ECG 750 – Introduction to Econometric Methods – Spring 2015
SYLLABUS
Class Time: Tuesday and Thursday 11:45am-1:00pm in Nelson Hall 1206

Instructor: Denis Pelletier
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Office Hours: Tuesday 2:00pm-3:00pm, or by appointment.

Prerequisite and corequisite: The prerequisite is ST 421 Introduction to Mathematical Statistics I (or equivalent) and the corequisite is ST 422 Introduction to Mathematical Statistics II (or equivalent). For the purpose of this course, ST 521 and ST 522 are equivalent to ST 421 and ST 422, respectively, but ST 514 is not. If you have not taken ST 421 (or equivalent) or if you are not taking ST 422 (or equivalent), I suggest that you take ECG 561 instead of ECG 750. If you are not sure if you satisfy these requirements, please talk to me.

Course objectives: This is a course in econometrics for graduate students who plan to pursue a Ph.D. in economics. My main goals include:

- to present basic ideas in econometrics;
- to help you get familiar with the rigor of graduate-level econometrics; and
- to provide you with hands-on experience of coding in a matrix-oriented language (Matlab).

Required textbook: Baltagi, Badi H., Econometrics, Springer, fifth edition. An electronic copy of the textbook, as well as the solution manual, are available from the library’s website.

Electronic reserve: Some material that can only be made available to the students registered for this course will be made available through the library’s electronic reserve.

Grading:

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Problem sets and computer assignments</td>
<td>20%</td>
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<tr>
<td>First midterm exam (Tuesday, February 17)</td>
<td>20%</td>
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<td>Second midterm exam (Tuesday, March 31)</td>
<td>20%</td>
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<tr>
<td>Final exam (Tuesday, May 5, from 8:00am to 11:00am)</td>
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The standard NCSU letter grading scale is the following:
At the full discretion of the instructor the grades might be adjusted upward at the end of the semester if the instructor judge that the exams were too difficult.

Only the final exam is cumulative in nature. Exam questions will be taken from material covered in:

- the lecture notes and related classroom discussion,
- the textbook,
- handouts,
- the homework assignments.

The dates for the midterm exams are somewhat tentative and may change slightly according to the needs of the class or the instructor. The policy for the exams is that I do not give exams early or late barring special circumstances. For complete attendance and excused absence policies, please see http://policies.ncsu.edu/regulation/reg-02-20-03.

**Homework assignments:** The policy regarding homework assignments is that unless otherwise stated, they will be due at the beginning of class on the date assigned. Late assignments will not be accepted barring special circumstances. For complete attendance and excused absence policies, please see http://policies.ncsu.edu/regulation/reg-02-20-03. I expect the students to discuss the questions among themselves but each student must submit their own personal answers.

**Software:** The class will use Matlab, a matrix programming language, for the computer exercise part of the homework assignments. You need not have any prior experience with Matlab. It is available on the computers in Nelson Hall’s computer labs and probably elsewhere on campus. You can obtain a copy of the student version at http://software.ncsu.edu.

There are several overview books on MATLAB and its functions. Two are “Matlab Guide” by D. Higham and N. Higham (elementary) and “Mastering Matlab 7” by Hanselman and Littlefield (more advanced). If you are new to matrix programming I suggest investing a few hours in going
through such a book. I will do at least one computer lab session to present the basics of Matlab and give sample code through the semester to help you complete the assignments. The language is easy to learn. The goal is not for you to become certified Matlab programers. Matlab is a tool with which you will learn econometrics.

Email: I will often send emails to the whole class to distribute the assignments, answer keys, give instructions, ... To do so I will use an email alias created by Wolfware to send these emails. Through this alias, the emails will be sent to your unity email address, unless you told the Office of Internet Technology to send university emails to a different email address. It is your responsibility to check this email account on a regular basis.

Academic integrity, academic honesty and honor pledge: Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at http://policies.ncsu.edu/policy/pol-11-35-01. Also see http://policies.ncsu.edu/policy/pol-11-35-01 for a detailed explanation of academic honesty. Your signature on any test or assignment indicates “I have neither given nor received unauthorized aid on this test or assignment.”

Accommodations for disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Services Office (http://www.ncsu.edu/dso), 919-515-7653. For more information on NC State’s policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at http://policies.ncsu.edu/regulation/reg-02-20-01.

Outline of the course:

1. Basic statistical concepts
2. OLS algebra
3. OLS asymptotic: law of large numbers, central limit theorem, ...
4. Limited dependent variables
5. Endogenous regressors, instruments and method of moments
6. Time series data
7. Panel data