

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

AP/ECON 1540 3.0 Q
Mathematics for Economists II
Winter 2020
Course Outline

1. Course Instructor Contact:

Instructor: Vassilios Bardis
Office: DB 2020
Email: vbardis@yorku.ca
Office Hours: TBA
Phone:
Course website: On *moodle.yorku.ca*
Class Time: T 19:00 - 22:00 Class Location: CB 121

2. 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.

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. Course Textbook (Optional but Strongly Recommended)

Essential Mathematics for Economic Analysis, fifth edition, Knut Sydsaeter and Peter Hammond with Arne Strom, Prentice Hall.

4. Weighting of Course:

The course grade will be based on **two term tests** to be held in class on **Feb. 4 and Mar. 3, each worth 20%**, and a **final exam, worth 60%, to be held during the examination period**. The final exam will be comprehensive. The final exam date will be scheduled and posted by the Registrar's office. There are no makeups for missed midterm exams. Anyone missing the midterm exam will automatically have their final exam reweighted to be worth 100%. If a student receives a higher grade on the final exam than on the midterm, the final exam grade will be substituted for the lower midterm grade.

Students who are unable to write the final exam must follow the steps described on <http://www.yorku.ca/roweb/exams/deferred/>

5. Topics to be covered (The detailed list of topics is available on the course website on Moodle.)

- a. Functions of several variables
- b. Multivariable optimization
- c. Constrained optimization
- d. Linear Algebra
- e. Linear programming

6. Some Important Dates:

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| Classes start / end | Jan. 6 / April 5 |
| Reading Week | Feb. 15-21 |
| Examination Period | April 7-25 |
| Last date to add a course without/with permission of instructor | Jan. 19 / Feb. 3 |
| Drop deadline: Last date to drop a course without receiving a grade | March 13 |
| Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript) | March 14 - April 5 |

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/>

- Note on the use of Electronic Devices: All electronic devices must be turned off during class. Audio/visual recordings of any type are not allowed. Only simple calculators are allowed during tests and exams.
- 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>