Math 2410 Fall 2026 sec 005 and sec 011 Syllabus for Zill (12e)

Week #	Section(s) Covered	Topic(s)
1	1.1 1.2 1.3	Definitions and Terminology Initial-Value Problems Differential Equations as Mathematical Models
2	2.1 2.2	Solution Curves without a Solution (Direction Fields/Autonomous) Separable Equations
3	2.3 2.4	Linear Equations Exact Equations
4	2.6 3.1 3.2	A Numerical Method (Euler's Method) Linear and Nonlinear Models
5	3.3 4.1	Modeling with Systems of First-Order Equations Theory of Linear Equations
6	4.1 4.3	Homogeneous Linear Equations with Constant Coefficients
7	Exam 1 4.4 4.5	Covers 1.2, 2.1-2.4, 4.1, 4.3 Superposition and Undetermined Coefficients
8	4.6 5.1 7.1	Variation of Parameters Linear Models: Initial-Value Problems (Spring/Mass Systems) Definition of the Laplace Transform
9	7.2 7.3	Inverse Transforms and Transforms of Derivatives Operational Properties I
10	7.4 Exam 2	Operational Properties II Covers 4.1, 4.3, 4.4, 4.6, 5.1, 7.1-7.4
11	B.1 (Appendix) B.2 B.3	Basic Definitions and Theory Gaussian and Gauss-Jordan Elimination The Eigenvalue Problem
12	8.1 8.2	Preliminary Theory- Linear Systems Homogeneous Linear Systems
13	8.2 Review for Final	(continued) Cumulative