Faculty of Science Course Syllabus
Department of Economics
Econ 5525 Applied Econometrics
Winter 2018

Instructor: Professor Weina Zhou
Office: 6220 University Ave (Economics Department), C21
Email: wnxzhou@gmail.com
Class Time: Tuesday and Thursday, 10:05-11:25
Class Location: McCain 2198
Office Hours: Tuesday and Thursday, 13:00-14:30

Course Description:
The course focuses primarily on panel and cross-sectional data methods with a strong emphasis on a hands-on approach to learning statistics and programming techniques. Some topics to be covered include fixed effects, differences-in-differences, instrumental variable, quantile regressions, selection bias and regression discontinuity design.

Prerequisites:
Graduate standing in the Department of Economics and graduate or senior undergraduate class in econometrics such as ECON 3338 (grade of B or higher) or ECON5575, or permission of the instructor.

Learning Outcomes:
- The goal of the course is to teach student to understand a variety of statistical methods and research designs that are essential in Economics.
- Students will critically analyze evaluation research.
- Students develop and apply statistical skills that are essential to carry out their own research projects in labour, development, political science and other related fields.

Textbook:
Required:

Recommended:

Course Assessment: Students will be evaluated on the basis of three course requirements:
- Presentation and Replication:(20%): Each student will present a paper from a top ranked journal (subject to instructor’s approval), as if he/she were the author presenting the paper at a conference. Presentation will be taken place in the last class(es) of the term. Students are also required to replicate the main results of the paper.
• In-class Exams: (45%) There are three closed-book exams (15% each) in this class.

• Term Paper (35%): Proposal due on February 26. Final paper due on April 15.

Grading Scheme:

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>90-100</td>
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<tr>
<td>A</td>
<td>85-89</td>
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<tr>
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<td>B+</td>
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<td>B-</td>
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<td>&lt;70</td>
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Policy on Missed Materials:
Replication files and term papers will NOT be accepted after the due date. If a student miss an in-class exam for a valid medical reason (original doctor notes are required), all the weight of the exam will be shifted to the last in-class exam. If a student miss the last in-class exam for a valid medical reason, you must notify the instructor immediately, provide appropriate medical documentation, and make arrangements to write a comprehensive exam as soon as health permits.

Other General Notes:
Please note the Department of Economics Statement on Academic Integrity posted on the course website. As part of an academic community it is your responsibility to be aware of appropriate conduct. Any academic offence will be reported and acted upon immediately by Dalhousie administration.

Course Coverage:

Causality, Selection Problem and Peer Effect
• Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 1-2.

Randomized Control Trials
• Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 1-2.

Panel Data, Fixed Effects
• Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 5

Difference-in-Difference
• Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 5
Regression Discontinuity

- Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 6

Instrumental Variable

- Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 4

Selection on Observables and Propensity Score Matching

- Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 3.

Quantile Regression

- Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 7

Issues in Standard Errors

- Mostly Harmless Econometrics: An Empiricist’s Companion, Chapter 8