Math 225, Fall 2002, Tentative Schedule:

| Date | Section/Topic |
| :--- | :--- |
| W $8 / 28 / 02$ | First Day Handout; <br> $\S 1.1$ - Background |
| F 8/30/02 | $\S 1.2$ - Solutions and Initial Value Problems |
| W 9/4/02 | $\S 1.3$ - Direction Fields |
| F 9/6/02 | $\S 1.4$ - Phase Line |
| M 9/9/02 | $\S 1.5$ - Approximation Method of Euler |
| W 9/11/02 | $\S 2.2$ - Separable Equations |
| F 9/13/02 | $\S 2.3$ - Linear Equations |
| M 9/16/02 | Review for Exam 1 |
| W 9/18/02 | $\S 3.2$ - Compartmental Analysis |
| F 9/20/02 | EXAM 1 |
| M 9/23/02 | $\S 3.2$ - Compartmental Analysis |
| W 9/25/02 | $\S 3.5$ - Improved Euler's Method |
| F 9/27/02 | $\S 3.6$ - Higher-Order Numerical Methods: Taylor and |
| Runge-Kutta |  |
| M 9/30/02 | $\S 4.1$ - Introduction: the Mass-Spring Oscillator |
| W $10 / 2 / 02$ | $\S 4.2$ - Linear Differential Operators |
| F $10 / 4 / 02$ | $\S 4.3$ - Fundamental Solutions of Homogeneous Equations |
| M $10 / 7 / 02$ | $\S 4.3$ - Fundamental Solutions of Homogeneous Equations |

W 10/9/02
$\S 4.5$ - Homogeneous Linear Equations with Constant Coefficients

F 10/11/02 §4.6-Auxiliary Equations with Complex Roots
M 10/14/02 §4.8 - Method of Undetermined Coefficients
W 10/16/02
F 10/18/02
M 10/21/02
W 10/23/02
F 10/25/02
M 10/28/02
W 10/30/02
F $11 / 1 / 02$
M 11/4/02
W 11/6/02
F 11/8/02
M $11 / 11 / 02$
W 11/13/02
F $11 / 15 / 02$
M $11 / 18 / 02$
$\S 4.7$ - Superposition and Nonhomogeneous Equations
Review for Exam 2
$\S 4.9$ - Variation of Parameters
EXAM 2
$\S 5.2$ - Introduction to the Phase Plane
§5.4 - Coupled Mass-Spring Systems
$\S 7.2$ - Definition of Laplace Transform
$\S 7.2$ - Definition of Laplace Transform
Student Presentations
$\S 7.3$ - Properties of the Laplace Transform
$\S 7.4$ - Inverse Laplace Transform
§7.4 - Inverse Laplace Transform
$\S 7.5$ - Solving Initial Value Problems

## Student Presentations

$\S 7.6$ - Transforms of Discontinuous and Periodic Functions

W 11/20/02
$\S 7.6$ - Transforms of Discontinuous and Periodic Functions and Review for Exam 3

F 11/22/02
M $11 / 25 / 02$
W 11/27/02
F 11/29/02
M $12 / 2 / 02$

M 12/9/02 Review for Final Exam
M $12 / 16 / 02$
$\S 9.5$ - Homogeneous Linear Systems with Constant Coefficients

W 12/4/02 §12.2 - Linear Systems in the Plane
F 12/6/02 Connections Between Eigenvalues and Guess and Test Method
$\S 9.3$ - Review 2: Matrices and Vectors
EXAM 3
$\S 9.4$ - Linear Systems in Normal Form
Thanksgiving Break

FINAL EXAM

