Instructor: Luc Bourbonnais  
Office Hours: I do not hold regular office hours, so make an appointment with me first. Either come see me before/after class or send me an e-mail at lbourb@math.carleton.ca or via CULearn. Note that the best times to meet are after the lectures (Mon./Wed. 4:15 – 5:15pm). I will consider other days/times when we can meet.

Objectives of the course:
- Learn and understand concepts related to multi-variable differential calculus, integral calculus and matrix algebra.
- Learn, understand and properly use techniques pertaining to these disciplines, with an emphasis on applications in economics.

Prerequisites: ECON 1000 or FYSM 1003 with a grade of C– or higher, and ECON 1401/MATH 1401 with a grade of C– or higher.

Lectures: Monday and Wednesday, from 2:30 to 4:00pm, in Southam Hall 306


Material covered: The lectures will cover selected topics from Chapters 14–19 of the textbook, plus additional material. Not all sections of every chapter will be covered. I will be posting the notes for the lectures on matrix algebra (last 5-6 lectures or so).

Tutorials and tests: There are 7 tutorials and 4 term tests for a total of 11 sessions, held on Monday from 1:30 – 2:30pm for all sections. Consult the term schedule (posted in CULearn) for room numbers.

All the 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. Also note that, in an effort to ensure that all sections are the same size, I reserve the right to change your tutorial section allocation. I will announce this in class, at an appropriate time.

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

Tutorials: You are required to attend all tutorials.

You will work in teams of 2-3 students on sets of problems handed out to you, with the names of all members of the team clearly indicated. Your team’s tutorial work must be handed in at the end of the tutorial hour for grading. The start date for tutorials is Monday September 18th.
Tests: There will be **four 50-minute (closed-book) tests** administered during the tutorial hour (in the same room as the tutorials).

The dates for the term tests are: **September 25\(^{th}\)**, **October 16\(^{th}\)**, **November 6\(^{th}\)** and **November 27\(^{th}\)**.

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 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 (2 weeks at the most). Ideally you must present me the document during the Wednesday lecture following the tutorial/test date, and/or have sent me an e-mail making me aware of your absence as soon as possible. In this e-mail, I expect to be informed when you plan on returning to class, and I expect to see the documented note upon your return. 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 an absence during the semester is foreseen.

**Attendance:** Attendance will be taken during lectures, tutorials and tests, and counts towards your overall mark (see marking scheme).

**Final Exam:** The final exam is a cumulative **three-hour closed book exam** scheduled by the university. Consult the undergraduate calendar ([http://calendar.carleton.ca/academicyear/](http://calendar.carleton.ca/academicyear/)) for the dates of the exam period for this Fall 2017 semester.

**Note:** Students wishing to see their examination papers must make an appointment within three weeks of the examination date to do this. 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. The deferred exam will be written in late January 2018 (see schedule at: [http://calendar.carleton.ca/academicyear/](http://calendar.carleton.ca/academicyear/)).

**Marking Scheme:**
- Attendance (lectures, tutorials and tests) 5%
- Tutorials 10%
- Term Tests 40%
- Final Exam 45%

The **best 3** Term Test results will be used. This marking scheme assumes that all 4 Term Tests are written and that a minimum of 30% is obtained on each. 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.

Calculators: Only non-programmable, non-graphing calculators are allowed for tests and the final exam. I reserve the right to confiscate any calculator during a test or exam.

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/.

Withdrawal: Consult the Undergraduate Calendar to know the last day for withdrawal from Fall 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. Review the course outline promptly and 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.

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. The deadline for submitting completed forms to the Paul Menton Centre for December Examinations is November 10th.

IMPORTANT NOTES CONCERNING MARKING:

1. I reserve the right to adjust any student’s final mark by up to 3% (up or down) based on participation and behaviour.
2. To be permitted to write the final exam, you must have accumulated at least 16.5 marks out of 55 (i.e. 30%) from your term tests and your tutorials. Students who fail to achieve this minimum requirement will automatically receive a letter grade of F in the course.
3. 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.