

**Math 441, Fall 2011, Tentative Schedule:**

Date	Section/Topic
W 8/31/11	First Day Handout; §1.1 – Basic Concepts and Taylor’s Theorem
W 9/7/11	§2.1 – Representation of Numbers in Different Bases
M 9/12/11	§2.1 – Floating-Point Numbers and Roundoff Errors
W 9/14/11	§2.2 – Absolute and Relative Errors: Loss of Significance
M 9/19/11	§2.2 – Absolute and Relative Errors: Loss of Significance
W 9/21/11	§3.1 – Bisection Method
M 9/26/11	§3.2 – Newton’s Method
W 9/28/11	§3.2 – Newton’s Method for Nonlinear Systems
M 10/3/11	§3.4 – Fixed Points and Functional Iteration
W 10/5/11	<b>EXAM 1</b>
M 10/10/11	§6.1 – Polynomial Interpolation
W 10/12/11	§6.2 – Divided Differences
M 10/17/11	§6.4 – Spline Interpolation
W 10/19/11	§6.8 – Best Approximation: Least-Squares Theory
M 10/24/11	§6.12 – Trigonometric Interpolation
W 10/26/11	§6.13 – Fast Fourier Transform

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M 10/31/11	§6.13 – Fast Fourier Transform
W 11/2/11	§7.1 – Numerical Differentiation and Richardson Extrapolation
M 11/7/11	<b>EXAM 2</b>
W 11/9/11	§7.2 – Numerical Integration Based on Interpolation
M 11/14/11	§7.3 – Gaussian Quadrature
W 11/16/11	§7.5 – Adaptive Quadrature
M 11/21/11	§8.2 – Taylor-Series Methods
W 11/23/11	<b>NO CLASS</b>
M 11/28/11	§8.3 – Runge-Kutta Methods
W 11/30/11	§8.4 – Multistep Methods
M 12/5/11	§8.4 – Multistep Methods
W 12/7/11	Catch up Day
M 12/12/11	Review for Final Exam
W 12/21/11	<b>FINAL EXAM</b>