Environmental & Resource Economics
ECG 715
North Carolina State University
Fall 2016

Instructor: Dr. Harrison Fell
Office: 4312 Nelson
Telephone: (919) 515-4676
Email: hfell@ncsu.edu
Office Hours: 2:00 – 4:00 TTh and by appointment

Class Hours: TTh, 10:15am-11:30am

Room: 4163 Nelson

Website: Moodle (you will need your Unity ID and password to access this site)

Objectives: This course is the first in the environmental Ph.D. sequence. The course is primarily a survey course that will be broken down into two major themes. For the first half of the semester we will survey papers related to environmental policy design. For the second half of the semester we will survey empirical papers in environmental and energy economics with a key focus on modern micro-econometric methods and identification concepts.

Prerequisites: ECG 700 (or graduate-level microeconomic theory)

Text: There is no text book required for this course. Readings will come from academic journals and working paper series.

Grades: Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm</td>
<td>25%</td>
</tr>
<tr>
<td>Research Proposal Paper</td>
<td>35%</td>
</tr>
<tr>
<td>Referee Reports</td>
<td>15%</td>
</tr>
<tr>
<td>Presentations</td>
<td>15%</td>
</tr>
<tr>
<td>Participation/Seminars Attendance</td>
<td>10%</td>
</tr>
</tbody>
</table>

TAKE-HOME MIDTERM: 3-5 short answer and mathematical questions. You will have 24 hours.
RESEARCH PROPOSAL PAPER: The research proposal should be around 10-15 pages in length on a topic of your choosing. The paper topic does not necessarily have to relate to a topic covered in class, although it does need to fall within the field of environmental and resource economics – please check with me. You may not use a paper you are writing for another class to satisfy this assignment.

The purpose of this research proposal is for you to provide a possible research idea that could turn into a dissertation chapter and/or academic publication and to do a lot of work you will need for that future paper now. The paper should include a description and motivation of the research question, a literature review, and a discussion of modeling, econometric, or data issues. In particular, if you are proposing an empirical research topic to explore, you must identify and discuss the data available. If the data you need does not exist or cannot be easily obtained, your research topic is invalid.

Early in the semester, I will give you some advice on working on a research proposal and my expectations for this paper. Again, if you are planning on writing a dissertation in environmental and resource economics, this is an excellent opportunity to start exploring topics. Due dates concerning the paper are as follows:

- A bibliography of roughly 15 academic papers in the area your area of interest. Due October 6th.
- A two-page description of and motivation for the research question you will explore. Due October 15th.
- A draft literature review section. Due November 17th.
- Final paper. Due December 3rd (last day of the semester).

Presentations: Approximately every other week, 2 students will present papers noted below. The presentations will be similar to those presented in academic conferences – approximately 20 minutes in length, with about 10 minutes of Q&A following. The student’s grade will be dependent, in part, on their ability to keep their presentation to the allotted time, so please practice your talks beforehand. Also, all students are required to read the student-presented papers even if they are not personally presenting the paper.

Referee Report: Students are required to turn in 2 “referee report” papers on papers of their choosing. The only restriction is that one must be a theory/simulation based paper and the other an applied econometric paper. Additionally, all reviewed must be unpublished (i.e. still working papers). These papers can be from your list of referenced papers from your research proposal. I will provide sample referee reports so that you may get a sense of what I am looking for in these assignments.
Participation and Seminar Attendance: I expect students to complete the readings and come prepared to engage during in-class discussions. This is particularly true for the student-presentation days. I also expect students to attend TREE seminars and the CEnREP colloquium. The TREE series meets on Thursdays at Research Triangle Institute (RTI) in the Research Triangle Park from 3:15-4:15. This year’s schedule of presenters is as follows:

Sep. 8 – Catie Hausman (Michigan)
Sep. 15 – Matt Kotchen (Yale)
Sep. 29 – Amir Jina (Chicago)
Oct. 27 – Mushfiq Mobarak (Yale)
Nov. 10 – Koichiro Ito (Chicago)

Students are expected to attend these seminars, with the exception of one excused absence. CEnREP also conducts a more student-focused lunch meeting each Friday. Again students are expected to attend, though pre-excused absences for this colloquium is allowed.

Academic Integrity: Cheating will be prosecuted to the maximum extent possible within the University’s Code of Student Conduct:

http://policies.ncsu.edu/policy/pol-11-35-01

Incomplete University policy will be strictly followed, and incomplete grades will only be granted under exceptional circumstances.

Withdrawals:

Course Outline: Below is a tentative outline of topics and papers we may cover. The “*” papers indicate that it can be used for a student presentation.

Part I: Environmental Policy Design

1. Prices vs. Quantities and Hybrid Policies (static)

2. Dynamic Considerations of Instrument Choice
3. Performance Standards and Output Based Allocations


4. Investment and Policy Choice


5. Spatial Issues

Part II: Empirical Work in Environmental and Energy Economics

1. Electricity Markets, Pricing, and Deregulation

2. Electricity Producers/Markets and Environmental Regulation

3. Energy Use and Efficiency

4. **Renewables and Electricity**


5. **Climate Change Responses**


6. **Misc.**


