Faculty Liberal Arts and Professional Studies
Department of Economics

Course: AP/ECON 4140A 3.00 – Financial Econometrics
Prerequisites: AP/ECON 3210 3.00 or AP/ECON 3500 3.00 or equivalent
Course Webpage: http://moodle.yorku.ca
Term: Fall 2019

Course Instructor

Professor: **Djogbenou, Antoine**
Lectures: Thursday 11:30 AM–2:30 PM, ACW 304
Office Hours: Thursday 3:30 – 5:30 PM or by appointment, VH 1048
Email: daa@yorku.ca
Phone: (416) 736-2100 Ext. 77027

Teaching Assistant: **TBA**
Office Hours: TBA
Email: TBA

Course Description

This course is an introduction to financial econometrics. The objective of the course is to explain the use of selected statistical methods and econometric models in finance. The content of the course includes simple static and dynamic econometric models of financial returns, elements of portfolio theory, the capital asset pricing model (CAPM), elements of option pricing, the value-at-risk (VaR), and the autoregressive conditional heteroskedasticity (ARCH) model. The theoretical concepts will be illustrated in class by empirical examples.

The sessions are in the form of a lecture by the professor. Students will find the slides related to the covered topics on the course webpage (http://moodle.yorku.ca) before each class. The instructor provides more details and explanations on the topics during the lectures. As nothing beats practice, as a learning tool, students need to practice by solving many financial econometric problems. The practice works include exercises involving statistical software. Students may also use their favorite software (e.g., SAS, R or MATLAB). Announcements, lecture slides, questions, problems, data and codes will be posted on the course website, which students are invited to consult regularly.

At the end of this course, students will be able to know and understand the essential concepts in financial econometrics, analyze financial data using econometric models, understand the properties of financial data, estimate basic dynamic models for finance, interpret a computer output of model estimation, and develop basic programing skills.

The Required Textbook

Statistics and Finance, by David Ruppert, Springer 2004. ISBN: 978-0-387202-70-9.

The course will be based on this textbook and its copies are available in the campus bookstore. Additional readings may be assigned or recommended during the course.

Evaluation

Some Important Dates

- Assignment 1 — September 26, 2019
- Midterm Exam — October 24, 2019
- Assignment 2 — November 28, 2019
- Final Exam — December 5-20, 2019

Weighting of the Course

- Assignments — 15 %
- Midterm Exam — 40 %
- Final Exam — 45 %

September 26 and November 28 are the due dates of the assignments. Assignments received later than the due date will not be accepted. Note also that the final exam will be cumulative.

Grading: The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+= 7, C+ = 5, etc.) Assignments and exams will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.) For the description of the grading scheme and feedback policy, see: https://previous-calendars.students.yorku.ca/2018-2019/policies-and-regulations/academic-policies-and-regulations/grading-scheme-and-feedback

ASSIGNMENT SUBMISSION, LATENESS PENALTIES AND MISSED TESTS

Assignment Submission: Proper academic performance depends on students doing their work not only well but on time. Accordingly, assignments for this course must be received on the due date specified for the assignments.

Lateness Penalty: Assignments received later than the due date will not be accepted and will be given a grade zero. Exceptions to the lateness penalty for valid reasons such as illness, compassionate grounds, etc., may be entertained by the Course Instructor but will require supporting documentation (e.g., a doctor's letter). If a student misses the assignments, and have a documented excuse, the final exam will carry the extra weight.

Missed Exams: If a student misses the midterm, and have a documented excuse, the final exam will also carry the extra weight. There will be no make-ups for the midterm exam. A deferral for the final exam will be granted only for with a documented reason, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (e.g., doctor's letter). These students must fill out the Deferred Standing Agreement form and submit it along with all original supporting documentation to the Department of Economics located in 1144 Vari Hall within ten business days of the original exam date. See http://econ.laps.yorku.ca/students/academic-policies-procedure/deferred-standing/ for details.

OUTLINE

1. Returns (Ruppert, Chapter 3)
2. Time Series Models (Ruppert, Chapter 4)
3. Portfolio Theory (Ruppert, Chapter 5)
4. The Capital Asset Pricing Model (Ruppert, Chapter 7)
5. ARCH models (Ruppert, Chapter 12)
6. Option Pricing (Ruppert, Chapter 8)
7. Value-at-Risk (Ruppert, Chapter 11)

Note: This lecture schedule is a guide. Coverage may vary given time constraints.

OTHER IMPORTANT COURSE INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage; http://secretariat-policies.info.yorku.ca/

- Senate Policy on Academic Honesty and the Academic Integrity Website
http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/
- Student Conduct Standards
http://calendars.students.yorku.ca/2016-2017/policies-and-regulations/student-conduct/student-conduct-and-responsibilities
- Religious Observance Accommodation
https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs/

COURSE ADD/DROP DEADLINES

	Fall Term 2019	**Winter Term 2020**
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Sept. 17	Jan. 19
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 1	Feb. 3
Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 8	March 13
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	**Nov. 9 - Dec. 3**	**March 14 - April 5**

*****Policy and Guidelines on Withdrawn from Course:***
https://secretariat-policies.info.yorku.ca/policies/withdrawn-from-course-w-policy-and-guidelines/