

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

AP/ECON 1540 3.0, Section S
Mathematics for Economists II
Winter 2020 Course Outline

1. Course Instructor Contact:

Instructor: Paul Rilstone
Office: VH 1032
Office Hours: TR 11:30 PM- 12:30 PM
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Class Location: DB 0016

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. Required Course Text/Readings:

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

4. Weighting of Course:

The final mark will be based on one midterm test (Saturday, February 29, 10:00 AM, VH A, 20%), in-class spot quizzes (dates, times and number (N) of quizzes are random, 20%) and a final exam (Date TBA, 60%).

There will be no make up tests for missed class tests. Anyone missing the midterm test (or obtains a better mark on their final exam than their midterm test) will automatically have their final exam reweighted to be worth 80%. There will be no reweighting for missed spot quizzes.

Missed quizzes will be given a grade of zero. The 20% quiz component of the final grade will be based on the best N-1 quiz grades.

There will be no automatic deferments offered for missed final exams. Anyone wishing to write a deferred final exam will be required to formally petition for such.

5. Topics to be covered

- a. Functions of many variables, tools for comparative statics, multivariable optimization
 - b. Constrained optimization
 - c. Matrix and vector algebra, determinants and inverse matrices, linear programming
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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/>

- 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>