York University
Faculty of Liberal Arts & Professional Studies
Department of Economics
AP/ECON 1540 3.0 **R** Mathematics for Economists II
Winter 2021
Course Outline

Course Instructor Contact
Course Director: Mauri Hall
Virtual Office Hours: Thursday 3:30pm - 4:30pm
Email: hall1472@yorku.ca
Course Website: eClass.yorku.ca
Class Time: Friday 11:30am - 12:30pm (via Zoom)

Technical requirements
Several platforms will be used in this course (Moodle, Zoom and eClass), if you have privacy concerns you can provide only your first name or a nickname when you join a session. Note that a Zoom lecture will never be recorded without students being informed prior.

Please review technology requirements and FAQs for Moodle here

Link to Course Website: https://moodle.yorku.ca.

Useful links for student computing information:

Student Guide to Moodle
Zoom@YorkU Best Practices
Zoom@YorkU User Reference Guide
Computing for Students Website
Student Guide to eLearning at York University

Virtual office hours: Virtual Office hours will be held Thursday 3:30pm - 4:30pm.

Organization of the course
This course will be hosted in its entirety on Moodle. There will be a zoom lecture conducted via Zoom at 11:30am - 12:30pm on Friday. Each week videos covering the material that week's material will be posted to be watched at your convenience. The course will be broken into six units each lasting two weeks.

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.

Course Organization
The course content will be delivered via the course website on Moodle using a combination of the following:

(1) Concepts discussed via Zoom lecture
(2) Handouts
(3) Pre-recorded videos

Pre-recorded videos will be posted on the course website as supplementary instruction. Practice sets and/or online practice quizzes will be posted on Moodle on a weekly basis.

Tests and Exams
The following apply to the tests and exams in the course:

- The course will have six quizzes, one at the end of each unit, the last one held during the final exam period.

- The quiz with the lowest grade will be dropped.
- The quizzes are to be submitted on the course website on eclass.
- The final (6th) quiz will be held during the examination period: April 14th - April 28th..

Virtual Office Hours
Regular office hours will use Zoom and will be held each week on Thursday 3:30pm - 4:30pm

Grading
The course grade will be based on the five highest grades of six quizzes, each worth 20% of the final grade. Each quiz will have to be completed and/or submitted on the course website by the stated due date. The composition of each quiz will focus *primarily* on the material covered in class since the last quiz. Note that quizzes are cumulative and may include content covered in previous weeks.

Missed Quizzes
- Students have the choice to substitute any single quiz with a writing assignment (this can be done only once without permission from the course director)
    - *Deadline: one week after the most recent quiz has been posted.*
- Students missing a second quiz, will receive a 0 for the missed quiz but can drop that score.
- Students missing more than two quizzes, receive a 0 for those missed quizzes.

Final Exam
Should a student require it, either for religious reasons or due to circumstances beyond their control, the opportunity to write a deferred final will be made available. Note that the deferred exam may take the form of a written assignment. If needed please email notification to the course director.

Alternately, copy and paste the following link into your browser:
https://myacademicrecord.students.yorku.ca/deferred-standing

Academic Honesty and Integrity
Our aim in this course is to maintain the highest level of academic integrity. Please read SPARK's Academic Integrity module. Observed academic dishonesty will be reported to the appropriate university authorities, and is punishable in accordance with the Senate Policy on Academic Honesty.

Link to Important Dates Winter 2021: Important Dates

Course Add/Drop Deadlines	Winter Term 2021(W)
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Jan. 25
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	Feb. 8
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	March 12
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	**March 13 - Apr. 12**

Recommended Course Textbook

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

Topics Covered

1. Functions of several variables
2. Multivariate (unconstrained) optimization
3. Constrained optimization
4. Linear algebra

Please nose that materials for this course should be used for educational (i.e. not commercial) purposes only. Students do not have permission to duplicate, copy and/or distribute the handouts, practice sets and/or recordings outside of class.