Instructor: Dr. Andrew Davis, andrew.davis@acadiau.ca

Office Hours: 9:30-11:30, Tuesdays and Thursdays, or by appointment, BAC 344.

**Course Description:** "This course aims to provide an introduction to empirical analysis in Economics and Business making extensive use of Microsoft Excel. Topics include both descriptive and inferential statistics, culminating in hypothesis testing and an introduction to regression analysis."

## Textbook and Materials:

- Laptop with spreadsheet software of your choice (required)
- Levine, Stephan, Szabat, Statistics for Managers (recommended, any edition is fine)
- Illowsky and Dean, OpenStax Introductory Statistics (optional not quite as good, but free)

**Topics Covered:** This serves as a rough plan of attack for the course. Progression will be determined in part by student interest, amount of discussion, and difficulty.

Text	Topic	Week
-	Introduction to spreadsheets	1
Ch. 2-3	Describing data, visually and numerically	2-3
Ch. 4	Introductory probability	4-5
Ch. 5	Discrete random variables	6-7
Ch. 6	Continuous random variables	8
Ch. 7	Sampling and the central limit theorem	9
Ch. 8	Confidence intervals	10-11
Ch. 9	Classical and Bayesian hypothesis testing; p-values	12-13

The immediate question that follows is why you should care about any of this beyond the fact that it is almost certainly a required course. This is an important question. The overriding goal of the course, from my perspective, can be summarized very simply. Suppose someone outside this classroom places a significant amount of data in front of you and asks you to tell them what to think about it. This course is aimed at giving you the ability to give them a good reply. This is an applied course about manipulating, understanding, analyzing, and presenting real-world data that could plausibly be encountered in a business environment.

## Grading:

- Assignments: 15% (3x5%)
- Midterm 1: 20%
- Midterm 2: 20%
- Final: 45%
- Bonus Project: 7%

Late assignments not accepted. Group work on assignments is accepted - pass in one copy per group, maximum of three per group. Missed assignments, midterms (with valid reason) will have their weight added to the final exam. At the end of the course, if it's to your advantage, the weight of the lower of your two midterms will be automatically shifted to the final. Further, if your grade on the final exceeds the weighted average, you will receive the final grade directly, to a maximum of an A. An A+ requires exceptional performance through the semester, not just the final.

Note that Acadia has changed grading systems starting in Fall 2019, leaving it up to individual instructors to decide what letter grades mean. I view one of the key roles in a grading system as providing a clear understanding of what you've achieved and accomplished. This means both within Acadia, but also externally. The grade system below is, from my research, the most commonly adopted one in Canada, and hence what I will use for this course.

A+: 90%+	A: 85%-89%	A-: 80%-84%
B+: 77%-79%	B: 73%-76%	B-: 70%-72%
C+: 67%-69%	C: 63%-66%	C-: 60-62%
D+: 57-59%	D: 53-56%	D-: 50-52%
F: ≤50%		

**Bonus Project:** The bonus project is a wholly optional exercise and is not at all required. It is simply an option for students who find it in their own personal interest. Reflecting that this is an applied course about handling real data, the project is simply as follows: find any data you consider interesting and create a report that presents and analyzes it in a coherent way with emphasis on statistical methods. I am open to receiving a report on any topic. Full marks will be reserved for highly exceptional projects - bonus marks are held to a much higher standard than normal marks.

I am very aware this is a vague outline at best. This is deliberate. The goal of the project is to encourage creativity. Investigate whatever you want to investigate. A secondary goal of my being vague is to encourage you to come and talk to me in person about your project!

**Disabilities and Access:** If you are a student with documentation for accommodations who anticipates needing supports or accommodations, please contact Marissa McIsaac, Accessibility

Resource Facilitator at 902-585-1520, disability.access@acadiau.ca or Emily Duffett, Accessibility Officer, 902-585-1823, disability.access@acadiau.ca. Accessible Learning Services is located in Rhodes Hall, rooms 111-115.

## Academic Honesty: https://central.acadiau.ca/registrar/faculty\_information/academic\_ integrity

**Technology Policy**: This is an extremely technology-driven class, which is consequently open to abuse given the necessity to have a laptop open for almost all classes. I encourage you to consider your peers in your use of technology in terms of their ability to participate, distraction-free, in the class.

Additionally, both the midterms and the final will require use of your computer, but not the internet. Please ensure that you are comfortable working within a spreadsheet without appealing regularly to search engines.

## **Important Dates**:

Sept. 4 - Fall courses begin.

- Sept. 13 Last day to add/change course sections without a W.
- Oct. 7 Midterm 1.

Oct. 14 - Thanksgiving Day. No classes.

Oct. 28-Nov.1 - Fall study break. No classes.

Nov. 11 - Remembrance Day. No classes.

Nov. 13 - Midterm 2

Nov. 15 - Last day to drop fall courses and receive a W.

Dec. 9 - End of classes.