Professor: Casey Warman

Class Time: Friday 12:25-15:25

Office Hours: TBA, by appointment

Office: 6214 University Avenue, A23

Objective of Course: The focus of the course will be on how to undertake creating an empirical paper of academic journal quality using applied econometric techniques. Students will be encouraged to continue on with their research after the completion of the course, either on their own or through co-authorships. The focus will be on labour and health related data sets, although other datasets are available outside of the RDC.

Evaluation of Course

- Attendance/Participation/Assignments - 25%

- Presentation - 25%

- Final Paper - 50%

Letter Grade... Numerical (%) Equivalent
A+... $90 - 100$
A.. $85 - 89$
A-... $80 - 84$
B+.. $77 - 79$
B.. $73 - 76$
B-... $70 - 72$
F.. < 70

Tentative Dates

- **Proposal**: ∼Early February

- **Lit Review/Methodology**: ∼Due mid/late-February

- **Presentation**: ∼End March

- **Final Paper**: ∼April

Term Paper: The term paper can be written in either Microsoft Word or Latex although the use of Latex is encouraged. The term paper should be between 20 to 25 pages. The term paper cannot be used for another graduate course in an form. If you have any questions regarding this, please see me before starting your term paper.

Presentation: MAs 18 to 20 minute presentation and 3 minutes of questions. (subject to change)
PhDs 25 to 30 minute presentation and 3 minutes of questions. (subject to change)

Some subjects we will examine:

Econometric Methods (time permitting):

Panel Data

- Pooled Data

- Fixed Effects

- Random Effects

- Synthetic cohorts

Exploring Common Data Problems

Binomial and Multinomial Models

- Linear Probability Models

- Probit

- Logit

- Multinomial/Ordinal data

- Count data (Poisson and Negative Binomial Regressions etc.)

Causal Inference with Observational Data

- Instrumental Variables

    - -IV
    - -Hausman-Taylor estimator

- Difference-in-Difference Models

- Regression discontinuity design

Obtaining Correct Inference

- Bootstrapping, Weighting and Survey Data

- Clustering related issues

Nonparametric and Semiparametric Methods

- Kernel Density Estimates

- Counterfactual Density Estimates

- Nonparametric Regressions

- Quantile Regressions

Other Stuff

- Factor Analysis

- Blinder-Oaxaca Decomposition

- Other requested topics...

- Heckit and Selection bias (probably not)

- Survival Analysis (probably not)

STATA

- No prior knowledge of STATA is required.

Subjects covered

- An introduction to STATA

- Simple programming techniques

- Panel Data

- Manipulating data

- MATA (STATA's built in Matrix program) will also be taught throughout the term.

Students are expected to learn the rest of the STATA codes required for their term paper on their own.

Some Data Sets that are accessible in the RDC:

- National Population Health Survey (NPHS)

- Canadian Community Health Survey (CCHS)

- Workers and Employers Survey (WES)

- Survey Labour and Income Dynamics (SLID)

- Ethnic Diversity Survey (EDS)

- Youth-in-transition Survey (YITS)

- 2001 and 2006 Census Masterfiles

- Longitudinal Survey of Immigrants to Canada (LSIC)

- National longitudinal Survey of Children and Youth (NLSCY)

- National Graduate Survey (NGS)

Other Data Sets Are Also Available in the RDC

Alternatively, public use data is available from many sites, including:
http://usa.ipums.org/usa/

Students using the RDC must undergo an orientation (takes around 45 mintutes) and sign an oath before they are able to gain access to the data.

Suggested Technical References

Baltagi Badi H. (2005) Econometric Analysis of Panel Data, John Wiley and Sons.

Cameron, A. Colin and Pravin K. Trivedi (2005) Microeconometrics: Methods and Applications Cambridge University Press.

Davidson, Russell and James G. MacKinnon (2003) Econometric Theory and Methods Oxford University Press.

Kennedy, Peter (2008) A Guide to Econometrics, 6th edition. Blackwell Publishing.

Wooldridge Jeffrey M. (2010) Econometric Analysis of Cross Section and Panel Data, 2nd edition. The MIT Press.

Course Readings

SLID
Hum, Derek and Wayne Simpson (2004)"Reinterpreting the performance of immigrant wages from panel data" *Empirical Economics* 29: 129- 147.
Methods: Fixed Effects, Random Effects and Haussman-Taylor estimation

Frenette, Marc. 2004. "Access to College and University: Does Distance to School Matter?" *Canadian Public Policy* 30(4): 427-443.

LSIC
Imai, Susumu, Derek Stacey and Casey Warman. 2011. "From Engineer to Taxi Driver? Occupational Skills and the Economic Outcomes of Immigrants," Working Papers 1275, Queen's University, Department of Economics. `http://ideas.repec.org/p/qed/wpaper/1275.html`
Methods: Factor Analysis

CCHS
Carpenter, Christopher ,Sabina Postolek and Casey Warman. 2011. "Public-Place Smoking Laws and Exposure to Environmental Tobacco Smoke (ETS) in Public Places," NBER Working Papers 15849, *American Economic Journal: Economic Policy* `http://ideas.repec.org/p/qed/wpaper/1260.html`
Methods: Difference-in-Difference

NGS
Betts, Julian, Christopher Ferrall and Ross Finnie (2006) "The Role of University Characteristics in Determining Post-Graduation Outcomes: Panel Evidence from Three Recent Canadian Cohorts" *Canadian Journal of Economics*, forthcoming.
Methods: Hazard model

WES
Aydemir, Abdurrahman and Mikal Skuterud (2008) "The Immigrant Wage Differential Within and Across Establishments" *Industrial Labor Relations Review*
Methods: Fixed Effects, Blinder-Oaxaca decomposition

NPHS
Deri, Catherine (2005) "Social networks and health service utilization" *Journal of Health Economics*, 24:6, 1076-1107.
Methods: Fixed Effects

Census

Warman, Casey (2007) "Ethnic Enclaves and Immigrants Earnings Assimilation" *Canadian Journal of Economics* 40(2): 401-422. `http://ideas.repec.org/p/qed/wpaper/1261.html`
Methods: Fixed Effects, Synthetic Cohorts

Other papers
Lemieux, Thomas (2002) "Decomposing change in wage distributions: a unified approach" *Canadian Journal of Economics* Vol 35:4 pp. 646-688.
Methods: Counterfactual density estimates

Dinardo, J., N.M. Fortin and T. Lemieux (1996) "Labor market institutions and the distribution of wages 1973-1992: a semiparametric approach," *Econometrica*, 64, 1001-1024.
Methods: Counterfactual density estimates

Becker, William E. (1992) "A Graphical Exposition of the Ordered Probit" *Econometric Theory* 8(1): 127-131.
Methods: Ordered Probit

Warman, Casey, Frances Woolley and Christopher Worswick (2010) "The Evolution of Male-Female Wages Differentials in Canadian Universities: 1970-2001" *Canadian Journal of Economics*, 43(1):347-372. `http://ideas.repec.org/p/qed/wpaper/1099.html`
Methods: Blinder-Oaxaca Decomposition, Kernel Density Estimates, Counterfactual density estimates

Norton, Edward, and Chunrong Ai (2004) "Interaction terms in logit and probit models" *Economics Letters* 80(1):123-129.
Methods: Correctly interpreting interaction terms for Logit/Probit

Firpo, Sergio, Nicole M. Fortin and Thomas Lemieux (2009) "Unconditional Quantile Regressions" *Econometrica*.
Methods: Unconditional quantile regressions