York University
Department of Economics
Faculty of Liberal Arts and Professional Studies
Summer 2020
AP/ECON 4140A 3.0
"Financial Econometrics"

Instructor	Shervan Vafa
Contact	E-mail: svafa@yorku.ca
Office Hours	By appointment through Zoom
Lecture Time	Please note that this is an online course. The entire course, including the submission of assignments, participation/discussion and test-taking, will take place on the course's Moodle.
Lecture Location	Moodle
Course Webpage	Students MUST check the course website for regular announcements: http://moodle.yorku.ca. All lecture videos will be posted to the website, along with practice questions and Python codes.
Course Description	This course is an introduction to financial econometrics for students who have taken Econ 3210 or Econ 3500. Background knowledge of finance is not required. The objective of the course is to explain, in simple terms, the use of selected statistical methods and econometric models in finance. The content of the course includes simple static and dynamic models of financial returns, ARIMA models and forecasting, Multivariate models, and ARCH models. All theoretical concepts introduced in this course will be illustrated in class by various empirical examples. Additional examples will be assigned as homework. The assignments (if any) will require only basic programming skills in R or Python.
Textbook	**Required:** Chris Brooks, "Introductory Econometrics for Finance", 2019, Cambridge, ISBN: 978 – 1108436823. **Recommended**: Ruey S. Tsay, "Analysis of Financial Time Series", 2010, Wiley, ISBN:978 – 0470414354.

Evaluations

- There will be one mid-term test worth 40% and the exam is worth 60% of the final grade:

Mid-term	40%
Exam	60%
Total	100

- Mid-term Test will be held during the lecture:
  - Monday June 1st, 2020 6-9pm
- Mid-term test will be 120 minutes.
- A grade of zero will be awarded to students who do not write the test, unless an appropriate and convincing note is received within one week of the missed test (explaining why the test was missed).
- The note must clearly state that on the date of the test, the student was too sick to write the test. Illness before the test is not enough grounds for missing the test.
- I will review each sick note to determine whether there are enough grounds for a student to be excused from a test. Part of this review process may include meeting with the student, and/or following up with the physician.
- There will not be a make-up midterm. Instead, the exam grade will count towards the final grade.
- If a student wishes to appeal a grade, he/she must provide a written explanation of why they believe their grade is mistaken and submit it to the TA within one week of the test being returned to the class. Note that the entire test will likely be re-graded, and the appealed grade can be lower or higher than the original grade.

Important Dates:

- Last date to enroll in the course without the instructor's permission: May 15th
- Last date to enroll in the course with the permission of the instructor: May 26th
- Last date to drop the course without receiving a grade: June 8th
- Examination period: June 24th – 26th

Tentative Course Schedule

Module	Topic	Chapter
1	Introduction and Mathematical Foundations	1
2	Statistical Foundations and Dealing with Data	2
3	Victoria Day	-
4	Statistical Foundations and Dealing with Data	2
5	A Brief Overview of the Classical Linear Regression Model - 1	3
6	A Brief Overview of the Classical Linear Regression Model - 2	3
7	Midterm	-
8	Further Development and Analysis of the Classical Linear Regression Model	4
9	Classical Linear Regression Model Assumptions and Diagnostic Tests - 1	5
10	Classical Linear Regression Model Assumptions and Diagnostic Tests - 2	5
11	Univariate Time-Series Modelling and Forecasting - 1	6
12	Univariate Time-Series Modelling and Forecasting - 2	6
13	Modelling Volatility and Correlation	9

Misc.

IMPORTANT: I take your feedbacks very seriously and look for- ward to your suggestions for improving the course. Please do not hesitate to come forward with criticism and new ideas. I would like you to "enjoy" the course first and foremost, to have a pleasant learning experience and get a good mark at the same time.

Important Policies

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing SPARK's Academic Integrity module at the beginning of the course. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities and can be punishable according to the Senate Policy on Academic Honesty. All students are expected to familiarize themselves with the following information:

- Student Rights & Responsibilities
- Academic Accommodation for Students with Disabilities

Technical requirements for taking the course

Students will need a computer and highspeed internet to access the course material. In addition, students must have Anaconda installed. Here are some useful links for student computing information, resources and help:

Student Guide to Moodle
Zoom@YorkU Best Practices
Zoom@YorkU User Reference Guide
Computing for Students Website
Student Guide to eLearning at York University