

MATH 1401 A – Elementary Mathematics for Economics I – FALL 2019

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Objectives of the course:

- Learn and understand mathematical concepts related to functions, differential calculus, and algebra.
- Learn, understand and properly use techniques related to these mathematical concepts.
- Become familiar with applications in the field of economics that make use of these concepts.

Prerequisites: Ontario Grade 12 U Advanced Functions, or MATH 0005, or equivalent; and ECON 1000 or FYSM 1003, which may be taken concurrently with MATH 1401/ECON 1401.

Office Hours and appointments: I do not hold regular office hours, so set up an appointment with me if you wish to see me. The easiest way to do this is by e-mail, although you can come and see me on days I am on campus, which for this semester are Mondays to Thursdays. If you show up to my office unannounced, I may or may not be there. The other instructors in the office are not aware of my schedule, so they will not be able to help you concerning my availability.

Textbook: *Maths for Economics*, 4th Edition, by Geoff Renshaw (3rd ed. is also usable).

Material covered: The lectures will cover selected topics from **Chapters 1 – 13** of the textbook, plus additional material. **Not all sections of every chapter will be covered.** Also note that chapters 1 and 2 are left up to the students to cover by themselves.

Attendance: Attendance will be taken during lectures, tutorials and tests. Your attendance during lectures will count for up to 5% of your overall mark. During a tutorial or test, you may not leave the classroom until this activity is completed by your TA.

Lectures: Monday and Wednesday from 11:30am – 1:00pm in TB 360

Tutorials and tests: There are **8 tutorials** and **4 term tests**, for a total of **12 sessions**, held on Wednesday from 1:30–2:30pm. The tutorial rooms will be announced shortly. I will also communicate to you your tutorial section. Do not assume that your tutorial section is going to be the one that is presently set up in Carleton Central or in the CULearn grade book. I will set up the tutorial sections manually and will announce this just prior to the tutorials starting.

No make-up, early, or delayed tutorials and tests will be held.

All the lecture, tutorial and test dates are detailed in a document entitled “**Term Schedule**”, on the home page of the course CULearn website. Bear in mind that tutorial room information is subject to change so check Carleton Central regularly to get the most up-to-date information.

Tutorials: You are required to attend all tutorials. Your TA will go over examples from the material covered in class. There will be a short quiz (out of 5 marks) at the end of the session (1 or 2 questions). Your quiz work must be handed in at the end of the tutorial hour for grading. Your tutorial work at the beginning of the session is not graded, but you will be given an attendance grade (5 marks). If you arrive late at the session, you will not be given attendance marks, even if you write the quiz.

The start date for tutorials is Wednesday September 11th.

Tests: There will be **four 50-minute (closed-book) tests** administered during the tutorial hour (in the same room as the tutorials).

Dates for the term tests are **September 25th, October 16th, November 6th and November 20th.**

You must bring your student card to each test and place it on your desk where it is visible.

NB – If you require a revision of your test, do so with me within one week of receiving the test. Under normal circumstances, you can expect the TA's to return your tests one week after the test was written, in the tutorial hour.

Missed tests or tutorials: **Missed tests or tutorials carry a mark of zero (0).** However, students who can document a compelling reason for missing a test or tutorial will be excused and their test/tutorial grade will be based on their performance in the rest of the test/tutorial work. Valid reasons include, for example, a medical reason with a doctor's note, or bereavement with some form of documentation.

IMPORTANT: This documentation must be presented to me within a reasonable delay. You must either present me the document during the lecture following the tutorial/test date, or have sent me an e-mail making me aware of your absence. Please send the e-mail as soon as possible. In this e-mail, I expect to be informed on when you plan on returning to class. Upon your return I expect to be presented with the documented note. I will not accept a documented note that is presented to me too late, or without having been notified by e-mail.

Note that it is advisable to warn me in advance if a justifiable absence during the semester is foreseen.

Term mark: Grades for tutorials and tests will be posted in CULearn. You have the responsibility to bring to the attention of your instructor any missing or incorrectly recorded grade within two weeks of the day the grade is available to you (i.e. posted in CULearn). An **original** test or tutorial paper must be presented to make any corrections, I do not accept photos enclosed in an e-mail.

PLEASE NOTE that I use CULearn as a repository of raw evaluation marks ONLY. I do not use it to compute your term grade, overall grade, etc. Thus, columns like "Overall tutorial mark" in the grade book are meaningless up until the end of the semester, when I finally upload all the marks used to compute your final overall grade. In addition, it is entirely possible that the maximum score for term tests is incorrect. It might be, for example, set to '30' at the beginning of the semester, but a term test might end up being out of 28, 32, etc. I will correct this at the end of the semester when computing the term grade and the overall grade.

Your term grade (i.e. your mark out of 55 prior to writing the final exam) is based on the average mark for the tutorials counting for a maximum of 10, and the average of the **best three** term test results counting for a maximum of 40 and your attendance record (during lectures) counting for a maximum of 5.

IMPORTANT: This marking scheme for tests assumes that all four tests have been written and that a minimum of 25% was obtained on all of them. If this minimum requirement is not met then the average of all four tests is used.

This marking scheme also assumes that a student is not under investigation for an academic offense.

Overall Marking Scheme:

- Attendance during lectures 5%
- Tutorials 10%
- Tests 40%
- Final Exam 45%

Final Exam: The final exam is a cumulative **three-hour closed book exam** scheduled by the university. Please consult the undergraduate calendar for the dates/location of the exam period for this semester. Failure to write the final examination when the student has achieved satisfactory performance during the term will result in a grade of F. See Academic Regulation 2.3 (<https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv2/>) for the official meanings of these grades, and note that it stipulates that no course grades are final until approved by the Faculty Dean. Application to write a deferred final examination must be made at the Registrar's Office.

Students wishing to see their examination papers must make an appointment with me. Do note that this privilege constitutes an opportunity to review any mistakes made, and not to negotiate a better grade.

Students who obtain a Term Grade of at least 16.5/55 but miss the Final Examination for **valid reasons** may be eligible for a deferred exam. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office within five working days after the examination. Please consult schedule at: <http://calendar.carleton.ca/academicyear/> for the relevant dates.

Calculators: Only non-programmable, non-graphing calculators are allowed for all evaluations (quizzes, tests, final exam). I reserve the right to confiscate any calculator during a test or exam. Other electronic devices (phones, computers, etc.) are not acceptable to use as calculators.

Math Help Centre (Tutorial Centre): You are encouraged to use the Math Help Centre when necessary. The Math Help Centre is located at **3422 Herzberg**. Hours of operation for the help centre will be communicated as soon as it is available. For more information, including hours of operation see <http://www5.carleton.ca/math/math-tutorial-centre/>.

MS-LAP: This course will be supported by the Math&Stats Learning Assistance Program. Videos of certain solutions to exercises have been created. The exercises can be found at: <https://global.oup.com/uk/orc/busecon/economics/renew4e/student/exercises/>

The link to the videos will be available in CULearn shortly. I or the MS-LAP coordinator (prof. Kyle Harvey) will apprise you when this is the case.

Withdrawal: Consult the Undergraduate Calendar to know the last day for withdrawal from courses. The calendar is at <http://calendar.carleton.ca/academicyear/>.

Academic Accommodation: You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

Make sure you respect these timelines particularly for tests and final exams. You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://carleton.ca/equity/accommodation>.

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the last official day to withdraw from classes in each term. **Please consult the Undergraduate Calendar to know the deadline for submitting completed forms to the Paul Menton Centre for the final examination.**

IMPORTANT NOTES CONCERNING MARKING:

1. To pass the course, you must have accumulated at least 16.5 marks out of 55 (i.e. 30%) from your term tests, tutorials and attendance record. Students who fail to achieve this minimum requirement will automatically receive a letter grade of **F** in the course.
2. Students who fail to achieve an equivalent mark of at least 30% on the final exam will automatically receive a letter grade of **F** in the course regardless of their term mark.