Munteanu, Radu Email: rmuntean@econ.ucsd.edu Office: Econ 124 Session: A05, A08, A10



1/5/04 Please note that the computer lab sessions are just like the office hours. The attendance for the sessions are not required. TAs will not have extra office hours.

### **ECONOMETRICS 120A**

Instructor: Zhigang Li

Email: zli@econ.ucsd.edu

Office: Sequovah Hall 206

Office Hours: MWF 12:45 a.m - 2:45 p.m. (i.e. before each class)

Classroom: Center Hall 101

Class Time: MWF 3:00 p.m. - 3:50 p.m.

Course Webpage: www.econ.ucsd.edu/~zli/120a

# Course Description:

As the first of the *Econometrics* sequence, this course is designed to provide you building blocks necessary to construct rigorous econometric tools. These building blocks include basic statistics, probability rules, and the methodology of inferring the truth from the observed. Besides laying a groundwork for sophisticated econometrics, this course also provides you some tools that are ready to be used in analyzing *quantitatively* interesting economic problems. For example, this course teaches you how to judge statistically whether two variables are the same on average; this tool has wide applications in economic and business practices.

### Texts

Wonnacott, T.H. and R.J. Wonnacott, (1990) <u>Introductory Statistics for Business and Economics</u>, Fourth Edition, John Wiley and Sons:New York.

Software

All of the statistics in this course can be done using the Microsoft Excel spreadsheet program, which is available in the computer laboratory in Econ 100. You may use other econometric or statistical software.

### Course Outline

The course is organized around the following topics. Summary class notes will be posted in order.

Introduction (PDF)

### Part One --- the Basics

- Topic 1 Describing Data --- Single Variable PDF Notes (updated at 1:39pm on 1/12/04)
- Topic 2 Describing Relationship in Data --- Two Variables PDF Notes (posted at 1:20pm on 1/20/04)
- Topic 3 Basics of Probability PDF Notes (posted at 9:45pm on 1/24/04)

# Part Two --- Inference about Sample Mean

An Application: Inferring the Truth --- the Fairness of a Coin PDF Notes (posted at 8:11pm 2/3/04)

- **Topic 4** Distributions of Sample Mean <u>PDF Notes</u> (posted at 12:58pm 2/8/04)
- Topic 5 Confidence Interval PDF Notes (posted at 11:19pm 2/10/04)
- Topic 6 Basics of Hypothesis Testing

# Part Three --- Applications, Generalization, and the More Advanced

Topics to be listed.

Problem Sets and Practice Exams

Tips for Using the Excel

My tips for drawing a histogram: First turn your data into a five-bin frequency table with a MIDPOINT for each bin in the first column and the corresponding frequencies in the second column. On an Excel worksheet input the frequency table. Click the "Chart Wizard" button, choose the "Column" chart type, click "next", highlight the "frequency" column of the data, now you should see a five-bin bar chart on the mini-window. Click the "series" button close to the upper right-hand corner, click the small open window next to "Category (X) axis labels", highlight the "bin" column of the data. Click "next" and fill in any information you want.

Finally, click "finish".

<u>Problem Set 1</u> Answer or hints To obtain data for the problem set, go to this <u>webpage</u>, click Data & Statistics, and then click "Data by Country" in the left-hand-side index. If you are not familiar with the distribution of countries, check <u>this page</u>.

Problem Set 2 Data

Problem Set 3 Sugar Library Excel Tips

<u>Practice Midterm 1</u> <u>Solution</u> Note that the practice midterm is longer than the real midterm. Moreover, in the real midterm you will have enough space to write your answers.

Solutions to Even Number Questions in Chapter 3 of the Textbook

Solutions to the First Midterm

Computer Lab Usage

Lab Facility: Economics Building 100

Combination: 0578715

Note 1: Some labs have open hours when a combination is not required and some labs require a combination 24 hours/day depending on the use of the lab. Room hours are posted outside the door. The combination is for the students in this class *only*. The labs will be closed to the students at the end of exam week and all class access codes will be removed.

## Computer Accounts Slips contains information you need to access computer facilities.

Note 1: Computer accounts slips are distributed by TAs. Please go to your computer lab sessions and ask the TAs for your computer accounts slips.

Note 2: Pre-registered students: your name is already on the computer account slip. The accounts should be active by 4:00 p.m. on the first day of classes.

Note 3: Students not on the roster: a BLANK computer account slip will be distributed to you. You need to fill in your name, student id. number, and password; then return the slip to the Account Office. There are instructions on the forms.

**Evaluations** 

Four Homework Assignment 20%

One Midterm Exam (date and location to be announced) 35%

One Final Exam (date and location to be announced) 45%

### Letter grades will be allocated as follows:

Letter	A	A-	B+	В	B-
Numerical Range	90% - 100%	85% - 89%	80% - 84%	75% - 79%	70% - 74%
Letter	C+	С	C-	D	F
Numerical Range	65% - 69%	60% - 64%	55% -59%	40% - 54%	0% - 39%

For example, suppose that you earned 13 out of 20 for the four homework assignments, 65 out of 100 for the mid-term, and 80 out of 100 for the final. Your numerical grade will be (13/20)\*20%+(65/100)\*35%+(80/100)\*45%=71.75%. Therefore, your final letter grade will be B-.

Assignments should be handed in before class on the dates specified. Do not interrupt class to hand in assignments. Late assignments will not be accepted.

Exam policies: You may use a calculator, a simple one is enough. All grading problems (exams and problem sets) must be rectified within a week my returning the work. There will be no regrading of exams written in pencil. Makeup exams will only be given if absence is due to medical reasons (Doctors certificate required). In general, makeup exams will be at least as difficult as the regular exam, most likely harder.

Problem Set 3 is out. Please check it out HERE.

Solutions to the midterm are available HERE.

Solutions to the practice midterm are available <u>HERE</u>. If you have downloaded the solution before 9pm Saturday, please check again since I made a couple of corrections to my solutions.

Practice midterm is posted HERE. Please check it out.

Answers to Problem Set 1 is out. Please check it out HERE.

### **ANNOUNCEMENTS:**

1/30/04 Midterm is on Feb 2. Calculators are allowed.

1/20/04 New information about accessing the computing facilities in Econ building 100 can be found HERE.

1/20/04 As to the histogram for problem set 1, you may follow the tips <u>HERE</u> and use the data analysis tools in the computer lab (Econ 100). You may also just use the ``bar chart" function of Excel (this way you may get a histogram with "non-touching" bars). You may check <u>my tips for histogram</u> for reference.

1/16/04 TA Regis is going to have an extra office hour in his office (Econ 115) every Friday  $1 \sim 2$ pm.

1/12/04 Two copies of textbooks and workbooks are put on reserve in SSHL today.

1/8/04 Please mark your schedule. The final is scheduled at 3:00-6:00 pm on March 17.

1/8/04 About the midterm: due to unexpected problem with scheduling the midterm, I decide to split the midterm into two. Details are as below. The first midterm is on Feb. 2 and the second midterm is on Feb. 20. You can choose take *either* of the midterm. If you take both of them, only the one with higher grade will be counted. Both midterms are taken in class.

1/6/04 Since session 03 and 05 have very few students enrolled, I decide to combine this two sessions. Now those students who have chosen session 03 please attend session 05. TAs will start their computer lab hours on Wednesday. Moreover, session 02 will not have a TA; therefore, students enrolled in session 02 are allowed to go to any other sessions for help from TAs.

1/6/04 TAs:

Barnichon, Regis Email: <u>rbarnichon@ucsd.edu</u> Office: Econ 115 Session: A01, A06, and Fri. 1-2pm.

Calhoun, Grayson Email: gcalhoun@ucsd.edu Office: Econ 123 Session: A04, A07, and A09