



## Department of Economics Course Outline

		<b>Term:</b>	Spring 2009
<b>Course:</b>	Economics 395 [Use of Statistics in Economics]	<b>Section:</b>	20
<b>Time:</b>	MW 13:00 – 15:50 (Lab – MW 12:00 – 12:50)	<b>Place:</b>	SS 113 (Lab – SS 018)
<b>Instructor:</b>	Marian Miles		
<b>Office:</b>	SS 447	<b>Phone</b>	403-220-5740
<b>Office Hours:</b>	W 11:00 – 11:50	<b>E-Mail:</b>	<a href="mailto:mamiles@ucalgary.ca">mamiles@ucalgary.ca</a>

### Textbook(s):

Gerald Keller, *STATISTICS FOR MANAGEMENT AND ECONOMICS*, 8<sup>th</sup> edition, with Aplia Software Kit (sold together) **or** Aplia Software Kit (sold by itself): This kit gives you access to an on-line version of the textbook, Cengage Learning. [**Required Text**]

### Book(s) on Reserve:

Gerald Keller, *STATISTICS FOR MANAGEMENT AND ECONOMICS*, 8<sup>th</sup> edition, Cengage Learning.

### Blackboard:

This course will make use of blackboard – students who are registered in the course can logon at <http://blackboard.ucalgary.ca/webapps/login>

### Course Outline:

Prerequisites; Econ 201, 203 and Stats 211 or 213.

Building on the fundamental mechanics of statistics and probability as presented in Stats 211 or 213, Econ 395 familiarizes students 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. The core of this course comprises Random Variables, Expectation, Probability Distributions, Hypothesis Testing and the Two-Variable Linear Regression Model.

Topics Covered

*Random Variables:* The role of random variables as the fundamental building block of econometric models; the use of expectation theory including the conditional expectation operator as the main tool for investigating the characteristics of econometric relationships; the role of probability theory in expectations; sampling and sampling distributions; probability density and cumulative distribution functions.

*Data Gathering and Manipulation:* Instruction on searching for and downloading economic variables from the main economic data sources in Canada; transforming and modifying data to be read into an econometric software package.

*Single and Multi-Variate Probability Distributions:* Instruction on using and interpreting the Uni-variate and Multi-variate Normal distribution; extensions to the t, Chi-squared and F distributions with empirical applications.

*Hypothesis Testing and Inference:* Single and joint hypothesis tests, Type I and Type II errors and p-values; choosing the correct test statistic for the measurement problem.

*The Least Square Regression Estimator:* The two-variable regression model; interpreting the variables, the coefficients and the error term; confidence intervals, goodness-of-fit, hypothesis testing and introduction to multi-variable linear regression models.

*Applications of Econometric Software:* Instruction on using a standard econometric software package; reading data, descriptive statistics, applying the least squares estimator, interpreting econometric results, carrying through with and the empirical interpretation of hypothesis testing and other standard econometric tests; graphical methods.

***Students MUST attend lab presentations. The course will use software Excel and STATA.***

**Grade Determination and Final Examination Details:**

Assignments	5	30%	Using Aplia, Excel, and Stata.
Midterm	1	30%	June 8 <sup>th</sup> (2 hours)
Final Examination	(2 Hours)	40%	As scheduled by the Registrar

1. In order to complete assignments in this course, you will be required to access the Aplia website at <http://econ.aplia.com>. Please register on the website by May 20th.
2. Due dates for the assignments will be announced during the first week of the semester, and posted on Blackboard. It is your responsibility to remember the due dates.
3. The format and dates of these tests and assignments will be discussed during the first week of classes. Each assignment is due on the date and time stated on the assignment. Aplia will not accept late assignments. Some of the assignments will be done in small groups (3 – 4 students) and a group assignment is to be handed in. All students in the group will receive the same mark for that assignment.

4. Emails regarding Aplia should be directed towards the providers of Aplia.

Tests and final exams are marked on a numerical (percentage) basis, and then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, these letter grade equivalences will generally apply:

A+	97 – 100	B+	81 – 85	C+	66– 69	D+	53 – 56
A	90 – 96	B	75 – 80	C	61 - 65	D	49 – 52
A-	86 - 89	B-	70 - 74	C-	57 - 60	F	0 - 48

Programmable calculators are NOT allowed during the writing of tests or final examinations. Non-programmable calculators WILL be allowed during the writing of tests or final examinations, but cell-phones are strictly forbidden during the writing of examinations.

No deferred midterm will be given. In case of documented illness or family emergency, the extra weight will be shifted to the final examination. The Instructor should be *notified in advance* if a student will be unable to write a midterm. In any case, documentation must be provided as soon as possible (within a day or so of the missed midterm).

There will be a Registrar scheduled **final examination**, lasting 2 hours, and it may be held in a gym. The FULL COURSE will be covered.

Tests and exams MAY involve multiple choice questions.

Students' Union Vice-President, Academic

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Society of Undergraduates in Economics (S.U.E.)

E-mail: [sue@ucalgary.ca](mailto:sue@ucalgary.ca)

[www.ucalgary.ca/sue/](http://www.ucalgary.ca/sue/)

#### Notes:

- Students seeking reappraisal of a piece of graded term work (assignment, midterm, etc.) should discuss their work with the Instructor *within seven days* of the work being returned to the class.

- It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 403-220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than seven (7) days after the start of this course.

Safewalk / Campus Security: 403-220-5333

MAM/mi  
2009-03-25