

Econ 709
Econometrics I, Part I
Fall 2017

Course Time: Mondays and Wednesdays, 11:00 – 12:15.
Location: Psych 107
Webpage: <http://www.ssc.wisc.edu/~bhansen/709/709.htm>

Instructor: Bruce Hansen, 6438 Social Science. bruce.hansen@wisc.edu
Office Hours: Tuesdays, 9:00 – 11:00, or by appointment.

TAs: Yoshi Rai yrai@wisc.edu
Wanjia Zhu wzhu65@wisc.edu

Professor Hansen will teach the first half of the semester (until October 23).
Professor Porter will teach the second half of the semester, covering linear regression.

This course is an introduction to probability theory and statistical inference, designed for first-year Economics Ph.D. students. The course prerequisites a familiarity with intermediate calculus and linear algebra.

Class assignments will be passed out approximately every week. The assignments will be graded by the teaching assistant, and will be reviewed in the discussion sections.

There will be a midterm exam on October 25.

Grading for the first half the semester will be: Assignments: 20%. Exam: 80%.
The grades from the two halves will be averaged to obtain the semester grade.

The textbook for the first half is *Statistical Inference, 2nd Edition* by George Casella and Roger Berger. Used inexpensive copies are available from Amazon.

The textbook for the second half is *Econometrics* by Bruce Hansen. An updated printed version of the manuscript be available at the end of October for approximately \$15.

Some alternative texts that cover similar material to Casella and Berger are:

Less Advanced:

Arthur S. Goldberger, *A Course in Econometrics*

Robert Hogg and Elliot Tanis, *Probability and Statistical Inference*

Similar Level:

Robert Hogg and Allen Craig, *Introduction to Mathematical Statistics*

More Advanced:

Erich Lehmann and George Casella, *Theory of Point Estimation*

Erich Lehmann and Joe Romano, *Testing Statistical Hypotheses*

Topics and Readings:

Probability Theory	Chapter 1
Transformations and Expectations	Chapter 2
Common Families of Distributions	Chapter 3
Multiple Random Variables	Chapter 4
Properties of a Random Sample	Chapter 5
Point Estimation	Chapter 7, 10.1
Hypothesis Testing	Chapter 8, 10.3
Confidence Intervals	Chapter 9, 10.4

The textbook goes into many topics in more depth than we will have time to investigate during the half semester. Our treatment will be a bit more narrow and focused.