



Department of Economics

Faculty of Arts

Economics 395(L01) (Use of Statistics in Economics)

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Lecture Location: EDC 280
 Lecture Days/Time: MWF 12-12:50

Office: SS 432
 Office Hours: F 13:00-14:00

Fall 2018

Course Description:

Introduction to the use of statistical principles in economics. Topics include gathering economic data, basic data manipulation, hypothesis testing, and statistical estimation of economic relationships. The core of this course is based on the principles from random variables, expectation theory, and probability theory. The two-variable and multivariate linear regression models are introduced, developed and evaluated.

Laboratory: Quantitative analysis using standard statistical software; Stata and Excel.

Course Objectives/Learning Outcomes:

Building on the fundamental mechanics of statistics and probability as presented in Stats 205, 211 or 213, Econ 395 students will become familiar with the empirical application of statistical principles to problems of measurement in economics. The course focuses on the intuition and application of statistical reasoning, the gathering and manipulation of economic data, and the use of standard econometric software. Students completing this course successfully will have a fundamental working knowledge of statistics and econometrics as applied to solving current economic problems and measurement.

Week	Topic	Readings	Notes
1	Introduction: Why study econometrics? Why it is useful for understanding economic problems and issues of measurement.	Wooldridge Ch. 1	Classes begin Sept. 6
2, 3	Review of basic probability and statistics: Opportunity to review important elements in Statistics useful	Wooldridge Appendices A, B, C; Review Stats 213	
<u>** 3</u>	<u>Assignment #1 due</u>		<u>Sept. 21</u>
4	Simple Regression model: Fundamental characteristics and mechanics of regression analysis, the importance of the residual error term.	Wooldridge Ch. 2	
5, 6	Multi-regression Model: A detailed understanding of why and what restrictions are required for a regression equation to generate empirically accurate information on the relationships among economic variables.	Wooldridge Ch. 3	
<u>** 5</u>	<u>Assignment #2 due</u>		<u>Oct. 5</u>

7, 8	Multi-regression inference: Testing the statistical accuracy of the model and parameter estimates.	Wooldridge Ch. 4	
**7	<u>MIDTERM 1</u>	<u>Wooldridge Chapters 1 – 3, Appendix A, B, C</u>	<u>Oct. 15</u>
** 8	<u>Assignment #3 due</u>		<u>Oct. 26</u>
9, 10	Multi-regression further issues: Issues of functional form for specifying the regression model, selection of regressors, and using the estimated regression model for prediction.	Wooldridge Ch. 6	
**10	<u>MIDTERM 2</u>	<u>Wooldridge Chapters 4 - 6</u>	<u>Nov. 7</u>
11	Mid-term Break		
12	Qualitative information: The importance and use of binary (dummy) variables as regressors and choice variables. The linear probability model in economics is introduced.	Wooldridge Ch. 7	
** 11	<u>Assignment #4 due</u>		<u>Nov. 23</u>
13	Heteroskedasticity: The variance of the regression equation and the importance of constant variance (homoscedasticity) in economic inference and model valuation, tests and corrections.	Wooldridge Ch. 8	
14	Model Specification: Issues arising in empirical application of regression models, testing functional specification, proxy variables and measurement error.	Wooldridge Ch. 9	
14	Course Review and Final Examination Preparation		
** 14	<u>Assignment #5 due</u>		<u>Dec. 7</u>
	A cumulative final examination scheduled by the Registrar's Office	<u>Wooldridge Chapters 1 – 4, 6– 9, Appendix A, B, C</u>	

Prerequisites:

Economics 201, Economics 203, Statistics 205, 211 or 213

Textbook:Jeffrey M. Wooldridge Introductory Econometrics, A modern approach. 6th Edition, South-Western**Recommended Textbook(s):**Angrist, Joshua D. and Jörn-Steffen Pischke; *Mostly Harmless Econometrics: An Empiricist's Companion*
A. Colin Cameron & Pravin K. Trivedi, *Microeconometrics using Stata*, Revised Edition, Stata Press**Course Requirements/Assessments:**

5 Assignments (see dates above)	25% (5@5%)
Two Midterm Exams (Oct. 15, Nov. 7)	40% (2@20%)
Final Exam	35%

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+	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

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

The format of the assignments and the midterms will be discussed during the first week of lectures. **Late assignments will not be accepted.**

Tests and exams WILL NOT involve multiple choice questions. No programmable- calculators, cellphones, tablets or laptops are allowed in any midterm or final exam. A non-programmable calculator WILL be allowed during the writing of the midterm and the final exam.

The midterms will be written during class time.

The final examination will be comprehensive, scheduled by the Registrar, held in a classroom, lasting 2 hours.

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/MIDTERM 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.

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.

Reappraisal of Grades and Intellectual Honesty:

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>

Statement of Intellectual Dishonesty, see Calendar K.4

<http://www.ucalgary.ca/pubs/calendar/current/k-4.html>

Plagiarism and Other Academic Misconduct, see Calendar K.5

<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

Academic Accommodations:

The student accommodation policy can be found at: ucalgary.ca/access/accommodations/policy.

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities ucalgary.ca/policies/files/policies/student-accommodation-policy.

Students needing an Accommodation based on a Protected Ground other than disability should communicate this need, preferably in writing, to the course instructor.

Important Dates:

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

Student Organizations:

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

Economics Department Representative

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

Society of Undergraduates in Economics:

<https://www.ucalgarysue.com/>.

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events

for members. They invite you to join by contacting SUE at societyofundergradsineconomics@gmail.com.

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 assembly point for this classroom is food court in the Professional Faculties 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.**

Freedom of Information and Protection of Privacy (FOIP) Act:

Personal information is collected in accordance with FOIP. For more information, see <http://www.ucalgary.ca/legalservices/foip/foip-hia>.

Internet and Electronic Communication Device information:

The use of cell phones for any purpose in class is prohibited. The classroom is a no cell phone zone. Laptops and tablets may only be used for note-taking purposes.

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2018-08-09