

## Math 6318.001, Spring 2013, Tentative Schedule:

Date	Section/Topic
Tu 1/15/13	First Day Handout; Introduction to PDE's, Importance of Numerical Solutions, Taylor series review
Th 1/17/13	Matlab Demo
Tu 1/22/13	Taylor series methods for solving ODE's
Th 1/24/13	Runge-Kutta methods for solving ODE's
Tu 1/29/13	Multistep methods for solving ODE's
Th 1/31/13	Multistep methods for solving ODE's
Tu 2/5/13	Finite Difference Methods for Hyperbolic Equations
Th 2/7/13	Finite Difference Methods for Hyperbolic Equations
Tu 2/12/13	Finite Difference Methods for Hyperbolic Equations
Th 2/14/13	Order of Accuracy of FD Schemes
Tu 2/19/13	Stability of FD Schemes
Th 2/21/13	Dissipation and Dispersion of FD Schemes
Tu 2/26/13	Finite Difference Methods for Parabolic Equations
Th 2/28/13	Finite Difference Methods for Parabolic Equations
Tu 3/5/13	Midterm Exam
Th 3/7/13	Finite Difference Methods for Parabolic Equations
Tu 3/12/13	Spring Break
Th 3/14/13	Spring Break

Date	Section/Topic
Tu 3/19/13	Finite Element Methods for Elliptic Equations
Th 3/21/13	Finite Element Methods for Elliptic Equations
Tu 3/26/13	Finite Element Methods for Elliptic Equations
Th 3/28/13	Finite Element Methods for Elliptic Equations
Tu 4/2/13	FEM for Elliptic Equations (Inhomogeneous Dirichlet BC's)
Th 4/4/13	FEM for Elliptic Equations (quadrature)
Tu 4/9/13	FEM for Elliptic Equations (Inhomogeneous Neumann BC's)
Th 4/11/13	FEM for Elliptic Equations (2D)
Tu 4/16/13	Order of Convergence of FE Methods
Th 4/18/13	Weighted Residual Method
Tu 4/23/13	Multigrid Methods
Th 4/25/13	Multigrid Methods
Tu 4/30/13	Catch Up Day
Th 5/2/13	Review
Tu 5/9/13	FINAL EXAM