

STATISTICS 404 - SYLLABUS

Week 1 - Sept. 5

Material: C2, C3.1–3.3

Topics: Review of the two sample t-test and distributions, and complete randomization. Start one way ANOVA.

Lab: No Lab

Week 2 - Sept. 10, 12

Material: C3.3–3.5

Topics: Finish one way ANOVA: definitions, SS's, global F-test. Key assumptions and justifications of 1-way ANOVA, Cochran's theorem and two lemmas

Lab: Introduction to UNIX (vim, etc), get accounts.

Week 3 - Sept. 17, 19 - P.S. 1 due

Material: C3.6, C3.7

Topics: Cochran's theorem used to justify one way ANOVA. Checking assumptions of 1 way ANOVA, contrasts.

Lab: R commands useful for the basic 1-way ANOVA

Week 4 - Sept. 24, 26 - P.S. 2 due

Material: C4.1–3

Topics: Random effects models. Randomized blocks designs. Latin squares.

Lab: R commands ctd for ANOVA model checking. Intro to Emacs/SAS (for contrasts and multiple comparisons).

Week 5 - Oct. 1, 3 - P.S. 3 due

Material: C4.4, C5

Topics: Balanced incomplete block designs. Factorial designs – two factor case, with and without interactions.

Lab: Random effects models

Week 6 - Oct. 10 - P.S. 4 due

Material:

Topics:

Lab: RCB in R.

Week 7 - Oct. 15, 17 -MIDTERM W.