

**Course:** AP/ECON4010 M - Advanced Microeconomic Theory

**Term:** Fall 2024

**Prerequisite / Co-requisite**

AP/ECON 2300 3.00, AP/ECON 2350 3.00, and AP/ECON 3530 3.00, or equivalents. Recommended prior completion: AP/ECON 2400 3.00 and AP/ECON 2450 3.00.

**Please note:**

You must have ALL the prerequisites, including Econ 3530, before the semester begins. There will be no exceptions. At the beginning of the semester, students without all the prerequisites will be de-enrolled.

**Course Instructor:** Professor Elie Appelbaum

**Contact Information:** elie@yorku.ca

**Technical requirements for taking the course**

- You will need a stable, higher-speed Internet connection, a computer with a webcam and microphone, or a smart device with these features.
- You will need to be able to use eClass (see the guide link below).
- You will, therefore, need to be able to use Zoom (see the guide link below).

**Useful links for student computing information, resources and help**

- Student Guide to eClass
- Zoom@YorkU Best Practices
- Zoom@YorkU User Reference Guide
- Computing for Students Website
- Student Guide to eLearning at York University
- You can determine your internet connection speed at Speedtest or Fast.

**Organization of the course**

- ECON 4010 (fall semester) is an ONLINE teaching course.
- It will be taught synchronously.
- There will be no in-person interactions or activities on campus.
- Detailed lecture notes will be posted (on eClass) for each topic. They will include general discussions of the issues, mathematical derivations/presentations, diagrammatic examples/explanations, and intuitive explanations.
- Questions on each topic will also be posted. Students should go through these problems and attempt to solve/answer each set of questions.
- The topics to be discussed in class are based on the lecture notes.
- The lecture notes will be discussed/presented in scheduled Zoom sessions, which will take place during the course's scheduled meeting times—Mondays 11:30-2:30.
  
- During these Zoom sessions, I will also answer any questions about the lectures/ lecture notes, posted questions, or the topics in general.
- It is highly recommended that you attend these Zoom sessions.
- The link to these Zoom sessions is provided below.
- Your full name must be visible to be admitted into the Zoom sessions.

- I will not record/post these Zoom sessions. Neither should you record them.
- A general outline/summary/introduction will be provided during the first Zoom session.
- Students should carefully go through the lecture notes before the Zoom sessions.
- Exam questions will be based on these lecture notes (see the note on posted questions and exams).

### **Virtual Office Hours:**

Mondays, 9:30-10:30, via Zoom. Appointments need to be booked on eClass Scheduler.

1. If you have questions about the lecture notes or the posted questions, you can raise them during the Zoom sessions. Alternatively, you can book an appointment on the eClass Scheduler.
2. For administrative questions, you can reach me by e-mail. I will answer such e-mails only on Mondays and Wednesdays.

### **Zoom links**

- Please copy all Zoom links from this eClass page. If there are eClass access problems (a likely scenario), use the copied links to join the Zoom sessions.

TA: TBA

### **Expanded Course Description and Course Learning Objectives**

(1) This course aims to introduce students to most of the important topics in modern microeconomic theory at an advanced and rigorous level.

(2) These topics include (depending on time constraints) general methodology of science, consumer behaviour, the theory of the firm, static and dynamic models of imperfect competition, general equilibrium, social welfare functions and Arrow's Impossibility Theorem, expected and non-expected utility, risk aversion, portfolio choice, production under uncertainty, bargaining, models of imperfect information, including moral hazard, adverse selection and signalling. All topics are covered in the posted lecture notes.

(3) In addition to gaining a good understanding of these topics, students will be able to apply the concepts, models, and tools developed in this course to a wide range of issues in other areas of economics, finance, public policy, and various other social sciences.

(4) The course also prepares students interested in pursuing graduate work in economics or finance.

### **Course Text/Readings**

**Textbook: Advanced Microeconomic Theory, Geoffrey A. Jehle and Philip J. Reny (JR) 3rd edition.**

Other Useful (but not required) Books:

Microeconomics Analysis Hal R. Varian (third edition) Essential Microeconomics, J.R., Riley  
The Theory of Industrial Organization, J. Tirole Bargaining Theory with Applications, A. Muthoo (AM).

### **Topics**

(1) Introduction and Methodology (lecture notes)

(2) The Theory of Consumer Behaviour: Preferences, Expenditure, Indirect Utility Functions, Duality, Welfare Comparisons, Price Indices (JR 1, 2, 4.3, Varian: 7-10).

- (3) The Theory of the Firm: Technology, Cost and Profit Functions, Duality, Aggregation, Productivity, Empirical Applications (JR 3, Varian 1-6, 12).
- (4) Choice under Uncertainty: Expected and Non-Expected Utility, Risk Aversion, Portfolio Choice, Production under Uncertainty, Value of Information (JR 2.4, Varian 11, Riley).
- (5) Non-Competitive Markets: Perfect Competition, Imperfect Competition (static and dynamic), (JR 4, Varian 16).
- (6) Bargaining (Muthoo).
- (7) Imperfect Information: Principal-Agent Problems (Moral Hazard and Adverse Selection), Signalling, Market for Lemons (JR 8, Tirole, I.2.3, Riley).
- (8) The Firm as a Contract: (Tirole, 15-34)
- (9) Social Choice and Welfare: Pareto Optimality, Second Best Problem, Compensation Principle, Social Welfare Functions, Arrow's Impossibility Theorem, Examples of Welfare Functions (JR 6).

### **Evaluation**

The final grade for the course will be based on the following items weighted as indicated:

Midterm Test: (October 28, 2024, 11:30-1:00): 25%.

Final Exam: (TBA): 75%.

Note:

There will not be a deferred midterm exam. Students who miss the midterm will have the weight of the midterm shifted to the final, but only if they (i) regularly attended classes, (ii) have a valid reason (e.g., medical) and contact me within 24 hours.

### **Exam Coverage:**

Only material covered in the lecture notes will appear on the Exam. All topics are covered in the notes. The material in the Introduction and Appendices will not be on the Exam, except for the derivation of indirect and direct utility functions in consumer theory.

See also the posted note on posted questions and exams.

### **IMPORTANT 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 (see Reports, Initiatives, Documents) - <https://secretariat.info.yorku.ca/files/CourseInformationForStudentsAugust2012-.pdf>.

- Senate Policy on Academic Honesty and the Academic Integrity Website
- 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