ECON 4613 FA01 Econometrics 2022 Fall

Course Outline

CORE INFORMATION:

TIME: Tuesdays and Thursdays from 1:00 to 2:25pm **CLASSROOM**: BAC 424

INSTRUCTOR: Dr. C. Burç Kayahan

OFFICE LOCATION: BAC345

EMAIL ADDRESS: ckayahan@acadiau.ca

OFFICE HOURS: Virtual, by appointment

COURSE DESCRIPTION:

This course aims to provide an understanding of basic econometric techniques with an emphasis on applications in empirical research. The first half of the course covers a comprehensive review of the classical regression model and the underlying assumptions. The second half of the course presents models that are frequently used in empirical research such as qualitative response regression models, instrumental variables and time-series analysis.

COURSE OBJECTIVES:

"Econometrics" is a field in economics that focuses on measurement issues related to economic models and data. It combines economic theory, statistics, and computer science. What distinguishes econometrics from statistics is the attention to the failure of many standard assumptions, which arises from the nature of economic relationships and the lack of controlled experimentation.

The aim of this course is to introduce the students to the important ideas associated with elementary econometrics. Topics and issues covered in this course will constitute as building blocks for advanced econometrics courses in the graduate programs as well. Throughout the first part of the course, we will spend some time reviewing the fundamentals of a classical normal linear regression model. We will consider how to choose estimation rules consistent with the model under study, sampling properties of estimators, making inferences using the linear regression model, the computer implementation of the techniques to obtain results from empirical applications, and the validity of assumptions we make in deriving the Ordinary Least Squares estimators (OLS). The second half of the course covers fundamental issues for conducting regression analysis in practice such as qualitative response regression models, instrumental variables, and an introduction to time series models.

TEXTBOOK (Required):

Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach*, 7th Edition*,* Nelson Education, 2018, **ISBN-10:** 1337558869, **ISBN-13:** 9781337558860

EVALUATION:

3 Term Tests (@ 25% each)   **75%**   (Dates: TBA)

4 Assignments (Assignments 1 to 3 are worth 6% each, Assignment 4 is worth 7%) **24%** (Dates: TBA)

There will be NO make-up for missed assignments and/or term tests. If you are unable to write a test due to an illness or for compassionate reasons, the weight of the missed assignments or test(s) will be shifted to the remaining term tests.

STUDENT RESOURCES:

Accessible Learning Rooms 111-115, Rhodes Hall, 21 University Ave, **Email:** accessiblelearning.acadiau.ca

Accessible Learning Services works with students, staff, and faculty to facilitate academic accommodations and services for students with disabilities (permanent and temporary). Accommodations are based on the recommendations that are provided in students' psychoeducational or medical documentation. Accessible Learning Services also provides academic soft-skill development workshops for students, referrals to on-and-off campus resources, employment-readiness skill development and work placements, and educational awareness training.

EQUITY, DIVERSITY AND INCLUSION:

Acadia University is committed to becoming a culturally safe and anti-oppressive community. This can only be achieved where there are simultaneous efforts to eliminate all forms of discrimination and harassment from our campus community, including the elimination of all discrimination, harassment and violence based on one's identity, including but not limited to, gender, race, class, ethnicity, sexual orientation, disability, gender identity, gender expression, and Indigeneity.

The Equity, Diversity and Inclusion Officer is available to **students, staff, and faculty**. The fundamental objective of the Equity Office is to **prevent discrimination, sexual harassment, and personal harassment** from occurring, in part by managing Acadia's Policy Against Harassment and Discrimination. For more information, as well as for resources for students who believe they may have experienced or witnessed discrimination, sexual harassment, or personal harassment please contact Acadia's Equity, Diversity and Inclusion Officer, Polly Leonard, MSW, RSW (she/her/hers) at equity@ACADIAU.CA, and check out the website.

ACADEMIC ETHICS:

It is the responsibility of students to familiarize themselves with the University's policy on academic ethics. Copying, plagiarism, and other academic offences will **NOT** be tolerated. Penalties are severe and range from failing a quiz/test/exam to suspension from a program/course and/or expulsion. A complete list of Academic Regulations can be found on the Policies page of the University's website. I strongly recommend that you review the **Academic Policy and Regulations** section of the 2022-23 Academic Calendar. It is a serious offence to engage in **academic misconduct.**

STATISTICAL SOFTWARE PACKAGE: EVIEWS

We will use EVIEWS extensively for conducting regression analysis and presenting empirical results of the analysis in this course. Both assignments and term tests will require the use of EVIEWS. Each student is required to acquire a copy of EVIEWS 12 University Edition (USD 49.95), which can be obtained here. Features of this software will be explained in the labs conducted on Friday afternoons.

CHAPTERS:

PART I: REGRESSION ANALYSIS WITH CROSS-SECTIONAL DATA

1. **The Simple Regression Model:** Chapter 2

2. **Multiple Regression Analysis: Estimation and Inference** Chapters 3 and 4

3. **Multiple Regression Analysis: Further Issues,** Chapter 6

4. **Multiple Regression Analysis with Qualitative Information,** Chapter 7

PART II: RELAXING THE ASSUMPTIONS OF THE CLASSICAL MODEL

5. **Heteroskedasticity,** Chapter 8

6. **Basic Regression Analysis with Time Series Data** Chapter 10.

7. **Serial Correlation and Heteroskedasticity in Time Series Regressions** Chapter 12**.**

PART III: ADVANCED TOPICS IN ECONOMETRICS

8. **Instrumental Variables Estimation and Two Stage Least Squares** Chapter 15

9. **Limited Dependent Variable Models and Sample Selection Corrections**, Chapter 17

10. **Pooling Cross Sections Across Time: Simple Panel Data Methods**, Chapter 13 (Optional)

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ⓘ Help and documentation

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