

**AREC/ECON 540:**  
**Environmental and Natural Resource Economics**  
**Spring 2019**  
**MWF, 11:00-11:50, Eddy 109**

**Instructor:** Dr. Stephan Kroll

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**Office Hours:** Monday, Wednesday, 1:30-2:30 or by appointment.

**Class Website:** on <https://sites.google.com/site/540enspring2019/>

**Classroom:** Eddy 109

**Prerequisites:** ECON 306. Credit not allowed for both ECON 541 and AREC 541.

**Optional, but recommended Text:**

Perman, Roger, Yue Ma, Michael Common, David Maddison, and James McGilvray. *Natural Resource and Environmental Economics*. Prentice Hall; 4 edition (June 23, 2012)

Additional readings will be posted on a Google site:

[\(https://sites.google.com/site/540enspring2019/\)](https://sites.google.com/site/540enspring2019/).

**Course Description:**

Theory, methods, and policy in environmental and natural resource economics.

This course is a second-year masters-level class that will make use of micro-economic theory and modeling tools to develop a rigorous understanding of the connection between human economic behavior and the natural environment. We will use mathematical techniques to examine problems related to pollution, environmental valuation, climate change, and the use of scarce natural resources over space and time. Concepts and mathematical tools introduced in AREC 540 will be further developed in AREC 740 (resource economics) and AREC 741 (environmental economics).

**Course Objectives:**

At the end of the semester, students should

- (1) understand the behavioral reasons of environmental and natural resource-related problems
- (2) understand the workings of and intuition behind environmental and resource policies
- (3) understand how society and individuals (should) value the environment and natural resources
- (4) be able to consume and produce academic papers in the ENR literature

**Grading:** Your course grade will be determined as follows:

- |  |           |
|--|-----------|
| a) Midterm exam, Friday, March 29                | 20 points |
| b) Final Exam, TBD                               | 20 points |
| c) Response Papers, Focus Questions, HW          | 20 points |
| d) Class participation, keeping up with readings | 10 points |

e) Writing Assignment Proposal	10 points
f) Writing Assignment Final Paper, Presentation	<u>20 points</u>
Total Amount:	100 points

Final grades will be based on the following grade scale based on final percentage:

95-100 A+	80-85 B+	<70 C range or lower
90-95 A	75-80 B	
85-90 A-	70-75 B-	

**Universal Design for Learning:**

I am committed to the principle of universal learning. This means that our classroom, our virtual spaces, our practices, and our interactions be as inclusive as possible. Mutual respect, civility, and the ability to listen and observe others carefully are crucial to universal learning.

If you are a student who will need accommodations in this class, please contact me to discuss your individual needs. Any accommodation must be discussed in a timely manner prior to implementation. A verifying memo from [Resources for Disabled Students](#) may be required before any accommodation is provided.

**Cheating and Academic Dishonesty:**

Don't do it!

This course will adhere to the CSU Academic Integrity Policies and Guiding Principles as found in the General Catalog and the [Student Conduct Code](#).

**Cell Phones, Internet and Similar Electronic Devices:**

Please turn your cell phones and similar devices off before class! Please no texting, e-mailing or internet surfing during class!

**Response Papers**

For some important reading assignments, several of you will be asked to hand in a "response paper," in which you summarize the main points of the paper, how it fits to the other material we cover at that point, what you do and do not like about the paper, what you do not understand about it and other things you might find noteworthy. There is no upper or lower page limit on these response papers.

**Focus Questions**

Every other week or so I will ask a few short written questions about an assigned reading.

**Homework Assignments**

Occasionally, three to five times during the semester, there will be a homework assignment for which you will have at least one week time. You can work together on these assignments, but you have to hand in the answers individually; you cannot just copy-and-paste.

**Writing Assignment and Student Presentations**

Details TBD.

**Outline:**

	Topic	Important Events
Week 1: (1/23 + 1/25)	Overview	
Week 2: (1/28 - 1/30)	Markets, Market Failure, Efficiency and Public Goods; CBA	
Week 3: (2/4 - 2/8)	(Social) Discount Rate	
Week 4: (2/11 - 2/15)	Demand for Environmental Quality: Basics and Revealed Preferences	
Week 5 (2/18 - 2/22)	Demand for Environmental Quality: Revealed and Stated Preferences	
Week 6 (2/25 - 3/1)	Regulation: Command-and-control, Property Rights, Voluntary/Information Programs	
Week 7 (3/4 - 3/8)	Regulation: Pigouvian Taxation and Tradable Permits	Ideas for papers due
Week 8 (3/11 - 3/15)	International Environmental Topics: Transboundary Pollution, Climate Change	
Spring Break (3/18 - 3/22)		
Week 9 (3/25 - 3/29)	Carbon Pricing	Friday: Midterm Exam
Week 10 (4/1 - 4/5)	Introduction to Resource Economics	
Week 11 (4/8 - 4/12)	Tragedy of the Commons	
Week 12 (4/15 - 4/19)	Forestry and Fishery Economics	Friday: First draft of paper is due
Week 13 (4/22 - 4/26)	Non-renewable Resource Economics and Dynamic Modeling	
Week 14 (4/29 - 5/3)	Natural Resources in Developing Countries and/or Payments for Eco-system Services.	
Week 15 (5/6 - 5/10)	Student Presentations (TBD)	
Finals Week (5/13 + 5/16)	Monday, 11:59 pm: Final draft of paper is due.	Final Exam: TBD (Thursday, 7:30-9:30am?)