COURSE OUTLINE
Math 208: Mathematics for Economics and Econometrics

Instructor

Lecturer Tom (William) Thompson

Research Area Nonlinear Partial Differential Equations

Email wthompso@uvic.ca[1]

Office David Turpin Building A533

General Course Information

Number of Units 1.5[2]

Pre-requisites Econ 103, Econ 104 and one of Math 100, Math 102, Math 109.

Office Hours and Assistance

MWTh 11:30 am - 1:00 pm, DTB A533

Other Help The Mathematics & Statistics Assistance Centre is a large space where students can go to work, on their own or in groups, and to discuss math & stats problems. The Centre is staffed with talented Teaching Assistants who are happy to discuss primarily first and second year course material with you. Please see `http://www.math.uvic.ca/~msassist/index.html` for more information.

Math Club Students in Undergraduate Mathematics and Statistics (SUMS) was founded in 2014 as the reincarnation of a previous undergraduate course union that had been inactive for a few years. Please see `http://www.uvic.ca/science/math-statistics/current-students/undergraduate/sums/index.php` for more information.

Learning Objectives

We will be covering sections of chapters 7-12 and chapter 2.

- Matrix Algebra (Chapters 7-10)

- Sets and Functions (Chapter 2)

- Multivariable Calculus and Optimization (Chapters 11, 12)

- Lagrange Multipliers (Chapter 13)

---

[1]Please be patient on hearing back from me as I am also involved in other work than this course. I will aim to respond as soon as possible and within the day.

[2]Credit will not be granted if the student already has credit for both one of Math 200, Math 202, or Math 205 and one of Math 110, Math 133, Math 211, or Math 233A.

Course Material and Online Resources

Textbook *Mathematics for Economics* by Hoy, Livernois, McKenna, Rees and Stengos (Second or Third Edition)

Course webpage I will provide course information on the CourseSpaces webpage (http://coursespaces.uvic.ca). You can log onto the Math 208 course webpage using your netlink ID. It will be to your benefit to check the page frequently as recommended problems and additional problems will be posted there.

Calculator (**Required**) The Sharp EL-510R, EL-510RN or EL-510RNB. It may be purchased at the UVic Bookstore or elsewhere for about $12. A calculator is permitted in this course. No other calculators will be allowed.

Class Meetings

Section A01 [CRN 22016] MWTh 2:30 pm - 3:20 pm, David Turpin Building A102

To maximize your possibility of earning a good grade in this course it is highly recommended that you attend every lecture. At times I might speculate on different methods of solving problems or give helpful advice not provided in the textbook. If you are absent for any reason feel free to schedule an appointment with me or come by my office hours to see what you have missed.

Specific Topics

This is a further breakdown of the the topics listed in the learning objectives.

Matrix Algebra: basic linear algebra, solutions and existence of solutions to linear systems, determinants and their properties, linear independence and dependence, the rank of a matrix, eigenvalues and eigenvectors, quadratic forms, definiteness of matrices.

Sets and Functions: convex sets, convex and concave functions.

Multivariable Calculus and Optimization: multivariable calculus, unconstrained and constrained optimization, first order necessary optimality condition, second order sufficient optimality condition. Lagrange multipliers.

Evaluation and Grading

Your final percentage grade will be computed according to the following scheme.

Assignments	Midterms	Final Exam
3% each	16% each	59%

There will be three assignments given throughout the term giving a total amount of 9% towards your final grade. We will also have two midterms throughout the term with a total amount of 32% towards your final grade. Midterms will be written in lecture. Although you are allowed to work with others in solving problems it is important that your solutions will be written in your own style and work. The assignments will be posted on CourseSpaces and are due at the beginning of lecture. You will have roughly about a week to work on each assignment.

Assignment due dates: Jan 17, Feb 21, Mar 14
Midterm writing dates: Feb 1, Mar 22
Final Exam: TBD

Accessibility Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations `http://uvic.ca/cal`. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Grading Percentage scores will be converted to letter grades according to the university-wide standard table
(Undergraduate: `http://web.uvic.ca/calendar2017-05/undergrad/info/regulations/grading.html#`). (Graduate: `http://web.uvic.ca/calendar2017-05/grad/academic-regulations/grading.html#`).

Final Examination Off-schedule final examinations (i.e., deferred examinations) are given only in accordance with the university policy as outlined in the Calendar. If you are unable to write a final examination due to illness, accident or family affliction, please refer to the following webpages for detailed instructions how to proceed:
Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/concessions.html` Graduate: `http://web.uvic.ca/calendar/grad/registration/concessions.html` Students are **strongly advised not to make plans for travel or employment during the final examination period** as special arrangements will not be made for examinations that conflict with such plans.

Supplemental Examinations. The Department of Mathematics and Statistics does not award 'E' grades or offer Supplemental Examinations in any of its courses.

Policies and Ethics

Attendance The university Calendar states 'Students are expected to attend all classes in which they are enrolled.'
Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/attendance.html` Graduate: `http://web.uvic.ca/calendar/grad/academic-regulations/attendance.html#`

Our courses are conducted on that basis. If you miss an announcement (information concerning midterms, corrections to assignment, etc.) because you did not attend class, you must accept the consequences of not having learned of the change.

Guidelines on Religious Observances Where classes or examinations are scheduled on the holy days of a religion, students may notify their instructors, at least two weeks in advance, of their intention to observe the holy day(s) by absenting themselves from classes or examinations. Instructors will provide reasonable opportunities for such students to make up work or missed examinations.

Missing a Midterm Exam The following reasons for excusing a missed test are illness, accident, or family affliction. A university sponsored event that causes a conflict usually is counted as an accident. In all cases, an excuse note from an appropriate official (e.g. doctor, counselor, couch) is required and must be received no later than five working days after the missed exam. Your course score will be calculated out of the remaining course work, excluding the final exam. A score of 0 will be entered for any missed exam that is not excused.

Academic Integrity Academic integrity is intellectual honesty and responsibility for academic work that you submit individual or group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic offenses.
The responsibility of the institution
Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.
The responsibility of the student
Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a warning, a failing grade, a record on the students transcript, or a suspension.
It is your responsibility to understand the Universitys policy on academic integrity:
Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html#` Graduate:`http://web.uvic.ca/calendar/grad/academic-regulations/academic-integrity.html`

Important Scheduling Information

- Classes begin: Wednesday, January 3, 2018

- Reading break: Monday - Friday, February 12 - 16, 2018

- Easter weekend: Friday - Monday, March 30 - April 2, 2018

- Last day of classes: Friday, April 6, 2018

- Examination period: April 9 - April 24, 2018

How to Succeed in This Course

Show up to each lecture, work on problems as they're assigned, revisit problems frequently to keep yourself tuned up, visit my office hours if you're confused or need reminding of something (I also like to think of myself as just a fun person to hang with). I personally find that I learn a lot when I work with and observe how others tackle problems, so go be [academically] social! Calvin is awesome, but don't be like him below. Knowledge is power.