

Economics 387 (01) (Introduction to Mathematical Economics I)

Instructor:	Dr. L. Vojtassak	Lecture Location:	MS 319
Phone:	403 220 6550	Lecture Days/Time:	MWF 12:00 – 12:50
Email:	lvojtass@ucalgary.ca		
Office:	SS 336		
Office Hours:	M 13:00 – 13:50	Fall 2017	

Course Description

Essential mathematical background for studying Economics: basic techniques of linear algebra and calculus, including unconstrained and constrained optimization, and their applications to resource allocation problems.

Course Objectives/Learning Outcomes

This course introduces students to the application of mathematical methods in economic theory. Techniques discussed include linear algebra, single and multivariable calculus, optimization (unconstrained, equality constrained, inequality constrained), equilibrium analysis, comparative static analysis. Applications from microeconomic and macroeconomic theory and econometrics are used to illustrate concepts throughout the course. Chapters one to eleven in *Fundamental Methods of Mathematical Economics*, by Chiang and Wainwright, will be covered.

Prerequisites

Economics 201 and 203; Mathematics 211; and one of Mathematics 249, 251, 253, 265 or 281.

Corequisites

Economics 301 and 303.

Required Textbook(s)

Chiang, Alpha C., and Kevin Wainwright 2005. *Fundamental Methods of Mathematical Economics*, 4th edition. McGraw-Hill.

Reserved Readings

Chiang, A., and K. Wainwright, *Fundamental Methods of Mathematical Economics*, McGraw-Hill, 2005, 4th Edition.

D. Wade Hands, *Introductory Mathematical Economics*, Oxford Press, 2004.

Peter N. Hess, *Using Mathematics in Economic Analysis*, Oxford Press, 2001.

Hoy et al, *Mathematics for Economics*, MIT, 2011.

Sydsaeter et al, *Essential Mathematics for Economic Analysis*, Pearson, 2012, 4th Edition.

Course Requirements/Assessments:

5 pop-up assignments			
4 best count	2% each	8%	
5 Tests			
4 best count	14% each	56%	Wednesdays: Sept 27, Oct 11, 25, Nov 8, and 29, 2017.
Final Examination		36%	
		100%	

Desire2Learn

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

Timetable

I Introduction to Mathematical Economics			Chapter(s)
Assigned readings	The Nature of Mathematical Economics		1, 2
September 11, 2017	Economic Models		
II Static Analysis			
September 13 –	Equilibrium Analysis		3-5
October 4, 2017	Linear Models and Matrix Algebra		
III Comparative Analysis			
October 6 –	Concept of Derivative		6-8
November 1, 2017	Rules of Differentiation and Their Use in Comparative Statics		
	Comparative Static Analysis of General-Function Models		
IV The Optimization Problems			
November 15 –	Optimization: A Special Variety of Equilibrium Analysis		9-11
December 8, 2017	Exponential and Logarithmic Functions		
	The Case of More than One Choice Variable		

Grading Scale

A+	95 – 100	B	73 – 76	C-	60 – 62
A	85 – 94	B-	70 – 72	D+	56 – 59
A-	80 – 84	C+	67 – 69	D	50 – 55
B+	77 – 79	C	63 – 66	F	0 – 49

Tests and final exams are marked on a numerical (percentage) basis. The course grade is then calculated using the weights indicated above.

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

Grade Determination and Final Examination Details

Department of Economics Criteria for Letter Grades. Economics professors use the following criteria when assigning letter grades:

Grade	Grade Point Value	Description	Grade	Grade Point Value	Description
A+	4.00	Outstanding	C+	2.30	
A	4.00	Excellent-superior performance, showing-comprehensive understanding of subject matter	C	2.00	Satisfactory – basic understanding of the subject matter
A-	3.70		C-	1.70	Receipt of a grade point average of 1.70 may not be sufficient for promotion or graduation. (See individual undergraduate faculty regulations.)
B+	3.30		D+	1.00	
B	3.00	Good – clearly above average performance with knowledge of subject matter generally complete.	D	1.00	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
B-	2.70		F	0	Fail – unsatisfactory performance or failure to meet course requirements
			I	0	Incomplete – unsatisfactory (effective January 2007)

Assignments

- Five very short assignments are to be submitted to dropbox at D2L or at the beginning of class on the date due. Answers to assignments will be either discussed in class shortly after each assignment falls due or posted on the D2L. For this reason, late assignments will be given a score of zero, although you may still wish to have the work corrected and returned without a score being recorded. Please do not slide assignment under my office door – they will not be marked.
- Students are encouraged to discuss the assignments with their classmates, but each must write up their own answers. Copying or misrepresenting someone else's work as your own is a serious offence, which will not be tolerated. Your attention is directed to the "Statement of Intellectual Honesty" in the 2017-2018 Calendar. Taking credit for someone else's work is something for which I show zero tolerance.

Examination

- Tests and final exam will not consist of the multiple-choice questions.

2. Tests will be held in classroom during regular lecture hours and will last 50 minutes.
3. The lowest test mark will be ignored.
4. Tests are designed to reward diligence. In particular, most students who diligently prepare for the tests will go into the final exam with a sound mark. On the other hand, students who do not take the time to prepare for the tests will go into the final exam with a weak mark, or will have dropped the course before the final exam.
5. There will be a Registrar scheduled final examination, lasting 2 hours. It will be a comprehensive examination of all-material covered in the course.
6. The tests and exam must be completed during the specified time. Extra time will not be given for any reason.
7. All examinations will be closed-book.
8. Answers to the tests and the final exam questions must make use of equations and diagrams wherever possible. Numerical questions require numerical answers.
9. THERE WILL BE NO MAKEUP OR DEFERRED EXAMS under any circumstances, nor may the exams be written early. Students unable to write the exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam www.ucalgary.ca/registrar/exams/deferred_final Under no circumstance will this be accommodated by the department. Any student who finds it necessary to miss the one or more of the tests must notify the instructor in advance and produce a valid medical certificate or other required documentation in order to have the weighting adjusted. This adjustment will result in the final exam counting for 36% plus the weight of the excused missed test(s).
10. Examinations will not be given before the indicated examination date. For further information see the 2017-2018 Calendar.
11. The use of a simple calculator during test and examination is permitted. The use of graphing calculators, cell phones, and computers is not permitted.

Reappraisal of Grades

For reappraisal of graded term work, see Calendar I.2

<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

For reappraisal of final grade, see Calendar I.3

<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class; no reappraisal of term work is permitted after the 15 days. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed,

the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

Notes

1. Students should be aware of the academic regulations outlined in The University of Calgary Calendar.
2. **The use of cell phones for any purpose in class is prohibited. Tablets may be used for note-taking purposes only.**
3. Students will be responsible for all material listed on the course outline, regardless of whether or not the material has been covered in class, unless the instructor notifies the class that the material will not be covered.
4. Please note that the following types of emails will receive no response: emails not addressed to anyone in particular; emails where the recipient's name is not spelled correctly; anonymous emails; emails in which the sender has not identified which course and section he/she is taking; and, emails involving questions that are specifically addressed on the course outline.

Plagiarism and Other Academic Misconduct

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual Honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct,

<http://www.ucalgary.ca/pubs/calendar/current/k.html>

Academic Accommodation

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities visit www.ucalgary.ca/access/.

Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at

www.ucalgary.ca/policies/files/policies/student-accommodation-policy_0.pdf

Important Dates

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative

Office: SS 803, E-mail: econrep@fasaucalgary.ca Web: www.fasaucalgary.ca

Society of Undergraduates in Economics

www.ucalgarysue.com

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career partnerships with the Career Centre through hosting industry nights and information sessions, recognizing achievements in teaching, and organizing social events for members. They invite you to join by contacting sue@ucalgary.ca.

Faculty of Arts Program Advising and Student Information Resources

- Have a question, but not sure where to start? The Arts Students' Centre is your information resource for everything in Arts! Drop in at SS102, call them at 403-220-3580 or email them at artsads@ucalgary.ca. You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns, including program planning and advice.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Library Block.
- Online writing resources are available at <http://www.ucalgary.ca/ssc/resources/writing-support>

Evacuation Assembly Point

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at

www.ucalgary.ca/emergencyplan/assemblypoints

Please check this website and note the nearest assembly point for this course

Safewalk

The safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year.

Call 403-220-5333

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2017-07-20