John Parman
1125 Soc Sci & Hum
jmparman@ucdavis.edu
Office Hours: Mon 2pm-4pm, Thu 2pm-4pm

Econ 102, Winter 2010
Tu, Th 9:00am-10:20am
Haring 2205

# ECN 102 - Analysis of Economic Data

This course serves as a bridge between an introductory statistics course (Statistics 13 or 32) and a course in econometrics (Economics 140). The course will cover the basic principles of analyzing economic data. While certain formal mathematical arguments will be used in class, the majority of the material presented will focus on the practical applications of using data to address questions in economics. Topics covered will include how to find economics data, producing and interpreting descriptive statistics for data, and testing hypotheses about population characteristics and the relationships between variables.

## Requirements

The prerequisites for this course are Economics 1A and 1B, Statistics 13 or 32, and Mathematics 16A and 16B or 21A and 21B with a grade of C- or better in each of the classes. If you do not meet these prerequisites, you need to get permission from the instructor. Only two units of credit are allowed to students who have completed Economics 140 or Agricultural and Resource Economics 106.

## TAs

Kuk Mo Jung (kmjung@ucdavis.edu)
Section: Tue 2:10pm - 3pm and Tue 3:10pm - 4pm, Hutchison 93
Office hours: Thu 12pm - 2pm, 125 SSH

Danielle Sandler (dhsandler@ucdavis.edu)
Section: Wed 3:10pm - 4pm and Wed 4:10pm - 5pm, Hutchison 93
Office hours: Wed and Thu 10:30am - 11:30am, 145 SSH

Yi Chen (yiychen@ucdavis.edu)
Section: Tue 1:10pm - 2pm and Tue 4:10pm - 5pm, Hutchison 93
Office hours: Fri 2pm - 4pm, 118 SSH

## Reading Materials

The required text for the course will be *Analysis of Economic Data* by Colin Cameron. This is available as a packet printed by the Davis Copy Shop. While it is printed by the Davis Copy Shop, you will need to pick it up at Davis Textbooks on the corner of 3rd and A. You may use an older copy of the packet but should be aware that all page references will be to the most recent packet. In addition to the course packet, other materials such as lecture slides will be posted to the course website (smartsite.ucdavis.edu).

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# Grading

Grades for the class will be based on problem sets, two midterms and a final, weighted as follows:

| | |
|---|---|
| Problem Sets: | 10% |
| Midterm 1: | 25% |
| Midterm 2: | 25% |
| Final: | 40% |

In line with Economics Department policy the average GPA for the class will be 2.4. Students will have one week after any graded work is returned to raise any issues about grading. Grading issues related to clerical mistakes can be brought directly to the professor or TAs. Requests for regrading must be made in writing and cite the specific reasons that reconsideration of a grade is warranted. Students should only enroll if they are available for the regularly scheduled final exam time. There are no makeup exams for either the midterms or final.

# Problem Sets

Problem sets will be posted on the course website. Four of the problem sets will be collected and graded. It will say on the problem set whether or not it will be collected. You are welcome to work in groups but every person must still submit an individual problem set. Many of the problem sets will require use of a computer to analyze data. The UC-Davis computer labs have all of the necessary software to complete assignments.

# Schedule

| Week of | Tuesday | Thursday |
|---|---|---|
| January 3 | lecture | lecture |
| January 10 | lecture | lecture |
| January 17 | lecture | lecture |
| January 24 | lecture | **Midterm 1** |
| January 31 | lecture | lecture |
| February 7 | lecture | lecture |
| February 14 | lecture | lecture |
| February 21 | lecture | **Midterm 2** |
| February 28 | lecture | lecture |
| March 7 | lecture | lecture |

**Final Exam: Thursday March 17, 10:30am-12:30pm**

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# Outline of Course

Below is the general outline we will follow. The chapters numbers refer to the relevant chapters in Cameron's *Analysis of Economic Data*. This outline is subject to change depending on how quickly we cover material in class. If sections are to be skipped, I will make an announcement in class. Before each exam, I will post information on the set of chapters that will be covered on the exam.

I. Introduction *(Chapter 1)*

II. Visual Representations of Data *(Chapter 2)*

*Histograms, pie charts, line charts, column/bar charts*

III. Descriptive Statistics *(Chapter 2)*

*Measures of central tendency, dispersion, and other characteristics of distributions*

IV. Statistical Inference on the Population Mean *(Chapter 3)*

*Distribution of the sample mean, population and sample test statistics, hypothesis testing, confidence intervals*

V. Data Transformations *(Chapter 4)*

*Hypothesis testing with critical value approach, confidence intervals*

VI. Introduction to Bivariate Data *(Chapter 5)*

*Scatterplots, covariance, correlation*

VII. Linear Regression *(Chapter 5)*

*Least squares regression, measures of goodness of fit*

VIII. Statistical Inference on Regression Parameters *(Chapter 6)*

IX. Data Transformation *(Chapter 8)*

*Polynomial transformations, logarithmic transformations, dummy variables*

X. Introduction to Multivariate Data *(Chapter 9)*

*Multiple regression, statistical inference on one regression parameter*

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XI. More Statistical Inference *(Chapter 9)*

*Hypothesis testing on two or more regression parameters*

XII. Data Transformation *(Chapter 10)*

XIII. Model Misspecification *(Chapter 11)*

*Consequences of omitting key variables, using the wrong functional form, heteroskedasticity, autocorrelation*

XIV. Further Topics in Multiple Regression *(Chapter 12)*

*Dealing with heteroskedasticity, autocorrelation and omitted variable bias*

XV. Further Topics *(time permitting)*