

**Course Information for Statistics 514**  
**Design of Experiments – Fall 2005**

**Course Objective.** An intermediate course in applied statistics intended for students wanting to follow up a first course in statistics. This course counts towards either the statistics minor or the statistics certificate. Single-factor analysis of variance (ANOVA): diagnostics and remedial measures; multifactor ANOVA: equal and unequal sample sizes, random and mixed effects, analysis of covariance; randomized block designs, nested designs, repeated measures, latin square and response surface methodology are covered. The statistical program, SAS, is used extensively in this course.

**Time:** TBA (Division 1)

**Texts:** *Attendance Workbook For Statistics 514*,  
Kuhn, ??? (download from course web page)  
*Applied Linear Statistical Models, 4th Edition*,  
Neter et al., 1996,  
(Optional) *Students Solution Manual*  
*for Applied Linear Statistical Models*,

**Calculator:** TI-83 (plus) calculator

| Week(s) | Chapter(s) Covered | Description                     |
|---------|--------------------|---------------------------------|
| 1,2     | 16,17,18           | single factor ANOVA             |
| 3,4     | 19,20,21,22        | two factor ANOVA                |
| 5,6     | 23,24              | multi factor ANOVA              |
| 7       | 25                 | analysis of covariance          |
| 8       | 26                 | design of experiments           |
| 9       | 27                 | randomized block design         |
| 10      | 28                 | nested design                   |
| 11      | 29                 | repeated measures design        |
| 12      | 30                 | latin square design             |
| 13      | 31                 | factorial and fractional design |
| 14      | 32                 | response surface methodology    |

**More Information.** More information on grading, homework assignments, quizzes, the final exam, attendance policy and my teaching philosophy can be found at

<http://www.pnc.edu/faculty/jkuhn/courses/other/syllabus/syllabus.html>