AP/ECON 3530A 3.00 INTERMEDIATE MATHEMATICS FOR ECONOMISTS
TR 11:30 – 14:30

Instructor:	VASSILIOS BARDIS
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Course Website:	Available on *moodle.yoku.ca* when the term begins.

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

COURSE ORGANIZATION
(A) Content Delivery
The course content will be delivered *asynchronously* on the course website on Moodle using a combination of the following:
(1) detailed notes/handouts
(2) notes/handouts accompanied by pre-recorded short videos
(3) pre-recorded video lectures
These will be posted weekly on the course website by the beginning of the officially scheduled class times on *Tuesday* and/or *Thursday of each week*.
The above will be complemented by practice sets which will also be posted approximately weekly and by the end of the week.

(B) Tests and Exams
The following apply to the tests and exams in the course:
- They will be based on (draw from) the material covered in (1), (2) and (3) above and draw from (but not be limited to) the questions in the practice sets.
- They will be available, take place and have to be submitted on the course website on Moodle
- All terms tests will be held and/or have to be submitted during the originally scheduled class times (see below under *Grading* for the specific dates and times).
- The final exam will be held during the examination period on the date and time scheduled by the University (to be announced).

(C) Virtual Office Hours
Office hours will use Zoom and will be held each week on **Thursday, 1:00pm-2:30pm**.
Zoom registration is required. Please follow the Zoom link below to register:
https://yorku.zoom.us/meeting/register/tJMrce2grD8vHdMj7d63Ltpw29hgfcXkdTt4

Please note:
1) all handouts and recordings should be used for educational purposes only and as a means for enhancing accessibility;
2) students *do not have permission to duplicate, copy and/or distribute the handouts, practice sets and recordings* outside of the class (these acts can violate not only copyright laws but also FIPPA); and
3) all recordings will be destroyed after the end of classes.

Below are some useful links for 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

SOME IMPORTANT DATES

Classes start / end	May 10 / June 22
Examination Period	June 23-25
Last date to add a course without / with permission of instructor	May 14 / May 21
Last date to drop course without receiving a grade	**June 7**

Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript) June 8 - 21
Victoria Day (no "classes" or office hours)   May 24

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.

GRADING

The course grade will be based on **two term tests** and a **final exam.**
There are no deferred term tests. There will a deferred final exam for students who qualify (see below).

The course grade will be calculated as follows. Let H and L denote the highest and lowest of the two term test grades and X denote the final exam grade (each grade out of 100). Then the course grade, Y, will be
$$Y = \max (0.25 H + 0.25 L + 0.5 X , .35 H + .65 X, 0.85X).$$
It follows from the above that
- the maximum weight of the term work is 50% and the minimum weight of the final exam is 50%.
- for students who complete both tests, the worst test will be ignored if it benefits the student.
- for students who complete only one of the two tests, the weight of the test is 35% and the final exam weight is 65%. (No penalty for not completing a single test due to technical issues or otherwise.)
- if both tests are *not* completed, then a grade of *zero* will be assigned to 15% of the course grade.
- the weight of the final exam cannot exceed 85%.

Term Work
Each test will have to be completed and/or submitted on the course website during the officially scheduled class times. The composition of each test will rely more heavily on the material covered in the four to five weeks preceding the date of the test. The test dates will be announced on the first week of classes.

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://myacademicrecord.students.yorku.ca/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.

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, 3rd edition 1984, McGraw-Hill Inc. (An "old" classic)
4. Fundamental Methods of Mathematical Economics, by Alpha C. Chiang, Kevin Wainwright, 4th edition (of the book above), 2005, Irwin / McGraw-Hill.

LIST OF TOPICS: Please see the course website on moodle.yorku.ca for the detailed list.

Linear Algebra
Univariate and Multivariate Calculus
Static Optimization
Difference and Differential Equations