This syllabus is work in progress. I will put an “updated” version of it on my web page every time I work on it. Feel free to contact me if you have questions/suggestions about the course.

This is going to be a rather unstructured course. We will deal with different topics, “ordered” in a relatively chaotic way. We will focus on microeconometrics, and we will not deal with applications to macroeconomics and/or finance. Also, we will focus on methodologies particularly useful in a “reduced form” (that is, non-structural) approach. The emphasis will be, of course, on applications, but we will also spend time dealing with econometric and economic theory, as long as they are important in understanding the applications.

Most classes will be based on lectures, but some others will be based on discussion of applied papers. In the latter case I will ask you to read the paper before class, so we can have a constructive discussion on the content, strengths, and weaknesses of the paper.

For the empirical applications we will be using Stata©. We will spend some time discussing Stata programming, and 75% of your final grade will depend on problem sets which will be mostly empirical. The UNIX version of Stata 8 is available on Harsanyi. Duke students can also buy a perpetual license for $129, which is a much reduced price. See the following link for details, http://www.stata.com/info/order/new/edu/gradplan.html. Buying Stata is an excellent investment if you plan to use cross-section econometrics in your research, and Stata for Windows is much more user-friendly than Stata for UNIX (even if the commands are identical).

The remaining 25% of the final grade will be based on a presentation I will ask you to prepare for the last part of the course. I will be very flexible as to which paper(s) you will want to present. Broadly speaking, I would like you to present a paper (or set of papers) in which you have to discuss the economics and the econometrics of an applied paper, dealing with a methodology at least partly different from what we covered in class. You can also choose to present a paper you wrote, but this is not strictly required.

There will be NO final exam.
No textbook is, strictly speaking, required, but the following are two books you might want to purchase, if you have a strong interest in applied microeconometrics.

- Wooldridge, 2002 (W hereafter), Econometric Analysis of Cross Section and Panel Data, MIT Press. This should be available at the bookstore. All databases used in Wooldridge can be downloaded http://courses.bus.msu.edu/ECON/821/001/index.cfm?action=mat
- Deaton, Angus, 1997 (D hereafter), The Analysis of Household Surveys, Johns Hopkins. This textbook is also available online at http://www.netlibrary.com/ebook_info.asp?product_id=33616.

Most or all papers are available online. A useful starting point to search a paper is http://www.lib.duke.edu/texis/searchdb/ejdb/search/results.html?mode=subj&subjname=Economics&format_ne=d (which also includes JSTOR).

Office hours by appointment

- **Estimation with “Robust” standard Errors**
  - Weights, clustering and stratification, bootstrapping with complex survey design.
    - D, Ch. 1.
    - W, Ch. 17.8.
  - Heteroskedasticity, Robust standard errors, Quantile Regressions
    - D, Chapter 2
    - W, 4.2.3, 4.2.4, 14.6.
  - The Bootstrap, with iid observations and with complex survey design
    - D, Chapter 1, 58-61.

- **Measurement Error**
  - D, Chapter 2
  - W, 4.4.
• 2SLS, its Pitfalls, and Alternatives
  o Instrumental Variables
    ▪ W, Chapter 5.
    ▪ D, 2.6
  o Pitfalls of instrumental variables, and alternatives
    ▪ W, 5.2.6
    ▪ Davidson & McKinnon, Estimation and Inference in Econometrics, Oxford University Press, 1993, Ch. 7.5, 18.5.
    ▪ Bound, Jaeger & Baker, 1995, “Problems with instrumental variables estimation when the correlation between the instruments and the endogenous regressors is weak”, JASA, 443-450.

• Program Evaluation, Experiments & Natural Experiments
  o W, Chapter 18
  o article on command match).
• **Intrahousehold Allocation**
  o Deaton (1997), Chapter 4.

• **Identification & Externalities**

• **Experiments & Natural Experiments**