PSC 405  
Spring 2015  
3:25-4:40 T/TH  
Harkness 329  

Linear Models  

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PREREQUISITES  
The prerequisites for this course include a mathematical statistics course at the  
level of PSC 404 and mathematical modeling at the level of PSC 407.  

COURSE REQUIREMENTS  
The requirements consist of problem sets, a midterm, and a final. The problem  
sets will be divided between analytic and empirical exercises, and all empirical  
exercises will be performed in R. Students are also responsible for the additional  
readings. The course grade will be calculated as follows: problem sets 20%,  
midterm 40%, final 40%.  

COURSE WEBPAGE  
http://www.rochester.edu/College/PSC/clarke/405/405.html  

TEXTS  
The required texts for this course are:  

  http://www.ssc.wisc.edu/~bhsansen/econometrics/  

  http://cran.r-project.org/doc/contrib/Faraway-PRA.pdf  
The accompanying source code and data, are free on the web here:  
http://cran.r-project.org/web/packages/faraway/index.html  

For when you need a simpler initial overview, the following lower-level texts may be helpful:


**COURSE SCHEDULE**

Topic 1: Linear Model Basics  
Topic 2: Specification and misspecification  
Topic 3: Instrumental variables  
Topic 4: Nonlinear estimators  
Topic 5: Generalized method of moments  
Topic 6: Bayesian methods  
Topic 7: Panel models  
Topic 8: Semiparametric methods

**Additional reading**


• Belsley, Kuh, and Welsch. 1980. Regression Diagnostics, Ch. 2.


