



**Faculty of Liberal Arts and Professional Studies
Department of Economics**

Course: AP/ECON 4140 A 3.0 –Financial Econometrics

Course Webpage: <https://eclass.yorku.ca>

Term: Fall 2026

COURSE INSTRUCTOR

Professor: **Djogbenou, Antoine**

Email: daa@yorku.ca

TIME AND LOCATIONS

In-Person Lectures: Mondays, 11:30 AM – 2:30 PM, VH 3006

In-Person Office Hours: Tuesdays, 3:00 PM – 4:00 PM, VH 1048

TECHNICAL REQUIREMENTS FOR TAKING THE COURSE

All classes and office hours will be in person. The sessions are in the form of a lecture by the professor. Note also that exams will be in person. The course materials will be available on the course's eClass website. Please note that you are expected to meet at the scheduled times in class on campus. It is possible that, following York University recommendations and due to unforeseen situations, lectures, tests, and office hours may move online. In those circumstances, I will use the eClass and Zoom platforms, through which you will interact with the course materials and the course director, as well as with one another. The Zoom link for lectures will then be accessible through eClass and the course will be run synchronously. In the case of online test-taking, you will need a stable, higher-speed Internet connection. To determine Internet connection and speed, there are online tests, such as [Speedtest](#), that can be run.

ORGANIZATION OF THE COURSE

Please note that you are expected to meet at the scheduled times in class on campus. If for any reasons, the classes move online, the course will be run synchronously, i.e., with 'live' sessions scheduled according to your meeting times, via Zoom. Students will find the slides related to the covered topics on the course webpage before each class. More details and explanations on the topics are provided during the lectures. I will use the class time for interactive activities, to answer questions related to the presentation and/or examples to illustrate the theoretical concepts.

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. As nothing beats practice, as a learning tool, students need to practice by solving many practice problems. The practical works include exercises involving SAS. Students may also use their favorite software (e.g., R, STATA, MATLAB). Announcements, lecture slides, questions, and problems 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 programming 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 book, and this digital version is available (Cost: \$269) via [York's bookstore webpage](#) or the bookstore link on eClass. Additional readings may be assigned or recommended during the course.

EVALUATION

Some Important Dates

- Midterm Exam October 19, 2026
- Assignment November 30, 2026
- Final Exam December 10-23, 2026

Weighting of the Course

- Midterm Exam 40 %
- Assignment 10 %
- Final Exam 50 %

November 30 is the due date of the assignment. An assignment received later than the due date will not be accepted. AI tools are not permitted for the submitted assignment. Students may be asked additional questions to justify their answers for their submitted work, at the instructor's discretion. This could result in a zero grade if a student cannot justify their answers. Note also that the final exam will be cumulative.

Grading System: 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.). The assignment and the 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 a full description of the York grading system, see <https://calendars.students.yorku.ca/>

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: An Assignment 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 an assignment, and have a documented excuse, the final exam will carry the extra weight.

Missed Test: If a student misses the midterm, and has a documented excuse (e.g., a doctor's letter), the final exam will carry the extra weight. There will be no make-up for the midterm exam. A deferral for the final exam will be granted only for 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 within seven business days of the original exam date. See <https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/> for details.

OUTLINE

1. Probability and Statistics (Ruppert, Chapter 2) / September 14
2. Returns (Ruppert, Chapter 3) / September 21
3. Time Series Models (Ruppert, Chapter 4) / September 28 & October 5
4. Portfolio Theory (Ruppert, Chapter 5) / October 26 & November 2
5. The Capital Asset Pricing Model (Ruppert, Chapter 7) / November 9 & 16
6. ARCH models (Ruppert, Chapter 12) / November 23
7. Option Pricing (Ruppert, Chapter 8) / November 30
8. Value-at-Risk (Ruppert, Chapter 11) / December 7

Note: This lecture schedule is a guide. Dates and coverage may vary given time constraints.

OTHER IMPORTANT COURSE INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the information on Academic Standards, Curriculum, and Pedagogy.

Academic honesty and integrity: 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 is punishable according to the Senate Policy on Academic Honesty.

AI Technology & Academic Integrity: In this course, every element of each course assessment must be fully prepared by the student themselves. The use of generative AI is not permitted, and its use may be treated as a breach of academic conduct.

For more information, please refer to York University's Senate Policy on Academic Conduct;
<https://www.yorku.ca/secretariat/policies/policies/academic-conduct-policy-and-procedures/>.

Additional important information can be found on the Senate Committee webpage: <https://www.yorku.ca/secretariat/policies/>

- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning, and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

COURSE ADD/DROP DEADLINES

Information on important dates is available at <https://registrar.yorku.ca/enrol/dates>