

Math 6313, Fall 2016, Tentative Schedule:

| Date | Section/Topic |
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| Tu 8/23/16 | First Day Handout; §1.1 – Basic Concepts and Taylor’s Theorem |
| Th 8/25/16 | §2.1 – Representation of Numbers in Different Bases |
| Tu 8/30/16 | §2.1 – Floating-Point Numbers and Roundoff Errors |
| Th 9/1/16 | §2.2 – Absolute and Relative Errors: Loss of Significance |
| Tu 9/6/16 | §2.2 – Absolute and Relative Errors: Loss of Significance |
| Th 9/8/16 | §3.1 – Bisection Method |
| Tu 9/13/16 | §3.2 – Newton’s Method |
| Th 9/15/16 | §3.2 – Newton’s Method for Nonlinear Systems |
| Tu 9/20/16 | §3.4 – Fixed Points and Functional Iteration |
| Th 9/22/16 | §6.1 – Polynomial Interpolation |
| Tu 9/27/16 | §6.2 – Divided Differences |
| Th 9/29/16 | §6.1 – Chebyshev Polynomials |
| Tu 10/4/16 | §6.4 – Spline Interpolation |
| Th 10/6/16 | §6.8 – Best Approximation: Least-Squares Theory |
| Tu 10/11/16 | §6.12 – Trigonometric Interpolation |
| Th 10/13/16 | Midterm Exam |

| Date | Section/Topic |
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| Tu 10/18/16 | §6.13 – Fast Fourier Transform |
| Th 10/20/16 | §6.13 – Fast Fourier Transform |
| Tu 10/25/16 | §7.1 – Numerical Differentiation and Richardson Extrapolation |
| Th 10/27/16 | §7.2 – Numerical Integration Based on Interpolation |
| Tu 11/1/16 | §7.3 – Gaussian Quadrature |
| Th 11/3/16 | §7.3 – Gaussian Quadrature |
| Tu 11/8/16 | §7.5 – Adaptive Quadrature |
| Th 11/10/16 | §8.2 – Taylor-Series Methods |
| Tu 11/15/16 | §8.3 – Runge-Kutta Methods |
| Th 11/17/16 | §8.4 – Multistep Methods |
| Tu 11/22/16 | Fall Break |
| Th 11/24/16 | Fall Break |
| Tu 11/29/16 | §8.4 – Multistep Methods |
| Th 12/1/16 | §8.5 – Local and Global Errors: Stability |
| Tu 12/6/16 | Review for Final Exam |
| TBD | FINAL EXAM |