ECONOMICS 725-01: DATA METHODS IN ECONOMICS

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

FALL 2008

Instructor:
Prof. David Ribar
Office: 459 Bryan Building
E-mail: dcribar@uncg.edu
Phone: 336 334-3904

Class meetings:
Lecture: TR 8:00-10:50, 211 Bryan Bldg.
Office hours: TR 11 a.m. – 12 p.m. and by appointment

Description: Economics 725 is a three-credit course that teaches students how to use and analyze large data sets in economics and that introduces the SAS programming language. It is intended to precede ECO 726 and to give students the data tools needed to carry out guided research for that class. ECO 725 explores how to manipulate data, including how to read, write, subset, and combine records; how to prepare data for research purposes; how to tabulate and display data; how to work with descriptive and multivariate statistical output; and how to address common data problems, such as unit and item non-response. All of these methods are illustrated using the SAS programming language. This course is intended to serve as a building block in applied economic training.

Student Learning Outcomes: On completion of this course students will have:

- learned practical procedures for working with data;
- seen several different ways that data can be organized;
- learned the basics of the SAS programming language, and
- conducted descriptive economic research with a large dataset.

Texts: There is no specific, required text for the course. Instead, articles and write-ups will be assigned as needed.

Procedures: Students are required to attend and participate in two hour and 50 minute laboratory sessions that meet twice weekly over an eight-week period. Starting with the second class, students are expected to complete homework and reading assignments *before* each meeting, to prepare questions and comments about the assignments, and to contribute to discussions.

The class will generally meet in Bryan 211, which is a computer classroom. The school prohibits food and drink from the computer classrooms. Students are expected to follow the classroom discussion and exercises and to refrain from other activities, such as web-surfing, e-mailing, and game-playing, during class.

The primary responsibilities of students in this class will be to:

- attend and participate in class (10 percent of the grade),
- complete weekly homework assignments (60 percent of the grade), and
- complete one large programming assignment (30 percent of the grade).

The large programming assignment will be made in the sixth week of the class, with the assignment being due **Monday, October 28, 2008**. Please note that assignments must be turned in when they are due. Late assignments will not receive any credit, unless prior arrangements have been made with the instructor.

In addition to these responsibilities, students are expected to conform to the University's Student Code of Conduct (http://studentconduct.uncg.edu/). The instructor and students will also conform to the Bryan School's Faculty and Student Guidelines (http://www.uncg.edu/bae/faculty_student_guidelines_sp07.pdf).

Research Integrity: Students are expected to be familiar with and abide by the University's Academic Integrity policy (see http://academicintegrity.uncg.edu/). In particular, students are expected to work independently on homework assignments. Students may discuss general data and programming approaches among themselves. However, they should not discuss specifics of their programs. Assistance will be available from the instructor and teaching assistant.

Software: The primary software package for this class will be SAS. SAS is installed in the UNCG computer labs. SAS licenses for personal computers are available for UNCG students through ITS. To begin the license process, connect to https://web.uncg.edu/research-access/secure/sas/sas.asp.

Tentative schedule

BASICS

Aug. 26 Sources of Data in Economics

Students will obtain copies of the SAS software

Aug. 28 Introduction to the Panel Study of Income Dynamics (PSID)

BASE SAS TOOLS

Sept. 2 Introduction to SAS on the PC

Sept. 4 Lab

Homework #1 assigned

Sept. 9 Reading and storing data

Sept. 11 Preliminary discussion of ECO 726 projects

Homework #2 assigned

Sept. 16 Creating tables and graphs

Sept. 18 Cleaning and manipulating data

Homework #3 assigned

Sept. 23 Complex file and data structures

Sept. 25 Complex file and data structures continued

Homework #4 assigned

MULTIVARIATE ANALYSIS TOOLS

Sept. 30 An introduction to multivariate procedures

Oct. 2 Working with procedure output

Homework #5 assigned

Large programming project assigned

ADVANCED TOPICS

Oct. 7 Missing data

Oct. 9 Artificial data

Homework #6 assigned

Oct. 14 Macros

Oct. 16 Other data handling procedures

Oct. 28 **Large programming assignment due**