

## Math 225, Spring 2011, Tentative Schedule:

Date	Section/Topic
W 1/26/11	First Day Handout; §1.1 – Basic Definitions and Concepts §1.2 – Solutions and Initial Value Problems
M 1/31/11	§1.2 – Solutions and Initial Value Problems §2.7 – Direction Fields
W 2/2/11	Phase Line §2.7 – Approximation Method of Euler
M 2/7/11	§2.7 – Approximation Method of Euler §2.2 – Separable Equations
W 2/9/11	§2.1 – First-Order Linear Equations §2.4 – Compartmental Analysis
M 2/14/11	§2.4 – Compartmental Analysis
W 2/16/11	Improved Euler's Method §2.8 – Higher-Order Numerical Methods: Taylor and Runge-Kutta
M 2/21/11	§2.8 – Higher-Order Numerical Methods: Taylor and Runge-Kutta Review for Exam 1
W 2/23/11	<b>EXAM 1</b>
M 2/28/11	§3.9–3.11 – Introduction: the Mass-Spring Oscillator §3.1 – Introduction to Second-Order Linear Equations
W 3/2/11	§3.2 – Fundamental Solutions of the Homogeneous Equation
M 3/7/11	§3.4 – Homogeneous Equations with Constant Coefficients: Real Roots §3.5 – Homogeneous Equations with Constant Coefficients: Complex Roots
W 3/9/11	§3.6 – Nonhomogeneous Equations

Date	Section/Topic
M 3/14/11	§3.7 – Superposition and the Method of Undetermined Coefficients
W 3/16/11	§3.8 – Variation of Parameters
M 3/21/11	SPRING BREAK
W 3/23/11	SPRING BREAK
M 3/28/11	§8.1 – Introduction to the Phase Plane
W 3/30/11	§8.1 – Introduction to the Phase Plane Coupled Mass-Spring Systems
M 4/4/11	<b>EXAM 2</b>
W 4/6/11	§5.1 – Definition of Laplace Transform
M 4/11/11	§5.1 – Definition of Laplace Transform §5.2 – Properties of the Laplace Transform
W 4/13/11	§5.3 – Inverse Laplace Transform
M 4/18/11	§5.3 – Inverse Laplace Transform §5.4 – Solving Initial Value Problems
W 4/20/11	§5.5–5.6 – Transforms of Discontinuous and Periodic Functions
M 4/25/11	<b>STUDENT PRESENTATIONS</b>
W 4/27/11	§6.2 – Review of Matrices and Vectors
M 5/2/11	§6.3–6.4 – Homogeneous Linear Systems with Real Eigenvalues
W 5/4/11	Linear Systems in the Plane
M 5/9/11	Connections Between Eigenvalues and Guess and Test Method
W 5/11/11	Review for Final Exam
F 5/20/11	<b>FINAL EXAM</b>