INTD 397-3: TOPICS IN INTERNATIONAL DEVELOPMENT

Quantitative Methods for Impact Evaluation

Monday, Wednesday, 11:35-12:55 pm. – Rutherford Physics 118 (RPHYS 118)

Instructor: Ali Zeren
Office Hours: Peterson-244, Mondays and Wednesdays 10:00-11:15 a.m.
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Description: This course focuses on quantitative methods for impact evaluation. The students will learn the fundamentals of data analytics, regression analysis, design and implementation of randomized control trials, and other main methods for impact evaluation.

Recommended Texts:

We will rely primarily on the first two books. Both books are available electronically from the McGill library, in e-book format. The third book is a classic reference book and there are multiple copies of it on reserve in the library.

Evaluation:
Evaluation will consist of two in-class quizzes (each worth 20% of your final grade), five assignments (worth 50%) and in-class participation (10%). Their breakdown and due-dates are as follows:
Quiz-1, February-12, 20%
Quiz-2, March-25, 20%
Assignment-1, Jan-27th: 5%
Assignment-2, Feb-3rd: 10%
Assignment-3, Feb-24th: 10%
Assignment-4, Mar-16th: 10%
Assignment-5, April-14th: 15%
In-class participation: 10%

Quizzes: They will be taking place during regular class time. They are designed to test conceptual knowledge of the topics covered in class.
Assignments: These will be disseminated and explained during class the week before they are due. They involve application and/or replication of the techniques learnt in class with the use of programming software R.
POLICIES & NOTES:

Tentative nature of the syllabus: This syllabus is an approximate plan of how the semester will progress. Depending on the pacing of the course, we may have to update and change the material as we go along. Thus, I reserve the possibility to amend the items on this syllabus, including readings, order of topics, or dates of quizzes and conferences, at any point in the semester. Any changes will be announced at least one class in advance and posted on MyCourses.

Academic Integrity: McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information)

Language: In accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Course Outline
The course material will be significantly easier for you to follow if you keep up with the relevant and announced/indicated chapters of the textbooks for each topic. Please note that minor alterations could be made to the following outline during the semester.

Part-I, Data Exploration

January 6, 8:  1. Introduction
  - Kabacoff, Chapters 1-4

January 13, 15:  2. Exploring and describing data
  - Kabacoff, Chapters 6-7

January 20, 22:  3. Distributions and Probability
  - Kabacoff, Chapters 6-7
  - Supplemental reading(s)

Assignment-1, Jan-27th

January 27, 29:  4. Basics of Inference, Bivariate Analysis, RCTs
  - Kabacoff, Chapters 8-9
  - Kabacoff, Chapter 19
Assignment-2, Feb-3\textsuperscript{rd}

February 3, 5:

5. Regression

- Kabacoff Chapters 8-9
- Supplemental reading(s)

February 10, 12:

6. Causality and Inference

- Gertler et al, Chapter-3
- Supplemental reading(s)

February 12:

Quiz-1

February 17, 19:

7. Regression-2

- Kabacoff, Chapter-13
- Supplemental reading(s)

Assignment-3, Feb-24\textsuperscript{th}

February 24, 26:

8. Experiments

- Angrist-Pischke, Chapter-1

(No class during study break, March 2\textsuperscript{nd} and 4\textsuperscript{th})

Part-III, Design and Implementation Issues in Evaluation

March 9, 11:

9. Randomized Assignment and Controlled Trials

- Gertler et al, Chapter-4

Assignment-4, Mar-16\textsuperscript{th}

March 16, 18:

10. Instrumental Variables, Matching, DiD

- Gertler et al, Chapters 6-8
- Angrist-Pischke, Chapter-4
    • Angrist-Pischke, Chapter-5

March 25: Quiz-2

March 30th, April 1st: 12. Challenges and Ethics
    • Gertler et. al. Chapters 11-13

April 6, 8: 13. Conclusions
    • Supplemental reading(s)

Assignment-5, April 13th