

Core Information:

TIME: Tuesdays and Thursdays, from 2:30 to 3:50pm

CLASSROOM: BAC 207

INSTRUCTOR: Dr. Burç Kayahan

EMAIL ADDRESS: burc.kayahan@acadiu.ca

OFFICE HOURS: Tuesdays and Thursdays, from 12:30 to 1:30 pm

OFFICE LOCATION: BAC345

Course Description:

The objective of this course is to familiarize students with the fundamentals of regression analysis and illustrate its use via applications in economics and business. The first half of the course focuses on the classical linear regression model (CLRM) and the second half covers more advanced topics such as functional form, qualitative variables, and treatment of the violations of CLRM assumptions.

Course Objectives:

“Econometrics” is a sub-field of 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.

This course aims to teach the fundamentals of regression analysis. Topics and issues covered in this course also constitute as building blocks for taking advanced econometrics courses taught at the graduate level. Throughout the course, we will spend a significant amount of time on the classical linear regression model (CLRM) with particular attention given to the sampling properties of OLS estimators and details of conducting statistical inference within the context of the CLRM. The second half of the course covers more advanced topics such as the dummy (qualitative) variables, nonlinear functional form, and the consequences of violations of the CLRM assumptions.

Textbook:

Damodar N. Gujarati and Dawn C. Porter, Essentials of Econometrics, 4th Edition, McGraw-Hill Higher Education, 2010. Print ISBN: 9780073375847
eText ISBN: 0077414829

Evaluation:

Assignments (@ 7.5% each) **15%**

- 1st Assignment: Released on October 4th, Due back on October 25th
- 2nd Assignment: Released on November 8th, Due back on November 29th

Term Projects(@ 7.5% each) **15%**

- 1st Term Project: Released on October 4th, Due back on November 1st
- 2nd Term Project: Released on November 15th, Due back on December 3rd

Midterm **30%** (Date: November 5th, in the lecture) (Chapters 2, 3, 4, and 6)

Final **40%** (Date: TBA)

Assignments and Term Projects are to be handed via the Submission Links posted on Moodle on the respective due dates. Late assignments **WILL NOT BE graded.**

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The date(s) of the assignments, term projects, and midterm **MAY BE SUBJECT TO CHANGE** depending on the pace at which the course material is covered in the lectures. If the date of a particular assignment/project/test is changed, it will be **announced in the lecture** before the initial deadline.

If you are unable to write the midterm due to a medical/compassionate reason, **the weight of the midterm will be shifted to the final exam.**

Accessible Learning:

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

Website: <https://www2.acadiau.ca/student-life/accessiblelearning.html>

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' documentation. Accessible Learning Services also provides supports including academic skill development workshops for students, referrals to on-and-off campus resources, employment-readiness skill development and work placements, 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; Manager, accessible.learning@acadiau.ca, 902-585-1290

Gillian Hastey; Accessibility Resource Facilitator, accessible.learning@acadiau.ca 902-585-1823

Caleb Stark; Coordinator, Exam Operations accessible.learning@acadiau.ca, 902-585-1605

Emily Duffett, MA; Coordinator, Work Integrated Learning Program, WIL@acadiau.ca, 902-585-1823

Kate Johnstone; Accessible Learning Support Advisor, accessible.learning@acadiau.ca, 902-585-1605

Requirements:

I expect my students to attend classes in a regular 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 to digest the information provided in the lectures. Only via solving a sufficient number of exercises you can truly understand and enjoy statistics

The course website will be available via Acadia Courseware & Online Resource Network (Moodle) at <https://moodle.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 Ethics:

It is the responsibility of students to familiarize themselves with the University's policy on academic ethics. Copying, plagiarism, and other academic offenses 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 you review the Academic Integrity section of the Academic Calendar.** Engaging in **academic misconduct** has serious consequences.

Statistical Software: Eviews

We will use EViews extensively for conducting regression analysis and presenting empirical results of the analysis in this course. Term projects will require the use of EViews. **Each group is required to acquire a copy of EViews 12 University Edition (USD 49.95)**, which can be obtained from **the website below:**

<https://onthehub.com/shop?search=EViews>

The features of this software will be explained in the labs conducted on Friday afternoons.

Course Curriculum:

* **Basic Ideas of Linear Regression: The Two-Variable Model**, Chapter 2.

* **The Two-Variable Model: Hypothesis Testing**, Chapter 3.

* **Multiple Regression: Estimation and Hypothesis Testing**, Chapter 4.

* **Dummy Variable Regression Models**, Chapter 6.

- * **Functional Forms of Regression Models**, Chapter 5.
- * **Autocorrelation: What Happens If Error Terms Are Correlated**, Chapter 10
- * **Heteroscedasticity: What happens If the Error Variance is Nonconstant?**, Chapter 9

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