Instructor: Jordan Suter

E-mail: jordan.suter@colostate.edu

Office Hours (B-306 Clark): Tues. 12–2, Thurs. 2–3pm and by appointment

Description:

This course uses microeconomic techniques to rigorously explore decision-making and policy applied to environmental and natural resource problems. Specifically, the course will focus on economic issues related to the development of effective policy for open space land, managing water resources, energy and climate. The course will involve a focus on solving analytical problems in the field, critical thinking as it pertains to the development of policy, and research on policy solutions.

Course Objectives:

1. Assess the economic impacts of specific policies aimed at addressing environmental and natural resource challenges.
2. Critically assess competing environmental policies and projects by assessing overall economic implications and distributional consequences.
3. Interact with practitioners working in the primary course content areas (water, land use, energy and climate change).
4. Demonstrate writing and research dissemination skills through work on group policy projects and presentations.

Readings:

The readings will come from the textbook listed below or made available through Canvas. The readings that are required for a given class are indicated in the course schedule and will be announced in class. All documents, including the course schedule, problem sets, and exams will be posted on the Canvas site for this class.


Grading (out of 100%):

Problem sets (20%) – You will be given one week to complete each problem set. You are allowed to work on the assignment with one other student. If you choose to work with another student, please turn in one assignment with each of your names at the top. I expect each individual to fully understand all solutions provided. Problem sets are due at the beginning of class and late assignments will be assessed at 10 point reduction for each day that they are late.

Policy projects (40%) – You will have four opportunities to conduct policy analyses during the semester. The four projects will coincide with the four primary subject areas covered in the course. For each project you will work in groups with three or four students. The groups will be rotated for each of the assignments. For each project, groups will be asked to turn in a four to six page summary of their work. In addition, groups will present the results of their work in front of the class. More
information about the specific assignments will be provided two weeks in advance of when the project is due.

Midterm exam (15%) – The exam will include short answer and essay questions related to problem sets, readings and lectures. If you have a medical excuse or family emergency and cannot attend the exam, you must let me know at least 48 hours in advance and provide proper documentation.

Final exam (25%) – The final exam will be comprehensive and feature short answer and essay questions. The exam will take place during the exam period.

Final grades will be based out of 100 percent, weighted according to the values given above. Letter grades will be assigned using the following scale: A (100 – 90), B (89 – 80), C (79 – 70), D (69 – 60), F (59 and below). Pluses and minuses are possible for each letter grade of C and higher and are awarded based on B+ (89 – 87), B (86 – 83), B- (82 – 80), etc.

Academic Integrity:

This course will adhere to the Academic Integrity Policy of the CSU General Catalog and the Student Conduct Code. I expect all work to be your own. Cases of plagiarism in written work will be taken seriously, so please familiarize yourself with CSU’s guide to avoiding plagiarism (http://writing.colostate.edu/guides/researchsources/understandingplagiarism/plagiarismoverview.cfm).

Expectations and Feedback

I expect students to attend every class having done the assigned readings and prepared to contribute. It is also my expectation that you will be open-minded and considerate of the thoughts and ideas of all of your fellow classmates. In return, I will strive to conduct organized and insightful class sessions and to treat your intellectual work with fairness and impartiality.

Resources for Disabled Students:

If you have a documented disability and wish to discuss academic accommodations, please contact me as soon as possible to set up the appropriate arrangements. Please do not wait until the day before an exam to request accommodations. Further information - http://rds.colostate.edu/students

Course Outline:

I. Review of essential concepts
   ▪ Property rights, discounting, externalities, public goods

II. Land use and policy
   ▪ Spatial land use models (Tiebout, von Thunen), sprawl, open space conservation

III. Water resource economics
   ▪ Allocation of surface water, groundwater dynamics and externalities, water quality and challenges associated with non-point source pollution

IV. Energy development and utilization
   ▪ Conventional and alternative energy production, energy demand and efficiency

V. Economics of climate change
   ▪ Policies for greenhouse gas reductions, offsets, climate change impacts and adaptation
Course Schedule:

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<td>Jan. 26</td>
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<td>McIntyre 2006</td>
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<td>May 4</td>
<td>World Bank 2011</td>
<td>Colorado CAP 2007</td>
<td>Project #4</td>
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Background - W. Harrington and R. Morgenstern 2004, "Economics incentives versus command and control."

Land - J. Boyd, K. Cabellero and R. Simpson 1999, "The law and economics of habitat conservation"
T. Nechyba and R. Walsh 2004, "Urban Sprawl"
K. Messer 2006, "The conservation benefits of cost-effective land acquisition"
A. van Teeffelen et al. 2014, "Ecological and economic conditions and associated institutional challenges for conservation banking in dynamic landscapes"
P. Ferraro et al. 2011, “Conditions associated with protected area success in conservation and poverty reduction”

Water - E. McIntyre 2006, "A River in Debt"
M. Hanemann 2004, “The economic conception of water”
K. Frederick 1998, "Marketing water: the obstacles and impetus"
S. Olmstead 2009, "The economics of water quality"

Energy - S. Brown 2014, "Falling oil prices and US economic activity: implications for the future"
J. Darmstadter 2013, "The controversy over US coal and natural gas exports"
S. Borenstein 2011, "The private and public economics of renewable energy generation"
R. Schmalensee 2011, "Evaluating policies to increase the generation of electricity from renewable energy"
K. Gillingham et al. 2009, "Energy efficiency economics and policy"

Climate - J. Shogren and M. Toman 2000, “How much climate change is too much?”
I. Parry and A. Krupnick 2011, "Is a clean energy standard a good way to move US climate policy forward?"
R. Newell 2014, "Carbon markets past, present, and future"
D. Melnick, M. Pearl and J. Warfield 2015, "Make forests pay"
J. Siikamaki 2012, "Climate policy, international trade and emissions leakage"
World Bank 2011, "Economics of adaptation to climate change"
Colorado Climate Action Plan (CAP) 2007