

**Lectures**

April 1	Linear Algebra Background
April 3	Systems of DEs (7.1)
April 5	Linear Systems (7.4, 7.5)
April 8	Real Eigenvalues (7.5)
April 10	Real and Complex Eigenvalues (7.5, 7.6)
April 12	Complex Eigenvalues (7.6)
April 15	Repeated Eigenvalues (7.8)
April 17	Nonlinear Introduction (9.1, 9.2)
April 19	Almost Linear Systems (9.3)
April 22	Almost Linear Systems (9.3)
April 24	Competing Species (9.4)
April 26	Exam 3
April 29	Predator-Prey Systems (9.5)
May 1	Liapunov's Method (9.6)
May 3	Periodic Solutions (9.7)
May 6	Periodic Solutions (9.7)
May 8	Chaos and Strange Attractors (9.8)
May 10	Review

**Homework**

April 3	7.2	20, 22
	7.3	17, 18, 26a, 31
April 5	7.1	3, 5, 10 and 11 (no sketch), 14, 17
April 8	7.4	2, 5
	7.5	2, 3, 9, 15
April 10	7.5	10, 16, 29, 31
April 12	7.5	4, 6
	7.6	1,2, 9, 11ab
April 15	7.6	3, 10, 15, 19, 28abd
April 17	7.8	2, 3, 7, 10, 15 (argue carefully)
April 19	9.1	20
	9.2	5a, 6a, 16, 18a

April 22	9.3	1, 2, 5, 6, 8 (not part (d) on the last three)
April 24	9.3	10, 13, 24, 26 (not part (d) on the first two)
April 29	9.3	7, 16
	9.4	2, 3 (no eigenvectors)
May 1	9.4	5 (no eigenvectors), 8, 10
	9.5	1, 2 (no eigenvectors)
May 3	9.5	4, 5 (no eigenvectors)
	9.6	1, 2, 6
May 6	9.6	3, 4, 9a
	9.7	1, 4, 5
May 8	9.7	2, 6, 7, 9, 11, 12