

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

**AP/ECON 1530 3.0 A**  
**Introductory Mathematical Economics I**  
Fall 2025  
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: MW 8:30-10:00 in DB 0006

**2. Course Description (prerequisites/co-requisites):**

This course presents and analyzes a sequence of basic ideas, topics and problems arising in Economics. For each idea/topic/problem relevant mathematical ideas and techniques are recalled and/or derived so as to provide a deeper understanding of the Economic issue and how it can be resolved, if necessary. The notion of Quantity Demanded is first addressed by expressing quantity demanded as a linear function of price where both the slope and intercept embed important Economics ideas. This sequence leads naturally to the notion of Revenue (the product of quantity demanded and price) where nonlinear functions are analyzed using mathematical techniques that include derivatives. This sequence culminates with notions of prices that maximize revenue subject to a given demand function. A large number of such topic sequences involving univariate functions are examined.

**Prerequisite:** Grade 12U Advanced Functions or equivalent.

**Prerequisites/Co-requisites:** AP/ECON 1000 3.00 or AP/ECON 1010 3.00, or equivalent. Strongly recommended completion: high-school calculus or equivalent.

**Course credit exclusions:** SC/MATH 1000 3.00, SC/MATH 1013 3.00, SC/MATH 1300 3.00, SC/MATH 1505 6.00, SC/MATH 1513 6.00, SC/MATH 1520 3.0, SC/MATH 1530 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 1930 3.00. Note: Acceptable course substitutes are available in the Calendar.

**3. Some Important Dates**

|                                                                                              |                     |
|----------------------------------------------------------------------------------------------|---------------------|
| Classes start / end                                                                          | Sept. 3 / Dec. 2    |
| Examination Period                                                                           | December 4-19       |
| Last date to add a course without / with permission of instructor                            | Sept. 16 / Sept. 23 |
| <i>Last date to drop course without receiving a grade</i>                                    | Nov. 4              |
| <i>Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript)</i> | Nov. 5 – Dec. 2     |
| Reading Week                                                                                 | October 11-17       |

#### 4. Grading

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

The term test dates are *Sept. 27, Nov 1* and *Nov 22*. 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. (The electronic version of the textbook can be purchased for \$62 if purchased until Sept. 17. The link is available on the course website.)

#### 5. Topics to be covered

- a) Review of basic algebra, equations and inequalities
- b) Functions of one variable, Properties of functions
- c) Differentiation, Derivatives in use, Single-variable optimization
- d) Integration

#### 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](#)