University of Manitoba

ABIZ/ECON 7430: Advanced Theory of Resource Economics

Winter 2015
Agriculture Building Room 365
Class times: TBD

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Office hours: Tuesday 2:30 - 4:30 (or by appointment), Room 377 Agriculture Building

Course Information

This course examines (1) the regulation of polluting activities and (2) the use of renewable and exhaustible natural resources. We will cover the basic theory of externalities and will examine the role of economic incentives for environmental protection, involving an analysis of alternative policy instruments. We will examine both optimal and equilibrium allocation of natural resources with applications to energy, fisheries, forestry, land, and water resources.

Readings and Lecture Notes

Recommended textbook:

This text provides an excellent intuitive introduction to the concepts covered in this course. The course material covered in lecture notes will go well beyond the material presented in this text.

Supplementary texts:
The following texts provide a mathematical treatment of the material covered in this course and will serve as good references. Copies are available on reserve in the William R. Newman Library (Agriculture Building).


Course Requirements

There will be a midterm examination tentatively scheduled for February 26 (30% of course grade) and a final examination (40% of course grade). You will also complete a quantitative analysis of an environmental or resource economics issue (30% of course grade). Problem sets will be provided to students to help them familiarize themselves with the material covered in lectures. These problem sets will not be graded but will be essential preparation for exams.

Quantitative Analysis Assignment

This assignment will involve a detailed analysis of an article published in an academic economics journal. The article must contain an empirical examination of an environmental or natural resource issue. The choice of article is subject to my approval. The assignment will proceed in two stages. In the first stage students will conduct a written critique of the article, including suggestions to improve the analysis or to extend it in some way. In the second stage you will carry out the suggestion for further research.

First stage: The written critique will consist of the following components
1. Put the article in context: Explain in your own words the issue the article addresses and why it is important and interesting from a policy perspective or within the existing economics literature.
2. Deconstruct the article: Derive/replicate the results of the paper; discuss the results in your own words; identify the important assumptions driving the results.
3. Assess the robustness of the results: Discuss whether the important assumptions are reasonable and how sensitive the results might be to those assumptions.
4. Further research: Propose alternatives to or extensions of the analysis. This will typically involve an extension of the simulation or econometrics. You are also permitted to extend the theoretical model in some fashion.

Second stage: Carry out the suggestion for further research
1. Extend the analysis
2. Formally present the results of this extension (typically in a table)
3. Discuss the results of the extension

The final paper will include the written critique from the first stage and the extension from the second stage. The final paper should not exceed 15 pages (double spaced, 1 inch margins, Times New Roman 12 point font) exclusive of figures, tables, and references. You must follow AJAE reference guidelines: http://www.oxfordjournals.org.proxy2.lib.umanitoba.ca/our_journals/ajae/for_authors/guide.pdf

This assignment will be conducted in stages to permit feedback. The following is a tentative schedule.

January 23. Select paper and confirm with me.

March 13. A preliminary write up of the first stage, including replication of results. This will count for 5% of your final grade.

April 10. Final paper due. This will count for 25% of your final grade.
Tentative Course Outline

I. Regulation of polluting activities

a. Review of externalities, public goods, and open access


b. Policy instrument choice


II. Use of renewable and exhaustible natural resources

a. Review of optimal control theory


b. Exhaustible resources


c. **Renewable resources**


d. **Common pool resources**


e. **Open access and international trade**


Course Policies

1. **Evaluative feedback** will be provided by the voluntary withdrawal deadline date, which is March 19, 2015.

2. **Missed Exams**
   There is NO make-up examination for a missed midterm. If missed and student has a valid medical certificate or compassionate reason (e.g., death of an immediate family member), marks from midterm will be added to marks for the final examination. Students who miss the examination without a valid reason will receive a grade of zero for the midterm examination.

   In the case of a missed final examination, a student will be assigned an F no paper grade for the course unless an acceptable medical certificate or a confirmable compassionate reason is provided in which case a supplementary examination will be allowed.

3. **Academic Integrity**
   Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty.

   Students should acquaint themselves with the University’s policy on plagiarism, cheating, exam impersonation and duplicate submission (See Section 8.1 University of Manitoba Calendar).

4. **Use of Third Party Detection and Submission Tools**
   Electronic detection tools may be used to screen assignments and policy briefs in cases of suspected plagiarism.

5. **Students appealing any term work** whether it be an informal or formal appeal must appeal their term work within 10 working days of receiving their mark.

6. **Policy on Unclaimed Term Work**
   Unreturned term work will become the property of the Faculty and will be subject to confidential destruction four months after the final examination period.