

## **ECONOMETRICS 120A**

### *Course Description:*

The course introduces students to the science of statistics, building student skills in the analysis of data and introducing the formal methods used by statisticians to learn about the real world from data. As a building block students will be introduced to basic probability theory. We will gain an understanding of the collection of data and the problems and opportunities this affords. Students will be expected by the end of the course to understand the foundations of modern statistical analysis in preparation for 120B and C which will concentrate on developing methods of statistical analysis extending the concepts covered in this class.

### *TextBook*

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

### *Course Outline*

A detailed guide on to what to read is on WebCT, see file called READING.

Ch1 Introduction

Ch2 Descriptive Statistics (also Chapter 11, Sections 1,2)

Ch3 Probability

Ch4 Probability Distributions.

Ch5 Two Random Variables.

Ch6 Sampling.

----- Data Generation .

Ch7 Point Estimation.

Ch9 Hypothesis Testing

Ch 8 Confidence Intervals

Note: I am skipping most of chapter 3, which contains some basic results regarding probability. Please read through this chapter even though most of it is not directly examined – the remaining chapters use probability results.

*Statistical software:* All of the statistics in this course can be done using the Microsoft Excel spreadsheet program, which is available on most university computers. You may use STATA or other econometric or statistical software. Data, Problem sets and solutions will also be available for download from WebCT.

### *Grading*

There will be two midterm examinations (Jan 25 and February 22 in class) and a final exam. The midterms are each worth 25% and the final is worth 50% of your grade. It is important to do problems in this course, this is the best preparation for both learning and also for the exams. Sets of problems will be available on WebCT for each section of the course, with answer keys posted later. Problem sets do not need to be handed in or graded.

Exam policies: You may use a calculator, a simple one is enough (phones, PDA's and other devices with messaging capabilities are not allowed). All grading problems with exams 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.

*Office Hours* :Office hours are posted on WebCT.