

Economics 209 (L01) (Engineering Economics)

Instructor: Douglas McClintock
Phone: 403-220-2837
Email: dmclint@ucalgary.ca
Office: SS348
Office Hours: MW: 4:00 – 4:50

Lecture Location: ST 135
Lecture Days/Time: MW/6:00 p.m. – 8:45 p.m.
Email #2: douglas.mcclintock@shaw.ca

(Spring 2017)

Course Description

This course includes the basic tools and methodology of engineering economic studies. Topics include basic economic concepts, investment decisions, theory of replacement, project evaluation with taxes and depreciation, social decision making and government projects. Examples are drawn from the textbook and various engineering projects.

Course Objectives/Learning Outcomes

The objective of this course is to introduce the engineering student to the discipline of economics and its importance in the field of engineering. The first part of the course looks at the broad definition of economics and an overall view of Canada's economy in comparison to other economic systems. In particular, we look at a few important macroeconomic issues such as GDP, inflation, unemployment, banking and the role of the Bank of Canada in setting short-term interest rates.

The second (and most comprehensive) part of the course examines the time value of money and how engineers use the time value of money to make important economic decisions. In this section, we examine how interest rates and different compounding periods influence the future value of various capital investments. Future value and present value of annuities, bond and mortgages are also explored. Once we get a solid foundation in this area, we then use these tools to determine the net present value, internal rate of return and payback period of various investment options, which includes depreciation and taxes. Replacement analysis of equipment is also examined. The last part of the course explores the economic evaluation of public projects where the goal is to maximize social welfare instead of profits.

Prerequisites/corequisites

Students must be in the Faculty of Engineering with second year standing or higher. If not registered in the Schulich School of Engineering, consent of the Department of Economics is needed. If required for APEGA, consent must be obtained by the Schulich Undergraduate Studies Office.

Required Textbook(s)

Park, Zuo et al., *Contemporary Engineering Economics (Canadian Perspective)*, Addison-Wesley, 3rd Canadian Edition.

Reserved Readings

Hubbard, et al., *Macroeconomics Canadian Edition*. Toronto: Pearson Toronto.
(Copies of this book can be found at the Taylor Family Digital Library)

Course Requirements/Assessments:

	<u>Course Topics</u>	<u>Text</u>
1.	Introduction GDP, Unemployment and Inflation	<i>Lecture notes</i> Chapter 4 & 5 (<i>Hubbard et al.</i>)
2.	Money, Banking and Monetary Policy	<i>Chapter 10 (Hubbard et al.) and</i> <i>Lecture notes</i>
3.	Time Value of Money and Economic Equivalence	Chapters 3 and 4 (Park et al.)
4.	Analysis of Independent Projects / Mutually Exclusive Alternatives	Chapters 5 and 6
5.	Depreciation and Income Taxes	Chapters 8 and 9
6.	Developing After Tax Cash Flows (with and without borrowed funds)	Chapter 10
7.	Replacement Decisions	Chapter 11
8.	Inflation and Project Cash Flows	Chapter 14
9.	Economic Analysis in the Public Sector	Chapter 13

The basic lecture notes for Course Topics #1 and #2 (without graphs) will be provided on Desire2Learn. These notes are usually posted after the lecture so attendance to the lecture is important. Any graphs and additional notes that students may wish to take down can be added to the notes from Desire2Learn.

1 Midterm Examination (Wednesday June 7 th , 2017)	1	30%
2 Quizzes (10 percent each) (beginning of lectures - in class) Monday May 29 th Wednesday June 21 st	2	20%
Final Examination	1	50%
Total		100%

Tutorials

The tutorials will be 50 minutes in duration and these tutorials will allow the student to work on problem sets and clarify various economic concepts. Tutorials will commence the week of May 22nd 2017.

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.

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)

Grading Scale

A+	97– 100	B	75 – 79	C-	60 – 62
A	90 – 96	B-	70 – 74	D+	55 – 59
A-	85 – 89	C+	67 – 69	D	50 – 54
B+	80 – 84	C	63 – 66	F	0 – 49

Tests and final exams are marked on a numerical (percentage) basis, then converted to letter grades. 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.

There will be a Registrar scheduled final examination, held in a classroom, lasting 2 hours. Non-programmable (e.g. non-graphing) calculators will be allowed during the writing of tests or final examinations.

Quizzes and exams will involve multiple choice questions.

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.

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.ucalgayr.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.ucalgry.ca/policies/files/policies/student-accommodation-policy_0.pdf

Absence from a Quiz/Test/Exam

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/EXAMS under any circumstances, nor may the quizzes/tests/exams be written early. Students unable to write the quizzes/tests/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.

Important Dates

Date	
Monday May 15 th	Lectures begin
Friday May 19 th	Last day to drop full courses. No refunds for full courses after this date.
Monday May 2 nd	Victoria Day – no classes
Monday May 29 th	Quiz #1
Wednesday June 7 th	Midterm Exam
Wednesday June 21 st	Quiz #2
Tuesday June 27 th	Spring classes end
TBA	Final Exam Period for Spring

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.

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. In the case of an alarm, our muster point is at the west entrance of the Social Science Building.

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