Interpolation
Tu 10/24/06	§6.8 – Best Approximation: Least-Squares Theory
Th 10/26/06	§6.12 – Trigonometric Interpolation
Tu 10/31/06	§6.13 – Fast Fourier Transform

Date	Section/Topic
Th 11/2/06	§6.13 – Fast Fourier Transform
Tu 11/7/06	§7.1 – Numerical Differentiation and Richardson Extrapolation
Th 11/9/06	§7.2 – Numerical Integration Based on Interpolation
Tu 11/14/06	§7.3 – Gaussian Quadrature
Th 11/16/06	§7.5 – Adaptive Quadrature
Tu 11/21/06	§8.2 – Taylor-Series Methods
Th 11/23/06	THANKSGIVING BREAK
Tu 11/28/06	§8.3 – Runge-Kutta Methods
Th 11/30/06	§8.4 – Multistep Methods
Tu 12/5/06	§8.4 – Multistep Methods
Th 12/7/06	§8.5 – Local and Global Errors: Stability
Tu 12/12/06	§Review for Final Exam
Tu 12/19/06	FINAL EXAM