

Math 212 Differential Equations

Tuesday August 23 <i>Workbook:</i> <i>Selwyn Hollis,</i> <i>"A Mathematica Companion for Differential Equations"</i>	Thursday August 25 <i>Introduction to Differential Equations</i> <i>amcDE</i>	Tuesday August 30 <i>Mathematical Models Based on Differential Equations</i> <i>Sections 1.1-1.2</i>	Thursday September 1 <i>Fundamental Concepts and Terminology</i> <i>Section 1.3</i>
September 6 <i>Solutions of First-Order Linear Equations</i> <i>Sections 2.1-2.2</i>	September 8 <i>Elementary Applications</i> <i>Section 2.3</i>	September 13 <i>Review Chapters 1-2</i> <i>Sections 1.1-2.3</i>	September 15 <i>Exam 1 Linear First-Order Equations</i> <i>Sections 1.1-2.3</i>
September 20 <i>Direction Fields Separable Equations</i> <i>Sections 3.1-3.2</i>	September 22 <i>Bernoulli Equations Reduction of Order</i> <i>Sections 3.3-3.4</i>	September 27 <i>Applications of Nonlinear First-Order Equations</i> <i>Section 3.5</i>	September 29 <i>Local Solutions Existence and Uniqueness</i> <i>Sections 4.1-4.2</i>
October 4 <i>Qualitative Behaviour Logistic Population Models</i> <i>Sections 4.3-4.4</i>	October 6 <i>Numerical Methods Systems of Equations</i> <i>Sections 4.5-4.6</i>	October 11 <i>Review Chapters 3-4</i> <i>Sections 3.1-4.6</i>	October 13 <i>Exam 2 Nonlinear First-Order Equations</i> <i>Sections 3.1-4.6</i>
October 18 <i>Fall Break</i>	October 20 <i>Modeling Vibrations Numerical Approximation</i> <i>Sections 5.1-5.2</i>	October 25 <i>Operators and Linearity Solutions, Linear Independence</i> <i>Sections 5.3-5.4</i>	October 27 <i>Green's Functions Power Series Solutions</i> <i>Sections 5.5-5.6</i>
November 1 <i>Polynomial Solutions</i> <i>Section 5.7</i>	November 3 <i>Homogeneous Equations Exponential Shift</i> <i>Sections 6.1-6.2</i>	November 8 <i>Complex and Real Solutions</i> <i>Sections 6.3-6.4</i>	November 10 <i>Unforced Vibrations Periodic Forcing</i> <i>Sections 6.5-6.6</i>
November 15 <i>Review Chapters 5-6</i> <i>Sections 5.1-6.6</i>	November 17 <i>Exam 3 Second Order Linear Equations</i> <i>Sections 5.1-6.6</i>	November 22 <i>Laplace Transforms</i> <i>Sections 7.1-7.2</i>	November 24 <i>Thanksgiving</i>
November 29 <i>Heaviside Functions and Periodic Inputs</i> <i>Sections 7.3-7.4</i>	December 1 <i>Dirac Distribution and Impulses</i> <i>Sections 7.5-7.6</i>	December 6 <i>Course Review</i>	<i>Text:</i> <i>Selwyn Hollis,</i> <i>"Differential Equations with Boundary Value Problems"</i>
Thursday, Dec 8 <i>Final Exam</i> 9-11 am in WL134 <i>Sections 1.1-7.6</i>	 <i>Math 212 Differential Equations</i> <i>TTh 9:30-10:45</i> <i>Parrish, Fall 2005</i>	 <i>Grading Scheme:</i> <i>exams</i> <i>homework</i> <i>final exam</i> <i>total:</i>	 <i>points</i> 60 points 20 points <u>20 points</u> 100 points