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# Calendar

COURSE HOME	SES #	TOPICS	KEY DATES
SYLLABUS	1	The geometry of linear equations	
	2	Elimination with matrices	
CALENDAR	3	Matrix operations and inverses	
READINGS	4	<i>LU</i> and <i>LDU</i> factorization	
	5	Transposes and permutations	Problem set 1 due
ASSIGNMENTS	6	Vector spaces and subspaces	
EXAMS	7	The nullspace: Solving $Ax = 0$	
	8	Rectangular $PA = LU$ and $Ax = b$	Problem set 2 due
STUDY MATERIALS	9	Row reduced echelon form	
	10	Basis and dimension	
TOOLS	11	The four fundamental subspaces	Problem set 3 due
RELATED RESOURCES	12	Exam 1: Chapters 1 to 3.4	
	13	Graphs and networks	
VIDEO LECTURES	14	Orthogonality	Problem set 4 due
	15	Projections and subspaces	
	16	Least squares approximations	
	17	Gram-Schmidt and $A = QR$	Problem set 5 due
	18	Properties of determinants	
	19	Formulas for determinants	
	20	Applications of determinants	Problem set 6 due
	21	Eigenvalues and eigenvectors	
	22	Diagonalization	
	23	Markov matrices	Problem set 7 due
	24	<i>Review for exam 2</i>	
	25	Exam 2: Chapters 1-5, 6.1-6.2, 8.2	
	26	Differential equations	
	27	Symmetric matrices	
	28	Positive definite matrices	
	29	Matrices in engineering	Problem set 8 due
	30	Similar matrices	
	31	Singular value decomposition	Problem set 9 due
	32	Fourier series, FFT, complex matrices	

SES #	TOPICS	KEY DATES
33	Linear transformations	
34	Choice of basis	Problem set 10 due
35	Linear programming	
36	<i>Course review</i>	
37	Exam 3: Chapters 1-8 (8.1, 2, 3, 5)	
38	Numerical linear algebra	
39	Computational science	
40	Final exam	

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