Tentative Schedule for MTH 342
Winter 2020

	Monday	Tuesday	Wednesday	Thursday	Friday
Jan	6 Introduction, vector spaces (Sec 1.1)	7	8 Subspaces (Sec 1.7), see also 1.C in Axler's	**9** Recitation	10 Linear combination, independence, spanning set, basis (Sec 1.2)
Jan	13 Lineap maps (Sec 1.3)	14	**15** Matrix representation and operations on linear maps (Sec 1.5 and 2.8)	16 Recitation	17 **HW 1 due** Null space and range space (Sec 3.B in Axler's)
Jan	20 No class (Martin Luther King day)	21	22 Monomorphism, epimorphism, isomorphism (Sec 3.B in Axler's)	23 Recitation	24 **HW 2 due** Sum of vector spaces (Sec 1.36-39 in Axler's)
Jan	27 Direct sums (Sec 1.40-45 in Axler's, see also 3.77-78)	28	29 Invariant space, eigenspaces (5.A in Axler's)	30 Recitation	31 **HW 3 due** Eigenvalues and eigenvectors (Sec 4.1.1-4)
Feb	3 Diagonalizing linear maps (Sec 2.2), see also 5.C in Axler's	4	5 Diagonalizing linear maps (Sec 2.2), see also 5.C in Axler's	6 Recitation	7 Midterm review
Feb	10 Midterm exam (in class)	11	12 Inner product spaces (Sec 5.1), see also 6.A in Axler's	13 Recitation	14 **HW 4 due** Norm and orthogonality (Sec 5.2), see also 6.A in Axler's
Feb	17 Orthogonality and projection (Sec 5.3)	18	19 Orthogonal complement (Sec 6.45-47 in Axler's)	20 Recitation	21 **HW 5 due** Gram-Schmidt orthogonalization (Sec 5.3)
Feb	24 Adjoint operators (Sec 5.5), see also 7.A in Axler's	25	26 Normal operators and spectral theory of normal operators (Sec 6.2)	27 Recitation	28 **HW 6 due** Orthogonal and unitary matrices (Sec 5.7)
Mar	2 Minimizing problems and least square method (Sec 5.4), see also 6.56-58 in Axler's	3	4 Singular value decomposition (Sec 3.3-4), see also 7.49-51 in Axler's	5 Recitation	6 **HW 7 due** Singular value decomposition
Mar	9 Singular value decomposition	10	11 Catch-up/Review	12 Recitation	13 *(last day of class)* **HW 8 due** Final exam review
Mar	16	**17** Final exam 2 – 3:50 PM, Location TBA	18	19	20