

# **Biostatistics 652 Syllabus**

Mon-Wed (11:30-1:00 P.M.)

**Instructor:** Anant M. Kshirsagar (kay@umich.edu)

**Syllabus:** Principles of experimentation: Randomization, Replication, Local Control

Technical terms: Plots, yield, replication, blocks, treatments, factors levels, contrasts, interaction.

Linear model: estimability, generalized inverse, efficiency BLUES, confidence intervals, hypothesis testing of controls

Designs: Completely randomized, randomized blocks, Latin squares, Youden squares, B.I.B., incomplete block designs

Optimality properties

Factorial experiments,  $2^n$  and  $3^n$  designs, confounding fractional replication

Inter-block estimates