Faculty of Liberal Arts & Professional Studies

Department of Economics

ECON 1530 Section C

Fall 2024

(PRELIMINARY Course Outline: August 27, 2024)

Course: AP/ECON 1530 C – Introductory Mathematical Economics I

Term: Fall (F) Term of Academic Year 2024-25

Course Instructor: Sudeshna Maitra

Office: 1072 Vari Hall

Office Hours: TBA; and by email appointment

Email: sm2.teaching@gmail.com

Course Webpage (on e-class): https://eclass.yorku.ca/course/view.php?id=118484

Please check this site regularly for ALL announcements, lecture notes, assignments and solutions.

Prerequisite / Co-requisite:

1. Grade 12U Advanced Functions or equivalent.

2. 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 1530 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 1930 3.00.

Note: Acceptable course substitutes are available in the Calendar.

Time and Location: You are not permitted to attend the lecture if you arrive after 9:15 pm.

Thursday, 8:30 – 11:30 am; DB 0006

Class attendance and participation is mandatory. Students are required to close any electronic devices apart from calculators and, say, one reader which may be used to mark up class notes. Materials particularly germane to the midterms and final exam will often be covered exclusively in class.

Course Description

Overview: This course introduces and develops topics in differential calculus, integral calculus, and their applications in economics. Topics will include functions of one variable, continuity, limits and derivatives of single-variable functions, series, exponential and logarithmic functions, single-variable optimization, constrained optimization and integration. Applications to topics in economics will include (but not be limited to) supply and demand functions, maximization of revenue and profits, elasticity of demand and consumers' surplus.

Details: Economists are interested in microeconomic models of the behavior of agents (demanders and suppliers) in individual markets. Economists are also interested in macroeconomic models of aggregated markets and total consumption, investment and government spending as well as interest rates, exchange rates and money supply. This interest manifests itself at both a theoretical and empirical level. In all cases it is important that economists describe their areas of interest, their models and their results in a precise manner. The natural way to do this is to write models and study their properties using a language or languages that are rich and precise and which are used by most economists in the profession. These languages are mathematics and statistics. Our goal in this course is to review and develop the mathematics needed for you to be able to both understand the statement of economic models and for you to analyze and derive properties of economic models.

Learning Process: You are expected to attend lectures and to solve the problems that are assigned each week. Your understanding of the course material will become deeper and broader the more you practise. You can't simply read mathematics and expect to understand or retain ideas or solve problems.

Course Learning Objectives: By the end of this course, students should have a solid knowledge of univariate calculus and be able to set up and solve unconstrained and constrained optimization problems with particular emphasis on economic problems.

Course Text (REQUIRED)

Knut Sydsaeter and Peter Hammond, Essential Mathematics for Economic Analysis, 6th Edition (ISBN-13: 9781292359328), Pearson.

Weighting of Course Components

Classwork Assignments (10%):	Assigned during lecture hours in every lecture.
Homework Assignments (10%):	Assigned on e-class, must be submitted on time.
Midterm Exams (40%):	The best 2 out of 3 midterm scores will constitute 40% of the grade. The 3 midterm exams will be held on the following dates: • **Saturday, September 28, 10:00, room TBA** • **Saturday, November 2, 10:00, room TBA** • **Saturday, November 23, 10:00, room TBA**
Final Exam (40%):	During Final Exam Period, Dec 5 – 20, 2024. Final exam date for this course will be set by the Registrar's Office.

Missed Tests and Exams

There is generally no make-up for missed midterm tests. Note that the best 2 out of 3 mid-term test grades will contribute to the final grade. Anyone missing a midterm test will receive zero for that test. There will be no deferments offered for missed final exams except under very unusual circumstances. Anyone wishing to write a deferred final exam will be required to formally petition for such. Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

Additional Information on Assignments

The **classwork assignments** – each worth 1 mark – will take place during lecture hours in each lecture and will be based on the material covered in that lecture. If you submit answers to the assignment, you automatically get the 1 mark. **If you miss a classwork assignment, you get a grade of 0 for it. You MUST arrive in the lecture room before 9:15 am to attend the lecture and write the classwork assignment.**

The **homework assignments** – each worth 1 mark – will be posted on e-class and must be submitted on e-class by the stipulated deadline. If you submit answers to the assignment on time, you automatically get the 1 mark. **If you miss (or are late for) a homework assignment, you get a grade of 0 for it.**

Exam syllabi

50% of the content of the **first midterm exam** will be based on pre-calculus review materials, some of which will be the students' responsibility to review (see announcement on department-organized **Review Sessions** below). If a student does poorly on that part of the test, they should re-evaluate their participation in the course. The **second and third midterm exams** will test the material covered in lectures up until the date of the exam.

The **final exam** will be cumulative and will cover ALL materials discussed in class and the assigned problems. The date of the final exam will be scheduled by the Registrar's office.

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Tests and final exam grades will be numeric. They can be transformed to a letter grade using the following scale: A+ = 90 to 100, A = 80 to 89, B+ = 75 to 79, etc.

Review Sessions, Tutorials and Labs

The Department of Economics will be running Peer Assisted Study Sessions (PASS). Times and rooms TBA.

During the first two weeks of class, the Department will be conducting **Review Sessions of high school algebra and functions**. The schedule is provided on the last page of this document. It will also be posted on eclass.

Students may also receive assistance at the Student Numeracy Assistance Centre at Keele (SNACK).

Technical Requirements

eClass/Moodle will be used for posting class materials and making announcements.

We may also use Zoom from time to time, through which students will interact with the course materials, the course director, as well as with one another.

Using Zoom

Students shall note the following:

- Zoom is hosted on servers in the United States and Canada. Recordings done since May 1, 2022 are stored in Canada. For more information, please refer to the notes on Zoom Privacy and Security provided by Information Security at York.
- If you have privacy concerns about your data, provide only your first name or a nickname when you join a session.
- The system is configured in such a way that all participants are automatically notified when a session is being recorded. In other words, a session cannot be recorded without you knowing about it.

Here are some useful links for student computing information, resources, and help:

- Student Guide to eClass
- Zoom@YorkU Best Practices
- Zoom@YorkU User Reference Guide
- University Information Technology (UIT) Student Services
- Student Guide to eLearning at York University

To determine Internet connection and speed, there are online tests, such as Speedtest, that can be run. If you need technical assistance, please consult the University Information Technology (UIT) Student Services web page. For more specific assistance, please write to askit@yorku.ca.

Important Course Information for Students

Important Dates:

- Sep 4, 2024: Classes start
- Sep 18, 2024: Last day to enroll *without* permission of instructor
- Oct 2, 2024: Last day to enroll *with* permission of instructor
- Oct 12 – 18, 2024: Fall Reading Week
- Nov 8, 2024: Last day to drop course without a grade
- Dec 3, 2024: Classes end
- Dec 4, 2024: Fall Study Day
- Dec 5 – 20, 2024: Exam period. Exams dates are set by the Registrar. Special exam dates cannot be set by the instructor. **Do not pre-book travel that could conflict with the final exam date.**

Other Important Information:

- **Academic honesty and integrity:**
  In this course, we strive to maintain academic integrity to the highest extent possible. 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.

- Final course grades given by the instructor will use the standard York grading scale and may be adjusted to conform to Program or Faculty grades distribution profiles.

- All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage; http://secretariat-policies.info.yorku.ca
  - Senate Policy on Academic Honesty and the Academic Integrity Website: https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/

- Ethics Review Process for research involving human participants: https://secretariat-policies.info.yorku.ca/policies/ethics-review-process-for-research-involving-human-participants-policy/
- Academic Accommodation for Students with Disabilities (Policy): https://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/
- Student Conduct Standards: http://www.yorku.ca/oscr/standards.html
- Religious Observance Accommodation: https://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-religious-observances-policy-guidelines-and-procedures/
- Religious Observances Dates: https://registrar.yorku.ca/enrol/dates/religious-accommodation-resource-2024-2025
- Grading Scheme and Feedback (Senate) Policy:* http://secretariat-policies.info.yorku.ca/policies/grading-scheme-and-feedback-policy/
- Alternate Exam and Test Scheduling: https://altexams.students.yorku.ca/
- Important Sessional Dates: https://registrar.yorku.ca/enrol/dates

**Additional information:*

- ***Grading Scheme and Feedback Policy***

  The Senate Grading Scheme and Feedback Policy stipulates that (a) the grading scheme (i.e. kinds and weights of assignments, essays, exams, etc.) be announced, and be available in writing, within the first two weeks of class, and that, (b) under normal circumstances, graded feedback worth at least 15% of the final grade for Fall, Winter or Summer Term ,and 30% for 'full year' courses offered in the Fall/Winter Term be received by students in all courses prior to the final withdrawal date from a course without receiving a grade. Final course grades may be adjusted to conform to Program or Faculty grade distribution profiles.

PASS MATH REVIEW SESSIONS

Date	Time	Session
Sept. 5, Thursday (R)	14:00 -16:00	Session 1
Sept. 6, Friday (F)	9:00 - 11:00	Session 1
Sept. 6, Friday (F)	11:30 - 13:30	Session 2
Sept. 9, Monday (M)	9:00 - 11:00	Session 2
Sept. 10, Tuesday (T)	9:00 - 11:00	Session 3
Sept. 11, Wednesday (W)	9:00 - 11:00	Session 3
Sept. 12, Thursday (R)	9:00 - 11:00	Session 4
Spt. 13, Friday (F)	9:00 - 11:00	Session 4

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Place: Vanier College 113A

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