

APPM 2360 Fall 2008

Week	Date	Section	Lecture	HW #	Section	Problems	Due
1	M 25-Aug	1.1	Review of basic concepts, Modeling	1	1.2	8, 10, 15, 16-21, 24, 35, 38	
	W 27-Aug	1.2	Solutions of ODEs: Qualitative analysis and direction fields				
	F 29-Aug	1.3	Separation of variables: Quantitative analysis				
2	M 1-Sep	No Class	Labor Day	2	1.4	1, 5, 8, 18	4-Sep
	W 3-Sep	1.4	Numerical Analysis: Euler's Method				
	F 5-Sep	1.5	Picard's Theorem				
3	M 8-Sep	2.1	Linear equations	3	2.1	8, 30, 46	11-Sep
	W 10-Sep	2.2	First order linear ODEs				
	F 12-Sep	2.2					
4	M 15-Sep	2.3	Growth and Decay	4	2.3	6, 13, 22, 23, 33	18-Sep
	W 17-Sep	2.4	Mixing and Cooling				
	F 19-Sep	2.5	Nonlinear Models				
5	M 22-Sep	2.6	Systems of ODEs	5	2.6	8, 16, 18	22-Sep
	W 24-Sep	Review	Exam 1 (weeks 1-4) 7:15-8:45PM				
	F 26-Sep	3.1	Matrices				
6	M 29-Sep	3.2	Systems of linear equations	6	3.1	7, 9, 25, 27, 29, 61, 67	2-Oct
	W 1-Oct	3.2					
	F 3-Oct	3.3	The inverse matrix				
7	M 6-Oct	3.4	Determinants	7	3.3	8, 12, 21, 33, 34	9-Oct
	W 8-Oct	3.5	Vector spaces and subspaces				
	F 10-Oct	3.5					
8	M 13-Oct	3.6	Basis and dimension	8	3.4	3, 27, 32, 33	16-Oct
	W 15-Oct	4.1	The harmonic oscillator				
	F 17-Oct	4.2	Real characteristic roots				
9	M 20-Oct	4.2		9	3.5	15, 20, 38, 64	20-Oct
	W 22-Oct	Review	Exam 2 (weeks 5-8) 7:15-8:45PM				
	F 24-Oct	4.3	Complex characteristic roots				
10	M 27-Oct	4.4	Undetermined coefficients	10	3.6	22, 27, 32, 40, 50	30-Oct
	W 29-Oct	4.5	Variation of parameters				
	F 31-Oct	4.6	Forced oscillations				
11	M 3-Nov	4.6		11	4.1	4, 10, 11, 14	6-Nov
	W 5-Nov	5.3	Eigenvalues and eigenvectors				
	F 7-Nov	5.3					
12	M 10-Nov	6.2	Linear systems with real eigenvalues	12	4.2	7, 19, 24, 26, 41, 42, 46, 52	13-Nov
	W 12-Nov	6.2					
	F 14-Nov	6.3	Linear systems with nonreal eigenvalues				
13	M 17-Nov	6.3/6.4	Stability and linear classification	13	4.3	3, 16, 17, 31, 32, 60	17-Nov
	W 19-Nov	Review	Exam 3 (weeks 9-12) 7:15-8:45PM				
	F 21-Nov	6.4					
14	M 24-Nov	No Class	Fall Break	14	4.4	7, 18, 23, 29, 48	
	W 26-Nov	No Class					
	F 28-Nov	No Class					
15	M 1-Dec	7.1	Nonlinear systems	14	4.5	4, 10, 11, 14	4-Dec
	W 3-Dec	7.1/7.2	Linearization				
	F 5-Dec	7.2					
16	M 8-Dec	7.2/7.4	Chaos	14	4.6	1, 4, 10, 18	11-Dec
	W 10-Dec	Review					
	F 12-Dec	Review					
M 15-Dec			Final exam (Comprehensive) 7:30-10:00PM				