Syllabus
Stat 431-001 & -002 (Fall 2013)
Introduction to Statistics; Theory and Methods

Professor: Lawrence Brown, lbrown@wharton.upenn.edu; Office: 445 JMHH
　　　Office Hours: Tue, 3 – 4, & Thurs, 9:30 – 10:30, or by appointment (email or call 8-4753; I'm frequently available.)
　　　(Class: M&W 1:30-3 or 3-4:30, JMHH F-50)

Instructor: Emil Pitkin, pitkin@wharton.upenn.edu; Office:
　　　Office Hours: TBA
　　　Additional problem and instruction sections (optional) will be scheduled as needed. See our Canvas website for hours.

Canvas: Additional instructional material, homework assignments and solutions, schedules for problem sessions and other useful information will be posted on our "canvas" website.

Textbook: *Probability and Statistics, 4th Edition*. D. M. DeGroot and M. Schervish, Addison Wesley

Topics covered: Most of Chapters 8 – 11 of the text and selected portions of Chapter 7.
　　　There are occasional references in Chapters 8 – 11 to material presented in Chapter 7. Most of these can be skipped. However, you will get a more complete understanding if you have read Chapter 7. I recommend reading Sections 7.1 – 7.4 at your earliest opportunity. We will return later in the semester to cover some of this material, and also some of Sections 7.5 and 7.7.
　　　[For example, there is a sentence in Example 8.1.3 on p. 465 that says, "The posterior distribution of θ … ." This sentence can safely be skipped for now. You will lose some of the motivation for the estimator, $\hat{\theta}$, presented in the next sentence. But the remainder of the problem can be solved. I'll do it in class.]
　　　The text for the course emphasizes basic concepts, philosophy and theory. Additional material will be distributed to provide additional coverage of statistical applications and methodology.

Prerequisites:
　　　College calculus. Math 104 or the equivalent is a minimum prerequisite. Additional background in multivariate calculus such as covered in Math 114 or 115 is highly desirable. Familiarity with basic matrix operations is also assumed.
　　　Probability. Background in probability is a prerequisite, as contained in our Stat 430. The necessary material is included in Chapters 1 – 6 of our text.

Homework: Homework assignments will be posted on our website in "canvas". They will be due as noted in the assignments. Selected homework problems will be graded, but the primary purpose of the homework is to help you master the material. Accordingly, consultation with others is encouraged on homework assignments, but for your own benefit you should not be satisfied to provide rote copies of solutions by others. Homework exercises will occasionally be

discussed in class, and more often in problem sessions conducted by Emil Pitkin. Solutions will be posted. Additional problem and review sessions will be scheduled and conducted as needed.

Exams: There will be **two** midterms and a final, as follows.
      Midterm 1: **<u>IN CLASS</u>**, **Wednesday, Oct 2**.
      Midterm 2: EVENING; **Tue, Nov 5**, **from 6 – 8 pm**. Room TBA
      Final Exam:**TBA**.

Grade allocation: The midterm exams will each count 30% of the grade, and the (cumulative) final will count 40%. Upward adjustment may occur on the basis of the professor's subjective evaluation based on the quality of class participation and performance on assigned homework. (These "adjustments" will generally not exceed one fractional mark, e.g. from B to B+).