	Math 20580 schedule	**Fall 2019**
Aug 28	Lay 1.1–1.2: Systems, row reduction	
30	1.3 Vector equations	
Sep 2	1.4. The matrix equation	
4	1.5 Solution sets	
6	1.7 Linear independence	
9	1.8–1.9: Linear transformations	
11	2.1–2.2: Matrix operations and inverses	
13	2.3 Characterizations of invertible matrices	
16	2.8 Subspaces	
18	2.9 Dimension and rank	
20	3.1: Determinants	
23	3.2: More on Determinants	
Sep 24	**Exam I: 8:00–9:15 a.m., covers material from Aug 28–Sep 18 inclusive**	
25	3.3 Cramer's Rule	
27	4.1–4.2: Vector spaces and subspaces, null spaces and column spaces	
30	4.3 Linear independence and bases	
Oct 2	4.4 Coordinates	
4	4.5 Dimension of vector space	
Oct 7	4.6–4.7: Rank and changes of bases	
9	5.1–2: Eigenvalues and characteristic equations	
11	5.3 Diagonalization	
14	5.4 Eigenvectors	
16	5.5 Complex eigenvalues	
18	6.1-6.2: Inner product and orthogonality	
Oct 19–27	**Fall Break**	
28	6.3 Orthogonal projections	
30	6.4 The Gram-Schmidt process	
Oct 31	**Exam II: 8:00–9:15 a.m., covers material Sep 20–Oct 18 inclusive**	
Nov 1	6.5 The least squares method	
4	Boyce & DiPrima 1.1-1.2: Solutions to Diff Equations, direction fields	
6	1.3 Classification of differential equations	
8	2.1-2.2: Integrating factors, separable equations	
11	2.3 Modeling	
13	2.4 Linear and non-linear equations	
15	2.5 Autonomous equations	
18	Review and leeway	
Nov 19	**Exam III: 8:00–9:15 a.m., covers material Oct 25–Nov 13 inclusive**	
20	2.6 Exact equations and integrating factors	
22	3.1 Homogeneous equations with constant coefficients	
25	3.2 Linear homogeneous equations; Wronskian	
Nov 27–Dec 1	**Thanksgiving**	
Dec 2	3.3 Complex roots	
4	3.4 Repeated roots	
6	3.5 Undetermined coefficients	
9	3.6: Variation of parameters	
11	3.7-3.8: Vibrations	
Dec 19	**Final Exam 1:45–3:45 p.m., covers all material except B&D 3.8**	