

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