

# STAT 2131: Applied Statistical Methods I Fall, 2016

Course Info.: Monday & Wednesday, 3:00PM - 4:15PM  
B60 Marvis Hall  
Webpage: <http://courseweb.pitt.edu>

Texts: Applied Linear Statistical Models, 5<sup>th</sup> Ed.  
-Kutner, Nachtsheim, Neter & Li  
SAS for Linear Models, 4<sup>th</sup> Ed  
-Littell, Stroup, & Freund

Instructor: Dr. Kehui Chen  
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Office Hrs: Monday & Wednesday, 4:15PM - 5:00 PM  
Or By Appointment

Grader: Yu Liu  
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Office: Posvar 1825  
Office Hrs: Friday 11AM-12PM

## Course Outline

This course is the first semester of a two semester sequence in applied statistical methodology. The overall goal of the course is to gain a deep understanding of the foundations of popular methodology and in how to choose, apply, and interpret appropriate statistical methods.

This first semester will cover linear regression and follows Chapters 1-12 of Kutner, Nachtsheim, Neter & Li. OLS and MLE estimation, hypothesis testing and confidence intervals, model interpretation, ANOVA, prediction, modeling building, and regression diagnostics are some of the topics that will be covered. The appropriate sections of Littell, Stroup, & Freund will also be covered and SAS will be used for data analysis. The text will be supplemented by course notes and other material to emphasize particular topics of interest.

## Prerequisites

- A course in Linear Algebra.
- A course in Mathematical Statistics (STAT 1152 or higher).
- Working knowledge of calculus (especially differentiation).

## Grading

The final grade will be computed from homework (30%), midterm (30%), and the final (40%).

- Homework: Homework assignments will be assigned on a regular basis. They consist of problems from the text, supplemental problems, and real case studies.
- Midterm: There will be one open book midterm, on Oct 18.
- Final: The final will be open book, in class on Dec 7.

## Accommodations for Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 216 William Pitt Union, (412) 648-7890 or (412) 383-7355 (TTY), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.