Math 250 Sequence of Topics

From *Ordinary Differential Equations*, by Tenenbaum & Pollard

§	Topic	Assignment
3	The Differential Equation	1, 2, 3, 4
4	The General Solution of a DE	2, 4, 6, 8, 11, 12, 14, 17, 18, 20, 22, 27
6C	Separable Equations	3, 5, 6, 8, 9, 11, 12, 14, 16, 17, 20, 21
7	Homogeneous Equations	2, 3, 5, 6, 8, 10, 13, 14, 15
9	Exact Equations	4–17
11	Linear and Bernoulli Equations	1–24
15A	Dilution and Accretion Problems	1, 4, 5, 6, 7, 8, 9, 11, 12
15C	Temperature Problems	1, 2, 3, 4
15D	Decomposition and Growth Problems	1, 2, 3, 4, 5, 6, 7, 8, 10
18	Complex Numbers	Read as needed for later lessons
19	Linear Independence of Functions	1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 14
20	The nth-Order Homogeneous Linear ODE with Constant Coefficients	2–34 (evens), 35
21	Method of Undetermined Coefficients	4–24 (evens), 28, 30, 32
22	Method of Variation of Parameters	1–15 (odds), 16–20
27	The Laplace Transform	2–21
28	Undamped Motion	p. 321: 3, 4, 5, 6; p. 329: 6, 7, 8, 9, 13, 14; p. 343: 6, 7, 8, 9
29	Damped Motion	p. 353: 7, 8, 10, 11, 12, 15, 16, 17, 18; p. 364: 11abc
31	Systems of Differential Equations	2, 4, 6, 8, 10, 12, 14, 16, 22, 23, 24, 25, 26
33A	Coupled Springs	1, 2, 6, 7, 10
N9.7	Applications of Systems	Problems in §9.7 of the Notes, p. 307
37	Power Series Solutions	1, 3–12