



**WINTER 2019 – ECONOMICS 4613 X2  
ECONOMETRICS I**

**TIME:** Tuesdays and Thursdays 10:00am-11:30am

**CLASSROOM:** BAC203

**INSTRUCTOR:** Dr. C. Burç Kayahan

**OFFICE LOCATION:** BAC340

**OFFICE TEL:** (902) 585 14 92

**EMAIL ADDRESS:** [ckayahan@acadiu.ca](mailto:ckayahan@acadiu.ca)

**OFFICE HOURS:** Mondays and Wednesdays 1:00pm-3:00pm, other times by appointment

**COURSE DESCRIPTION:**

This course aims to provide an understanding of basic econometric techniques with 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 at the graduate programs as well. Throughout the first part of the course we will spend some time to review the fundamentals of classical normal linear regression model. We will consider how to choose estimation rules consistent with the model under study, sampling properties of estimators, making inference using the linear regression model, on 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 introduction to time series models.

**TEXTBOOK (REQUIRED):**

Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach*, 6<sup>th</sup> Edition, Nelson Education, 2016, **ISBN-10:** 130527010X, **ISBN-13:** 9781305270107

## EVALUATION:

3 Tests (@ 30% each) (Eviews incorporated) **90%** (Dates: TBA)

2 Assignments (@ 5% each) **10%** (Dates: TBA)

**There will be NO make-up for a missed assignments and/or midterms.** If you are unable to write an exam due to illness or for compassionate reasons, please advise me in writing (along with a doctor's note, if applicable) stating your name, your student id and an e-mail address where you may be contacted.

Accessible Learning Services (located at Rhodes Hall, 21 University Ave, and can be reached via the email address: [accessiblelearning.acadiau.ca](mailto:accessiblelearning.acadiau.ca)) works with students, staff, and faculty to facilitate academic accommodations and services for students with disabilities. All accommodations are based on the recommendations that are provided in students' psychoeducational or medical assessments. Accessible Learning Services also provides transition programs for first year students, referrals to on-and-off campus resources, and educational awareness training.

For more information about Accessible Learning Services' registration process and support services, please contact one of the staff members listed below or visit our website.

### Accessible Learning Services Contact Information:

- Abu Kamara, PhD; Accessible Learning Coordinator, [abu.kamara@acadiau.ca](mailto:abu.kamara@acadiau.ca), 902-585-1291
- Marissa McIsaac, M.Sc; Disability Resource Facilitator, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca), 902-585-1520
- Kathy O'Rourke, Disability Resource Facilitator, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca), 902-585-1823
- Emily Duffett, MA; Accessibility Services Officer, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca), 902-585-1823

## REQUIREMENTS:

I expect my students to attend the classes in a regularly and organized manner. The **first month** is especially crucial in developing a good understanding of econometrics and its methodology.

Due to the quantitative nature of the course and time limitations, students will be expected to supply out-of class preparation time by solving exercises in order to digest the information provided in the lectures and to get familiarized with EVIEWS. Only via solving sufficient number of exercises you can truly understand and enjoy statistics.

The course website will be available via Acadia Courseware & Online Resource Network (ACORN) at <http://acorn.acadiau.ca>. Make sure to check this site every week for course related materials and announcements that will be available as we progress throughout the course.

## **ACADEMIC INTEGRITY:**

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 may result in suspension from a program/course and expulsion. A complete list of Academic Regulations can be found on the Policies page of the University's website. I strongly recommend that all class members review the sections found on pages 50 of the 2018-19 academic calendar dealing with **Academic Integrity**. It is a serious offence to engage in **academic misconduct**.

## **STATISTICAL SOFTWARE PACKAGE: EVIEWS**

Statistical software packages are essential for implementing econometrics in practice. We shall be making extensive use of EVIEWS in performing most of the actual statistical calculations and in presenting empirical results. There will be group assignment which will require the use of EVIEWS software. **Each student will be required to download a copy of the EVIEWS 10 Student Version, which can be downloaded for free from [here](#).** Labs will be conducted outside the class times to introduce and explain the important features of this software.

## **READING LIST**

### *PART I: SUMMARY OF CLASSICAL NORMAL LINEAR REGRESSION MODEL*

1. **Review of Classical Normal Linear Regression Model:** Chapters 2, 3, 5, 6
2. **Multiple Regression Analysis:** Chapters 7, 8
3. **Dummy Variable Regression Models:** Chapter 9

### *PART II: RELAXING THE ASSUMPTIONS OF THE CLASSICAL MODEL*

4. **Multicollinearity: What Happens If the Regressors Are Correlated?** Chapter 10.
5. **Heteroscedasticity: What Happens If the Error Variance Is Nonconstant?** Chapter 11.
6. **Autocorrelation: What Happens If the Error Terms Are Correlated?** Chapter 12.
7. **Econometric Modelling: Model Specification and Diagnostic Testing** Chapter 13

### *PART III: TOPICS IN ECONOMETRICS*

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

9. **Qualitative Response Regression Models**, Chapter 15

10. **Time Series Econometrics: Some Basic Concepts**, External Chapter