

YORK UNIVERSITY  
LA & PS  
DEPARTMENT OF ECONOMICS  
WINTER 2025

AP/ECON 3530 3.00 M INTERMEDIATE MATHEMATICS FOR ECONOMISTS  
T 14:30 – 17:30, Room: Ross DB 1016

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Instructor: VASSILIOS BARDIS  
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Course Website: Available on *eclass.yorku.ca* on the start date of the course  
Office Hours: TBA

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PREREQUISITES

AP/ECON1530.03 and AP/ECON1540.03, or equivalents

COURSE DESCRIPTION/OBJECTIVES

The course develops and demonstrates the mathematics commonly used in the analysis of static economic models. It provides a more extensive and in depth coverage of the material covered in 1530 and 1540. Its aim is to prepare students for more advanced courses in economics which commonly use these tools and techniques. Topics include: linear algebra (vectors and matrices), univariate and multivariate calculus, unconstrained and constrained optimization, and comparative statics analysis.

SOME IMPORTANT DATES

Classes start / end	Jan. 6 / Apr. 4
Examination Period	April 8 - 25
Last date to add a course without / with permission of instructor	Jan. 20 / Jan. 31
<i>Last date to drop course without receiving a grade</i>	<i>March 14</i>
<i>Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript)</i>	<i>March 15 – April 4</i>
Reading Week	Feb. 15 - 21

GRADING

The course grade will be based on class **participation (5%)**, a **midterm exam (35%)** and a **final exam (60%)**. (Both exams will be held in person.) The midterm exam will be held on *Feb. 11, in class*. There are is no deferred midterm exam. For students who do not attend the midterm exam, the weight is transferred to the final exam. There will a deferred final exam for students who qualify (see below).

The course grade will be calculated as follows. Let , P, M and X denote the participation grade, the midterm grade and the final exam grade and Y denote the course grade (each grade out of 100).

Then the course grade, Y, will be  $Y = \max ( 0.05 P + 0.35 M + 0.60 X , X)$ . This means that the weight of the term components, participation and midterm, will be transferred to the final exam if it benefits the student.

**Final Exam**

The final exam will be comprehensive and will held during the examination period on the date and time scheduled by the University (to be announced). The opportunity to write a deferred exam will be available to students for whom a religious observance coincides with the date of the final exam or who are unable to complete the exam due to reasons beyond their control. If this applies to you, please email me to let me know. (After the date of the final exam, students who did not complete the final exam must request deferred standing by completing and then uploading the required form on the course website using the link "Deferred Exam Request." The information on deferred standing is available at <https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/>

**Reappraisal of Term Work:** It is strongly recommended that reappraisal of students' term work should be completed during the course of the term and prior to the submission of final course grades.

**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. Please familiarize yourself with the meaning of academic integrity by completing SPARK's [Academic Integrity module](#) at the beginning of the course. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the [Senate Policy on Academic Honesty](#).

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

#### USEFUL COMPUTING 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](#)

#### TEXTBOOKS (OPTIONAL)

There is no required textbook. There are several good textbooks, including the following:

1. Mathematics for Economic Analysis by Knut Sydsaeter, Peter J. Hammond 1st edition (1995) Paperback. (Note this is a book by the same authors of the textbook used in 1530/1540. It is comprehensive and offers a much larger and more in depth set of topics than the textbook in 1530/1540).
2. Mathematics for Economists, by Carl P. Simon and Lawrence Blume, 1994, W. W. Norton & Company.
3. Fundamental Methods of Mathematical Economics. by Alpha C. Chiang, 3<sup>rd</sup> edition 1984, McGraw-Hill Inc. (An "old" classic)
4. Fundamental Methods of Mathematical Economics, by Alpha C. Chiang, Kevin Wainwright, 4<sup>th</sup> edition (of the book above), 2005, Irwin / McGraw-Hill.

**LIST OF TOPICS:** (A detailed list will be available on the course website on [eclass.yorku.ca](http://eclass.yorku.ca))

Linear Algebra  
Univariate and Multivariate Calculus  
Static Optimization and Comparative Statics  
Difference and Differential Equations (if time allows)