PSC 405
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/~bhansen/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.


