

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

Fall 2021 Course Outline

Course #: AP/ECON 1540 Section A

Mathematics for Economists II

Fall 2021

Course Instructor Contact:

Course Instructor: Dr Shadab Qaiser

Office Location: Vari Hall 1075

Virtual Office Hours: TBA

Email: qaisers@yorku.ca

Link to Course Website: I will be using eclass for posting announcements, lecture recordings, online midterm/final exam and online assignment set.

Teaching Assistant Information: TBA

Technical requirements for taking the course:

You will need a computer with a RELIABLE internet connection. Phones and tablets WILL NOT WORK for the online midterm and online final exam.

Here are some 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](#)

Course Format and Prerecorded Lectures

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. **The class lectures will be prerecorded and posted on the eclass course website on a weekly basis according to the course outline.** I will hold online office hours through Zoom to answer any course related questions and **there will be no live lecturing.**

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, 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:

Online midterm test **35% (Thursday Oct 28, 2021 at 10:00 through eclass)**

Online Assignment set **15% (Available online on eclass on Nov 16, 2021, Due on Nov 24, 2021 at 11:30 pm Toronto Time)**

Online 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 online midterm exam will have the weight automatically transferred to their online final exam. If a student missed the assignment (15%), the weight will be transferred to the online final exam. **Students are required to work independently on the online assignment set and on midterm/final exam.** The online final exam will be cumulative and will cover all materials discussed in the course. The date of the online final exam will be scheduled by the registrar's office. Students absent from the online final examination and requesting for deferred standing must follow the guidelines for Deferred Standing of the Department of Economics at York University.

6. Intellectual property notice

All materials prepared for **Econ 1540 Sec A** 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
- Deferred Standing - http://registrar.yorku.ca/pdf/deferred_standing_agreement.pdf
- Attending Physician's Statement Form - <http://registrar.yorku.ca/pdf/attending-physicians-statement.pdf>