



WINTER 2020 – ECONOMICS 2623 X2
INTRODUCTION TO ECONOMETRICS

TIME: Tuesdays and Thursdays at 2:30 – 4:00pm **CLASSROOM:** BAC 244

INSTRUCTOR: Dr. Burç Kayahan

OFFICE LOCATION: BAC340

OFFICE TEL: (902) 585 14 92

EMAIL ADDRESS: ckayahan@acadiau.ca

OFFICE HOURS: Virtual by appointment.

DELIVERY METHOD: In person if applicable

COURSE DESCRIPTION:

The objective of this course is to provide an introduction to econometric theory and illustrate practical implications of regression analysis in Economics and Business. The first half of the course provides an introduction to the classical linear regression model (CLRM). The second part of the course is concerned with identification and treatment of violations to the assumptions of the CLRM.

COURSE OBJECTIVES:

“Econometrics” is a separate 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 course we will spend a significant amount of time on the classical linear regression model. We will consider how to choose estimation rules consistent with the model under study, on sampling properties of estimators, on inference in the linear regression model, on the computer implementation of the techniques to obtain results from empirical applications, and on examining the validity of assumptions we make. The second half of the course covers fundamental issues for conducting regression analysis in practice such as model selection, consequences of violation of the assumptions associated with the classical linear regression model.

TEXTBOOK (REQUIRED):

Damodar N. Gujarati, *Essentials of Econometrics*, 5th Edition, McGraw-Hill College, 2019.
ISBN-13: 978-0073523255

EVALUATION:

Assignments (@ 10% each) **20%**

- Assignment 1: (Chapters 3 and 4) Released on February 5th, due back on February 26th.
- Assignment 2: (Chapters 5, 6 and 7) Released on March 19th, due back on April 2nd.

Group Projects (@ 10% each) **20%**

- Group Project 1: Released on February 5th, due back on March 5th.
- Group Project 2: Released on March 19th, due back on April 13th.

Midterm **30%** (Date: March 9th)

Final **30%** (Date: TBA)

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. The weight of any missed test will be added towards your final exam.

ACCESSIBLE LEARNING

Location: Rooms 111-115, Rhodes Hall, 21 University Ave

Email Contact: accessiblelearning.acadiiau.ca

Accessible Learning Services 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 academic strategy sessions for 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:

Marissa McIsaac, M.Sc; Disability Resource Facilitator, disability.access@acadiiau.ca, 902-585-1520

Emily Duffett, MA; Accessibility Services Officer, disability.access@acadiiau.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 statistics 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. 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.acadiiau.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 Academic Integrity section of the 2020-21 Academic Calendar on page 37.** 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 11 Univeristy Version, which can be downloaded for free from [here](#).** Labs will be conducted **outside the class times on Friday afternoons to introduce and explain the important features of this software.**

CELL PHONE FREE CLASSROOM:

For the benefit of everyone, please turn off your cell phone during class time. Cell phones must be turned off and put away during exams. They may NOT be used as calculators.

READING LIST

PREFACE

1. **Nature and Scope of Econometrics**, Chapter 1

PART I: THE LINEAR REGRESSION MODEL

2. **Basic Ideas of Linear Regression: The Two -Variable Model**, Chapter 2.
3. **The Two-Variable Model: Hypothesis Testing**, Chapter 3.
4. **Multiple Regression: Estimation and Hypothesis Testing**, Chapter 4.
5. **Functional Forms of Regression Models**, Chapter 5.
6. **Dummy Variable Regression Models**, Chapter 6.

PART II: REGRESSION ANALYSIS IN PRACTICE

7. **Model Selection: Criteria and Tests**, Chapter 7

8. **Heteroscedasticity**, Chapter 9

9. **Autocorrelation**, Chapter 10