## AEM 4500 - ECON 4810 Resource Economics Fall 2015

Meeting Time: Tuesdays and Thursdays: 2:55 - 4:10 PM Meeting Place: 101 Warren Hall

Instructor: Jon M. Conrad Office: 409 Warren Hall Office Hours: TuTh: 10:00 - 11:30 AM Email: jmc16@cornell.edu T.A.: Juan Nicolas Hernandez-Aguilera
T.A. Room: XXX Warren Hall
Office Hours: TuW: 4:30 - 6:30 PM
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**Course Description:** This course is concerned with the optimal use of renewable and nonrenewable natural resources. Simple dynamic models will be developed for fisheries, forests, fossil fuels, and stock pollutants. The Method of Lagrange Multipliers will be used to identify conditions for optimal allocation over time. Emphasis will be placed on the economic intuition behind the optimality conditions and using Excel to solve numerical examples.

**Learning Objective:** To be able to pose and solve simple dynamic allocation problems as they arise in the management of natural resources.

Course Prerequisites: Calculus, Knowledge of Excel, Intermediate Microeconomics.

**Problem Sets, Exams, Grading, and Honor Code:** Grades in this course will be based on 10 problem sets (each worth 10 points) and two take-home exams (each worth 100 points). The first take-home exam will be available from Blackboard at 4:30 PM on Thursday, October 15th. It will be due at the start of class on Thursday, October 22nd. The second take-home exam will be available from Blackboard at 4:30 PM on Thursday, December 3rd. It will be due at 409 Warren Hall no later than 3:30 PM on Tuesday, December 15th. Students may work together on problem sets, but are on their honor to work alone on the two take-home exams. Students must submit a signed honor code, found on the next page, to take this course.

**Text:** Conrad, Jon M. 2010. *Resource Economics*, Second Edition, Cambridge University Press, New York, New York.

## **Outline of Course:**

I. Basic Concepts (*Two Weeks*)
II. Solving Numerical Problems Using Excel (*Two Weeks*)
III. Bioeconomic Models of Fisheries (*Three Weeks*)
IV. Bioeconomic Models of Forests (*Two weeks*)
V. The Economics of Nonrenewable Resources (*Three Weeks*)
VI. Stock Pollutants (*Two Weeks*)

## AEM 4500 - ECON 4810 Resource Economics Fall 2015 Honor Code

To illustrate the concepts, models, and methods presented in AEM 4500 - ECON 4810, students will be asked to submit answers and supporting spreadsheets to 10 problem sets. Each problem set will be worth a maximum of 10 points toward a student's point total for the course. There will be two take-home exams, each worth 100 points. The first take-home exam will be available from Blackboard at 4:30 PM on Thursday, October 15th. It will be due at the start of class on Thursday, October 22nd. The second take-home exam will be available from Blackboard at 4:30 PM on Thursday, December 3rd. It will be due at 409 Warren Hall no later than 3:30 PM on Tuesday, December 15th. Students may work together on problem sets, but are on their honor to work alone on the two take-home exams.

I understand and agree to abide by the honor code for AEM 4500 - ECON 4810.

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