

Tentative Fall 2018 course outline; important dates

#	DATE	COMMENTS
1	T Sept 4	Introduction, basics of matrix manipulations
2	R Sept 6	Vector spaces, column spaces, rank
3	T Sept 11	Orthogonality, projections, Gram-Schmidt
4	R Sept 13	Least squares estimation, Spectral decomposition
5	T Sept 18	Consequences and applications
6	R Sept 20	Limits and continuity; Probability spaces
7	T Sept 25	Random variables and their distributions, convergence in probability, Jensens's Inequality Assignment 1 due
8	R Sept 27	Differentiation; MV and Taylor's Theorems
9	T Oct 2	Transformations of r.v.s, Variance stabilization
10	R Oct 4	Sequences and series
11	T Oct 9	Power series, moment and probability generating functions
12	R Oct 11	Application to branching processes Assignment 2 due
13	T Oct 16	Riemann integration
	R Oct 18	Midterm Exam
14	T Oct 23	Riemann-Stieltjes integration
15	R Oct 25	C.f.s, Chebyshev's Inequality, WLLN, CLT
16	T Oct 30	Multidimensional calculus. Taylor's Theorem
17	R Nov 1	Inverse and Implicit Function Theorems, Extrema, Lagrange multipliers
18	T Nov 6	Integration, distribution of (X, S^2) , Leibniz's Rule Assignment 3 due
19	R Nov 8	Normal sampling distributions
		Nov 12 - 16 Fall term break
20	T Nov 20	Steepest descent, Newton-Raphson, Gauss-Newton
21	R Nov 22	Maximum likelihood estimation
22	T Nov 27	Asymptotics of ML Estimation, Information Inequality
23	R Nov 29	Minimax M-estimation
24	T Dec 4	Minimax M-estimation
25	R Dec 6	Measure and Integration Assignment 4 due
	W Dec 19	Final Exam 2:00 - 5:00 (But check this on Bear Tracks – that is the only official source)