

Economics, Faculty of Liberal Arts & Professional Studies, York University

Winter 2023 Course Outline

Course #: AP/ECON 1540 Section O

COURSE TITLE: AP/ECON1540 O - Introductory Mathematical Economics II

Winter 2023

Course Instructor Contact:

Course Instructor: Dr Shadab Qaiser

Office Hours: TBA

Email: qaisers@yorku.ca

Link to Course Website: eClass website. I will be using eClass for posting announcements, lecture notes and online assignment set.

Teaching Assistant Information: TBA

1. Course Objectives: Course Description (prerequisites/co-requisites):

This course extends the analysis of basic Economics ideas, topics and problems begun in AP/ECON 1530 3.00. Again, relevant mathematical ideas and techniques are recalled and/or derived so as to provide a deeper understanding of Economic issues and how they can be resolved. The issues and problems covered require functions of more than one variable for their resolution. The notion of Quantity Supplied is combined with the notion of Quantity Demanded and notions of Market Equilibrium are introduced and discussed. Equilibria are evaluated through the introduction of mathematical notions and properties of systems of equations, eventually in matrix form. A deeper understanding of theories of demand (supply) and the foundations of demand (supply) functions is developed through the introduction of mathematical notions of unconstrained and constrained optimization and linear and nonlinear programming. As in AP/ECON 1530 3.0, many topics and issues are addressed and problem framing and problem solving abilities are enhanced.

2. Prerequisite: AP/ECON 1530 3.00 or equivalent.

Prerequisites/Co-requisites: AP/ECON 1000 3.00 or AP/ECON 1010 3.00, or equivalent. Note: No credit will be retained for this course for students who have successfully completed or who are currently enrolled in SC/MATH 1021 3.00, SC/MATH 1025 3.00, or SC/MATH 2221 3.00.

Course credit exclusions: SC/MATH 1505 6.00, SC/MATH 1540 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 2650 3.00. Note: Acceptable course substitutes are available in the Calendar

3. Recommended Course Text/Readings:

Essential Mathematics for Economic Analysis, 6th or 5th edition, Knut Sydsaeter and Peter Hammond with Arne Strom, Prentice Hall. You can also use older editions of this textbook.

4. Topics to be covered

- a. Functions of many variables, Tools for comparative statics, Multivariable optimization
- b. Constrained optimization Matrix and vector algebra, Determinants and inverse matrices, Linear programming

5. Weighting of Course:

Midterm test **35% (Tuesday Feb 28, 2023 in class)**

Online Assignment set **15% (Available online on eclass on March 17, 2023, Due on March 26, 2023)**

Final Exam – Cumulative (50%) Scheduled during the official exam period by the Registrar's Office. Comprehensive, covering all course material.

There is no makeup Midterm test or makeup assignment. Students absent from the midterm exam will have the weight automatically transferred to their final exam. If a student missed the assignment, the weight will be transferred to the final exam. The final exam will be cumulative and will cover all materials discussed in the course. The date of the final exam will be scheduled by the registrar's office. Students absent from the final examination and requesting for deferred standing must follow the guidelines for Deferred Standing of the Department of Economics at York University.

Link to the Mach form for submitting an ECON deferred exam request:

<https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/departments/policies/deferred-standing/>

Note: Students are not required to submit an Attending Physician Statement or medical document for deferring a final exam impacted by the COVID-19 situation.

6. Intellectual property notice

All materials prepared for **Econ 1540 Sec O** at York University are the intellectual property of the instructor. This can include but is not limited to the following material: lecture notes, handouts and recordings; assignment handouts and instructions; spoken and written presentations; audio and video recordings; PowerPoint slides; and questions and/or solution sets for assignments, quizzes, tests and final exams.

Course materials should only be used by students enrolled in this course. As a student in this course, you may not publish, post on an Internet site, sell, or otherwise distribute any of this work without the instructor's express permission. Unauthorized or commercial use of these materials is strictly prohibited. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course, or fall under an exception or limitation in Canadian copyright law. Copying this material for distribution (e.g. uploading material to a commercial third-party website, or online sharing of course material with people outside of the course) may lead to a charge of misconduct under York's [Code of Student Rights and Responsibilities](#) and the [Senate Policy on Academic Honesty](#). In addition, you may face legal consequences for any violation of copyright law.

Important Course Information for Students:

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage;

<http://www.yorku.ca/secretariat/policies/index-policies.html/>

York's Academic Honesty Policy and Procedures/Academic Integrity Website

Academic Honesty and Integrity: Conduct that violates the ethical or legal standards of the University community or of one's program or specialization is subject to severe penalties. Students are responsible for understanding the nature and consequences of these offences, as contained in the Senate Policy on Academic Honesty, found on the York University Senate WEB page:

<http://www.yorku.ca/secretariat/policies/document.php?document=69>

Ethics Review Process for research involving human participants

<http://www.yorku.ca/secretariat/policies/document.php?document=94>

Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities

<http://www.yorku.ca/secretariat/policies/document.php?document=68>

Student Conduct Standards

<http://www.yorku.ca/oscr/standards.html>

Religious Observance Accommodation

<https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs>

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) - <http://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

Important Academic Forms

- Religious Accommodation - http://registrar.yorku.ca/sites/registrar/files/pdf/exam_accommodation.pdf
- **Link to the Mach form for submitting an ECON deferred exam request:** <https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/>