ECON5525 Syllabus Revision

Schedule of CONTENT Coverage

Week of…	Original course content/coverage	Revised course content/coverage
March 16-20	- Factor analysis - Stata data	- Cancelled
March 23-27	- DD/RD - Presentations	- Cancelled
March 30-Apr 6	- Presentations	- Cancelled

ORIGINAL Course ASSESSMENTS

Component	Format	Weighting	Original Due Date	Completed?
Assignment 1	Written	5%	March 2nd	Yes
Assignment 2	Written	5%	March 25th	Not yet
Assignment 3	Written	5%	April 1st	Not yet
Attendance[1]	Sign in sheet	10%	End date April 6th	Almost
Participation	Asking questions during presentations	5%	April 10th	Not yet
Presentation	In class presentation	20%	April 10th	Not yet
Term paper	Printed and handed in	50%	April 14th	Not yet

REVISED Course ASSESSMENTS

Component	Format	Weighting	Revised Due Date
Assignment 1[a]	Written	5% or 10%	March 2nd
Assignment 2[a]	Written (uploaded)	10% or 5%	April 6th
Attendance[1]	Sign in sheet	15%	End date March 12th
Slides for Presentation	Email slides	10%	April 10th
Code term paper	Stata code for term paper, submitted online	10%	April 25th
Term paper[b]	Submitted online	50%	April 25th

Notes: [a] The assignment with the highest grade will be worth 10% and the lowest one, 5%.

[b] To earn an A+ in the course, you must earn an A+ on the term paper.

[1] Miss at most two classes, 10 out of 10; Miss three classes, 9 out of 10; Miss four classes, 8 out of 10; Miss five classes, 7 out of 10; Miss six classes, 5 out of 10; Miss seven classes, 3 out of 10; Miss eight classes, 1 out of 10; Miss 9 or more classes, 0 out of 10. Please do **not** email me to tell me you will be away (unless for an extended period). Absences due to illness or any reason count as missed classes.

IMPORTANT: Students concerned about the fairness of these changes may be considered for an **academic waiver** for withdraw. **If you feel that your circumstances make it impossible to complete this course**, please complete the Waiver of Academic Regulations and send to science@dal.ca. *Please note, waivers will not be considered after all academic requirements have been completed.*

Econ 5525: Research Problems and Methodology Winter, 2020

Professor: Casey Warman

Class Time: Tuesday/Thursday 10:05-11:25

Class Location: MCCAIN ARTS & SS 2022

Office Hours: By appointment

Office: 6214 University Avenue, A14

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. This course covers cross sectional and panel data techniques and does **NOT** cover time series. 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 - 30%
- Presentation - 20%
- 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**: February 4^{th}
- **2 Assignments**: $\sim$ One in February and One in March
- **Presentation**: $\sim$Last or 2^{nd} last class (presentations may start earlier than the normal class time to accommodate all of the students)
- **Final Paper**: $\sim$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 from or for another course in any form. However, the term paper may be used as the start of your MA/MDE/PHD Thesis/Essay. 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):

Exploring Common Data Problems and Issues

Panel Data

- Pooled Data
- Fixed Effects
- Random Effects
- Synthetic cohorts

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 and related issues

Nonparametric and Semiparametric Methods

- Kernel Density Estimates
- Counterfactual Density Estimates
- Nonparametric Regressions
- Quantile Regressions

Other Potential Topics (time permitting)

- Factor Analysis
- Blinder-Oaxaca Decomposition
- Panel Data: Long and Narrow Panels
- Machine learning
- 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.

Public use microdata is available from many sites, including:
http://usa.ipums.org/usa/
https://international.ipums.org/international/
https://libraries.dal.ca/find/data.html

Suggested Technical References

Angrist, Joshua and Jörn-Steffen Pischke (2009) Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.

Asteriou, Dimitrios and Stephen G. Hall (2016) Applied Econometrics. Red Globe Press

Angrist, Joshua and Jörn-Steffen Pischke (2014) Mastering Metrics: The Path from Cause to Effect. Princeton University Press.

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.