## Schedule and Homework Assignments Math 3113-002/005, Fall 2004

## Approximate Schedule

| Week | Topics | Week | Topics |
| :---: | :---: | :---: | :---: |
| Aug $23-\operatorname{Aug} 27$ | 1.1-1.3 | Oct 18 - Oct 22 | 4.1-4.2 |
| Aug 30-Sep 3 | 1.4-1.5 | Oct 25 - Oct 29 | 4.2-5.1, Exam 2 |
| Sep 6-Sep 10 | 1.6-3.1 | Nov 1 - Nov 5 | 5.1-5.2 |
| Sep $13-$ Sep 17 | 3.1-3.2 | Nov 8 - Nov 12 | $7.1-7.2$ |
| Sep $20-$ Sep 24 | 3.2-3.3, Exam 1 | Nov 15 - Nov 19 | 7.3-7.4 |
| Sep 27 - Oct 1 | $3.4-3.5$ | Nov 22 - Nov 26 | Exam 3 |
| Oct 4 - Oct 8 | 3.5-3.6 | Nov 29 - Dec 3 | 7.4-7.5 |
| Oct 11 - Oct 15 | 3.8, 4.1 | Dec 6 - Dec 10 | 7.6 |

## Homework by Section

| Section | Topic | Homework |
| :--- | :--- | :--- |
| 1.1 | Differential Equations and Solutions | $3,6,13-15,20,22,26,28-29$ |
| 1.2 | General and Particular Solutions | $5,7-8,10-11,15,19-22,25,30,35$ |
| 1.3 | Slope Fields, Existence/Uniqueness | $1,3,11-15,27-29$ |
| 1.4 | Separable Equations | $3,5,17,21,24,28,34,42,54,61$ |
| 1.5 | First Order Linear Equations | $3,7,17,24,29,33,37$ |
| 1.6 | Substitutions | $3,7,9,18-21,29,44,45,49,52,56-60$ |
| 3.1 | Second Order Linear Equations | $1,4,9,17-19,23-25,29,33,36,38-39,43-48$ |
| 3.2 | Linear Equations | $2,3,5-9,14,18,22-24$ |
| 3.3 | Homogeneous Equations | $6-8,10-11,18-19,23,25,33,35,39-42$ |
| 3.4 | Vibrations | $5-8,13-18$ |
| 3.5 | Non-homogeneous Equations | $5,7,9,17,21-24,32-33,47,51$ |
| 3.6 | Forced Oscillations and Resonance | $2-4,8,11,12,18,23,24$ |
| 3.8 | Boundary Value Problems | $2-4,7-9,13$ |
| 4.1 | First Order Systems | $1,4,10-13,16-17,21-22$ |
| 4.2 | The Method of Elimination | $1,3,7,13,21-22$ |
| 5.1 | Matrices and Linear Systems | $3,4,6,11-12,19-20,23$ |
| 5.2 | The Eigenvalue Method | $2-4,11,12,18,24$ |
| 7.1 | Laplaca Transforms | $1-4,7-9,11,14-18,20,23,25-29$ |
| 7.2 | Initial Value Problems | $2-3,5-6,11-13,17,19,21,28-31$ |
| 7.3 | Partial Fractions | $2-3,6-7,11,15,27,30-32$ |
| 7.4 | Calculus of Laplace Transforms | $2-3,5-7,9,15-16,19-20,23,25-26,33,36-37$ |
| 7.5 | Periodic, Piecewise-cont. Functions | $1-3,7,11-14,19-20,25-27,31-33$ |
| 7.6 | Impulses and Delta Functions | $1,4-6,9-11,13,14$ |

