Syllabus for the Comprehensive Examination

Covering Material from STAT 530 (Experimental Design & Analysis)

Topics:

- Analysis of variance (ANOVA), Least-squares estimation of model parameters, Model diagnostic;

- Contrasts, Orthogonal contrasts, Multiple comparisons; Tukey’s method, Fisher’s LSD, Scheffe’s test, Bonferroni’s t-test, Multiple range test, Duncan’s test

- Randomized complete and incomplete block designs, Latin square design, Graeco-Latin square design;

- Two-factor factorial design, \(2^k\) factorial design, blocking a factorial design, confounding in \(2^k\) factorial design in \(2^p\) blocks, one-half fraction of the \(2^k\) design

- Two-factor factorial with random effects, two-factor mixed model;

- Two-stage nested design

- Repeated Measures and Split-Plot Designs

References
