

Faculty of Liberal Arts & Professional Studies Department of Economics

**Course: AP/ECON4010 M - Advanced Microeconomic Theory Term: Fall 2021**

**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 Fall 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](mailto: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 need to appear on video (e.g., zoom sessions, remote proctoring, etc.).
- 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 Moodle](#)
- [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](#).

**Time and location**

Please note that this is a course that depends on remote teaching and learning. There will be no in-person interactions or activities on campus.

**Zoom Lectures:** Mondays 11:30 – 2:30.

**Organization of the course**

- This is a remote teaching course. It will be taught synchronously.
- 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, as well as intuitive explanations.
- The lecture notes will be discussed/presented in scheduled zoom sessions, which will take place during the scheduled meeting times of this course.
- They will consist of 30-minute segments, as needed.

- The link to these sessions will be posted on eClass.
- I will not record/post these zoom sessions. Neither should you record them.
- The first zoom session will be held on September 13, at 11:30 AM. It will provide a general outline/introduction.
- Students should carefully go through the lecture notes before the zoom sessions. Exam questions will be based on these lecture notes.
- Sample questions will be posted for each topic. Students should go through these problems and attempt to solve/answer each set of questions.

#### Virtual Office Hours:

Thursdays 12:00 - 1:00 PM, via Zoom, upon request. Again, these should not be recorded.

TA: TBA

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

- (1) The purpose of this course is to introduce students to most of the important topics in modern microeconomic theory at an advanced and rigorous level. 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 the 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.**
- (2) 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.

The course is also good preparation for 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) General Equilibrium: General Competitive Equilibrium – Definition, Existence, Properties, First and Second Fundamental Theorems of Welfare Economics (JR 5, Riley).
- (7) Social Choice and Welfare: Pareto Optimality, Second Best Problem, Compensation Principle, Social Welfare Functions, Arrow's Impossibility Theorem, Examples of Welfare Functions (JR 6).
- (8) Bargaining (Muthoo).
- (9) Imperfect Information: Principal-Agent Problems (Moral Hazard and Adverse Selection), Signalling, Market for Lemons (JR 8, Tirole, I.2.3, Riley).

### Evaluation

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

Midterm Test: (October 25, 2021, 11:30-1:00) - 25%.

Final Exam: (TBA) - 75%.

#### Note:

- (i) Students who miss the midterm or final exam will be permitted to write a deferred exam only if they have a valid reason (e.g., medical) and contact me within 48 hours.
- (ii) Exam weights cannot be changed.

### Exam Coverage:

Only material that is 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.

## 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 (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
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