

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

AP/ECON 1540 3.0 M
Introductory Mathematical Economics I
Winter 2026
Course Outline

1. Course Instructor Contact:

Instructor: Vassilios Bardis
Office: VH 1107
Email: vbardis@yorku.ca
Office Hours: TBA
Course website: On *eclass.yorku.ca* (available on the first day of class)
Class Time: TR 14:30-12:50 in VH D

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. A deeper understanding of theories of demand (supply) and the foundations of demand (supply) functions and equilibrium analysis is developed through the analysis of multivariable functions and calculus, the introduction of mathematical notions of unconstrained and constrained optimization, matrix algebra 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.

No Credit Retained (NCR) Note: 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. SC/MATH 1510 6.00 and SC/MATH 1520 3.00 may not be taken by any students who has passed or is currently taking AP/ECON 1540 3.00.

3. Some Important Dates

Classes start / end	Jan. 5 / Apr. 6
Examination Period	April 8-24
Last date to add a course	Jan. 15
Last date to drop course without receiving a grade	Mar. 9
Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript)	Mar. 10 – Apr. 6
Reading Week	February 14-20

4. Grading

The course grade will be based on **three term tests (best two worth 20% each), course participation/class attendance (20%)** and a **final exam (worth 40%)**.

Class Attendance 10%: 0.5 points for attending each of 20 (out of 24) classes.

Course Participation Online Quizzes 10%: 1 point for submitting each of 10 (out of 12) online quizzes within the allotted time. (Quiz dates will be announced in class.)

The *term test* dates are *Jan 31, Feb 28 and Mar 28*. Please note that each test is held on a Saturday. The start time of each test is 9:00am. The location(s) will be announced in class and posted on the course website. There are no deferred term tests. A grade of zero will be assigned to every missed test.

The *final exam* will be comprehensive. The final exam date will be scheduled and posted by the Registrar's office. **Students who are unable to write the final exam and wish to request deferred exam must follow the steps described at <https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/>**

- **Observance Dates:** Students for whom the midterm test date coincides with a religious observance must let me know within the first two week of classes. If there is such a conflict with respect to the final exam, students must complete an 'Examination Accommodation Agreement' soon after the final exam date is published. (This form can be obtained from the Registrar's office.)
- **Policy on Reappraisal of Term Work:** Reappraisal of students' term work should be completed during the term.
- **Note on Senate Policy on Academic Honesty:** Conduct that violates the ethical or legal standards of the University community or of one's program or specialization may result in serious consequences. Students are encouraged to familiarize themselves with the Senate Policy. **Please note that only basic calculators can be used during tests and exams.**
- **Note on the use of Electronic Devices:** All electronic devices must be turned off during class and during exams. Audio/visual recordings of any type are not allowed.

4. Course Textbook (Required)

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

5. Topics to be covered

(A detailed list of topics will be available on the course website on eClass.)

- a. Linear Algebra
- b. Functions of several variables
- c. Multivariable Optimization

6. Useful Links

Below are some useful links for computing information, resources and help:

- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities: <https://accessibility.students.yorku.ca/>.
- [Student Guide to Moodle](#)
- [Zoom@YorkU Best Practices](#)
- [Zoom@YorkU User Reference Guide](#)
- [Computing for Students Website](#)
- [Student Guide to eLearning at York University](#)