

Syllabus

Jan. 15	M1 Basic Matrix Operations
17	M1 Row & Column Operations
20	M2 Linear Equations
22	M2 Gaussian Elimination
24	M4 Matrix Inversion
27	M5 Determinants
29	M6 Linear Dependence
30	M6 Linear Independence
Feb. 3	M11 Gram-Schmidt
5	1.1–1.2 Introduction to Differential Equations
7	2.1 Linear Equations
10	2.2 Linear Equations
12	Review
13	Exam I
14	2.3 Non-linear Equations
17	2.4 Separable Equations
19	2.5 Applications of 1st Order Equations
21	2.5 Applications of 1st Order Equations
24	2.6 Population Dynamics & Related Problems
26	2.7 Elementary Mechanics
28	2.8 Exact Equations
Mar. 2	2.9 Integrating Factors
4	2.10 Homogeneous Equations
6	3.1 Introduction to 2nd Order Equations
9–13	Midsemester Break
16	3.2 Fundamental Solutions of the Homogeneous Eqn.
18	3.3 Linear Independence (<i>Review</i>)
19	Exam II
20	3.4 Reduction of Order
23	3.5 Homogeneous Eqns. with Constant Coefficients
25	3.5.1 Complex Numbers
27	3.6.1 Method of Undetermined Coefficients
30	3.6.1-3.6.2 Method of Undetermined Coefficients
Apr. 1	3.6.2-3.7.1 Method of Variation of Parameters
3	3.7.1 Free Vibrations
6	4.1 Power Series
8	4.1 Power Series
10	4.2 Series Solns at an Ordinary Point I
13	4.2.1 Series Solns at an Ordinary Point II
15	Review
17	Good Friday
20	Easter Monday
21	Exam III
22	4.3 Regular Singular Points
24	4.4 Euler Equations
27	4.5 Series Solns at a Regular Singular Point I
29	4.5.1 Series Solns at a Regular Singular Point II
May 1	Review & Course Evaluation
5	Final Exam