

	Lecture Monday 10:15-11:45
1st week	Gauss elimination, vector spaces, linear independence, basis,
2nd week	basis transform, linear transformation, determinant
3rd week	eigenvalues, eigenvectors, scalar product, orthogonal matrices, symmetric matrices, Gram- Schmidt orthogonalization,
4th week	trace, quadratic form, Gauss- Jordan elimination,
5th week	fundamental subspaces, dimension theorems, orthogonal projections,
6th week	method of smallest squares, positive definite matrices, singular values, polar decomposition, spectral decomposition,
7th week	midterm test
8th week	sine Fourier-series, vibrating string, Bernoulli solution,
9th week	D'Alembert's solution, infinite length rod, Heat equation
10th week	vector analysis, line integral, conservative fields,
11th week	Curl-test on plane, on space, potential function, surface integrals,
12th week	Gauss theorem, Stokes theorem
13th week	Green theorem, surfaces
14th week	extra practice

Retaken midterm