Econ 215 – Econometric Theory and Methods
Fall 2017; MWF 12:00

| Office: | Kirby 214 |
|---|---|
| Phone: | 758-5762 |
| E-mail: | cottrell@wfu.edu |
| Webpage: | http://users.wfu.edu/cottrell/ecn215/ |
| Office hours: | TR 9–12, Tues 2–4, and by appointment |

Text: Stock and Watson, *Introduction to Econometrics*, Pearson, third edition (updated), 2014.

**Objective**: The aim of this course is to give you both a theoretical understanding of the principles of econometrics and some hands-on experience of the possibilities and problems of the subject. Econometrics is concerned with the connection between economic concepts, theories and hypotheses on the one hand, and 'real world' economic data on the other. Typical econometric tasks include the quantification of economic relationships (such as demand curves), the precise specification of economic theories, and the testing of hypotheses derived from theory. The main tool for these purposes is regression analysis. We shall review and develop some basic concepts of statistics and probability, leading to an examination of regression analysis, its principles and pitfalls. Once sufficient groundwork is established, we will work with an econometric computer program (gretl), first carrying out prepared exercises and then progressing to an original piece of empirical research.

**Assessment**: Your grade in this class will be based on four elements, as follows:

| Midterm exam | 20 percent |
|---|---|
| Project | 40 |
| Final exam | 30 |
| Homeworks | 10 |

Please note that the project carries a good chunk of the grade. Some notes on the project can be found on the class webpage; you will begin planning for it before Fall Break and it will be due on Monday November 20.

**Syllabus**: We will devote approximately 4+ class sessions to each of the following topic headings on average, although some may take somewhat longer than others. You are expected to keep up with the textbook readings; these will be supplemented by handouts on topics which require additional clarification.

1. Introduction and review of probability and statistics: handouts; chapters 1 to 3

2. Linear regression 1: chapters 4, 5

3. Linear regression 2: chapters 6, 7

4. Nonlinear models, assessment of studies: chapters 8, 9

5. Binary dependent variables: chapter 11

6. Methods for panel data: chapter 10

7. Instrumental variables: chapter 12

8. Methods for time series: chapter 14

**Midterm exam date: Wednesday, October 18**
**Final exam: Monday, December 11, 2 pm**