

Course Outline STA2212H/453H1

from the private notebook
of
David Brenner

Jan7, 2017

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lectures:

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ref./text:

Brenner, D. :

FROM THE PRIVATE NOTE BOOK:

Illustrated adventures in very (very) mathematical
probability & statistics, 2008-15

Fraser, D.A.S. :

PROB & STATS: THRY & APPS (1976/2002/8)

Knight, K. :

MATH STATS (2000)

Lehmann, E.L. :

TESTING STAT HYPs (1957/86) & THRY of PT EST (1986)

Silvey, D.F. :

STAT INF (1976)

- **caution:* all contents subject to shuffling, merging, expansion
& (really serious) modification
- the general statistical model: confidence & likelihood
 - estimation theory: consistency, unbiasedness & minimum variance
 - sufficiency & the rao-blackwell theorem
 - exponential models
 - location-scale models
- the general linear model: correlation, regression
& conditional expectation
- hypothesis testing
 - testing means, variances: differences & ratios
 - neyman-pearson theory & the likelihood ratio test
- bayesian theory

grading (G) :

$$\begin{aligned} \text{test } (T) &= 40 \quad - \quad \text{Fri. Mar. 24} \\ 3\text{assignments@20each } (A = A_1 + A_2 + A_3) &= 60 \end{aligned}$$

$$G = T + A$$

(NOTE: test T will be held during class time.)