

Course Guide Linear Algebra: Spring 2017:

	Topic	My notes	Comments	Due
M: 1-16	what is the matrix ?			
W	matrix addition and multiplication			
F	matrix algebra, Block matrices and Applications			
M: 1-23	Gaussian elimination			Mission 1
W:	elementary matrices			
F:	spanning and linear independence and the CCP			
M: 1-30	inverse matrices			Mission 2
W:	Determinants			
F:	Determinants			
M: 2-6	Determinants			Mission 3
W:	Questions ?			
F:	Test 1 (on matrix calculation and determinants)			
M: 2-13	abstract vector space and subspace			
W:	theory of spanning and LI for abstract vector space			
F:	theory of spanning and LI for abstract vector space			
M: 2-20	theory of spanning and LI for abstract vector space			Mission 4
W:	coordinate map of a given basis			
F:	on the calculation of bases			
M: 2-27	linear transformations			Mission 5
W:	linear transformations			
F:	on isomorphisms of vector space			
M: 3-6	matrix of a linear transformation			Mission 6
W:	coordinate change			
F:	coordinate change			
	Spring Break 3-13 to 3-17			
M: 3-20	Questions ?			Mission 7
W:	Test 2 (on theory of vector spaces and linear transformations)			
F:	direct sum decompositions			
M: 3-27	eigenvectors			
W:	Assessment Day (there is an activity for this day for this class)			
F:	complex eigenvectors			
M: 4-3	generalized eigenvectors			Mission 8
W:	real Jordan Form			
F:	matrix exponential and the solution of systems of linear DEqns			
M: 4-10	Euclidean geometry			Mission 9
W:	Gram-Schmidt, the closest vector problem			
F:	quotient space and the first isomorphism theorem			
M: 4-17	Easter Monday			
W:	dual space, bilinear forms, metrics			Mission 10
F:	metric geometry and musical morphisms			
M: 4-24	Orthogonal transformations over \mathbb{R}, \mathbb{C} or \mathbb{H}			
W:	Spectral Theorem and its application to quadratic forms			Mission 11
F:	On the SVD and the Moore-Penrose inverse			
M:5-1	Discussion of Take-Home Test 3 (turn-in at start of class)			
W: 5-3	Reading Day,			
F:	Final Exam: Comprehensive, Friday, May 5 th , 10:30-12:30.			

❖ Grades:

Tests 1,2,3 = 3(150pts)=450pts, Final = 250pts, Missions = 260pts, A-Day Project 20pts, Participation 20pts, .

- ❖ There are 11 Missions, each problem in these Missions is worth 2pts, there should be at least 130 problems assigned.

- ❖ If helpful, I will likely replace your final exam score (properly weighted) for Tests 1 or 2. However, I will not replace Take-Home Test 3.