

Math 20580 schedule

Fall 2017

August 23	Lay 1.1–1.2: Systems, row reduction
25	1.3 Vector equations
28	1.4. The matrix equation
30	1.5 Solution sets
September 1	1.7 Linear independence
4	1.8–1.9: Linear transformations
6	2.1–2.2: Matrix operations and inverses
8	2.3 Characterizations of invertible matrices
11	2.8 Subspaces
13	2.9 Dimension and rank
15	3.1: Determinants
18	3.2: More on Determinants
September 19	Exam I: 8:00–9:15 a.m., covers material from Aug 23–Sep 13 inclusive
20	3.3 Cramer’s Rule
22	4.1–4.2: Vector spaces and subspaces, null spaces and column spaces
25	4.3 Linear independence and bases
27	4.4 Coordinates
29	4.5 Dimension of vector space
October 2	4.6–4.7: Rank and changes of bases
4	5.1–2: Eigenvalues and characteristic equations
6	5.3 Diagonalization
9	5.4 Eigenvectors
11	5.5 Complex eigenvalues
13	6.1-6.2: Inner product and orthogonality
October 14–22	Fall Break
23	6.3 Orthogonal projections
25	6.4 The Gram-Schmidt process
October 26	Exam II: 8:00–9:15 a.m., covers material Sep 15–Oct 23 inclusive
27	6.5 The least squares method
30	Boyce & DiPrima 1.1-1.2: Solutions to Diff Equations, direction fields
November 1	1.3 Classification of differential equations
3	2.1-2.2: Integrating factors, separable equations
6	2.3 Modeling
8	2.4 Linear and non-linear equations
10	2.5 Autonomous equations
13	Review and leeway
November 14	Exam III: 8:00–9:15 a.m., covers material Oct 25–Nov 10 inclusive
15	2.6 Exact equations and integrating factors
17	3.1 Homogeneous equations with constant coefficients
20	3.2 Linear homogeneous equations; Wronskian
November 22–26	Thanksgiving
27	3.3 Complex roots
29	3.4 Repeated roots
December 1	3.5 Undetermined coefficients
4	3.6: Variation of parameters
6	3.7-3.8: Vibrations
December 12	Final Exam 1:45–3:45 p.m., covers all material except B&D 3.8