Instructor: Prof. Kevin Roth
Department of Ag and Applied Economics
317 Taylor Hall
E-mail: kevin.daniel.roth@gmail.com or kevinroth@wisc.edu
Note that I do not answer content questions over email, only logistical questions.
(content: "How do I solve problem 3?" logistical: dates, locations, exams times etc.)

Office Hours: M 1:45-2:15 at Taylor 317, W 1:45-2:15 at Taylor 317,

F 10-11 at https://uwmadison.zoom.us/my/kevindanielroth

TA: Soong Kit Wong
E-mail: swong26@wisc.edu
Office Hours: 9-11 am Monday at 517 Taylor Hall

Grading: Your final grade will be based on the following components and weights.

Homework:	40%
Midterm 1:	15%
Midterm 2:	15%
Final Exam:	30%

Schedule: Part 1: Course basics, Open Access Resources, Public Goods, Biodiversity
Midterm 1: February 27

Part 2: Water, Local Pollution, MCB-MCR framework
Midterm 2: April 3

Part 3: Valuation, Climate Change

Comprehensive Final Exam: May 8, 2023, 2:45 – 4:45 pm

McBurney Disability Students: please check in with me before the first exam if you need extra time or a smaller setting.

Please check to make sure these dates work for you and inform me immediately if there are serious conflicts. I will generally only accommodate make up exams under extraordinary circumstances. Booked flights home are not a valid excuse for a make-up exam.

Some warnings on who should not take this class

You need to be at the final. There is no make-up or alternative.

There are no make-ups for midterms. Typically, the points for excused mid-terms are redistributed towards the remaining midterm and final.

Please do not come to class sick. If you get COVID or some other illness/family emergency, I will be recording lectures, but they will only be available by request, at which point I will give you a password for access.

Homework: There are 10 homework assignments (40% of final grade)

You will have one week to do an assignment.

Typically, you will get one assignment a week. Although before exams, there will sometimes be two assignments out at once. This happens so that the due date allows me to post a solution key to allow you to study.

Please see the schedule below for when things are assigned and due.

I will post a word document version of the homework for you to work on offline. You can turn that assignment in as a paper copy or electronically. Electronically it can be in word or as a scanned document. I will accept a high-quality photo but please try to avoid this unless absolutely necessary.

Homework is due at the start of lecture on the day it is due. Electronic submission must be timestamped for the start of lecture, not during or before.

Readings: Testable material comes from the lecture and homework.

The book, discussion section, any "additional help" videos listed etc. are supplemental. If a topic only shows up in those sources, I do not assume you have seen it. The book is really meant for those who benefit from that format. I'm generally not a big fan of most environmental textbooks targeted towards undergraduates. Some of this cannot be helped because they are usually out of date as soon as they are printed.

Book: Harris, J.M., & Roach, B. (2021). Environmental and Natural Resource Economics: A Contemporary Approach (5th ed.). Routledge. https://doi.org/10.4324/9781003080640

I try to give the relevant sections based on the 4th and 5th editions of the book with the 3rd edition in parentheses when it differs. Please contact me if you think the wrong section is referenced. I do this so you can buy whatever version of the textbook is cheapest. Feel free to us an alternative textbook if it gets you what you need. Or not textbook at all.

Exams: Exams are in class.

I do not do study guides although I usually do a short review discussing what I expect you to know and not know. I'm also very happy to answer questions.

Exams tend to be hard and curved up as needed at the end of the course.

I do not allow make-up exams or early finals for any reason other than extreme medical emergencies. If you cannot make a midterm for any reason other than a medical issue, your grade for that exam will be redistributed towards the remaining exams. So if you

cannot make the first midterm because you need to go to an athletic event, those points will be redistributed towards the second midterm and final.

Medical emergencies, including COVID will be dealt with on a case-by-case basis but require proof.

Section 1: Course basics, Open Access Resources, Public Goods, Biodiversity

	Date	Lecture Topic	Homework		Optional Reading
			Assigned	Turn in	
Week 1					Harris and Roach Ch. 3, including Appendix
	25-Jan	Intro			
Week 2	30-Jan	Supply Demand and Welfare	1		
	1-Feb	Externality/ Pigou / Coase			
Week 3	6-Feb	Open Access Resources	2	1	Harris and Roach Sections 4.1 and 17.1 to 17.3 (11.1 to 11.3 in 3rd ed)
	8-Feb	Solutions: ITQs and Property Rights			
Week 4	13-Feb	Regression	3	2	Harris and Roach Sections 4.2
	15-Feb	Public Goods / Solutions to Public Goods	4		
Week 5	20-Feb	Noah's Ark Problem / Biodiversity		3	
	22-Feb	Wind Erosion in the Dust Bowl (& review)		4	
Week 6	27-Feb	Exam 1			

Additional (very optional) help with Supply and Demand basics

Decreasing marginal utility	https://www.youtube.com/watch?v=f7mTb3mOwyw
Increasing marginal cost	https://www.youtube.com/watch?v=fzgBWol_S4Q
Supply	https://www.youtube.com/watch?v=ZSvEfSvRIus
Demand	https://www.youtube.com/watch?v=v023I-Iq3HE
CS	https://www.youtube.com/watch?v=Q8u4xXMGQX0
PS	https://www.youtube.com/watch?v=vVUKQAIZafM
External Costs	https://www.youtube.com/watch?v=CpVf11f09Pk

Section 2: Water, Local Pollution, MCB-MCR framework

	Date	Lecture Topic	Homework		Optional Reading
			Assigned	Turn in	
Week 6	1-Mar	Water	5		Harris and Roach Chapter 20 (15 in 3rd edition)
Week 7	6-Mar	Local Pollution 1			
	8-Mar	Local Pollution		5	
Week 8	13-Mar	Spring Break			
	15-Mar				
Week 9	20-Mar	MCB MCR framework	6		Harris and Roach Chapter 8 but skip 8.4 (16 but skip 16.4 in 3rd edition)
	22-Mar	MCB MCR framework	7		
Week 10	27-Mar	Taxes and Cap and Trade		6	
	29-Mar	Second Best Policies		7	
Week 11	3-Apr	Exam 2			

Section 3: Valuation, Climate Change

	Date	Lecture Topic	Homework		Optional Reading
			Assigned	Turn in	
Week 11					
	5-Apr	Valuation 1	8		
Week 12	10-Apr	Valuation 2			Harris and Roach Sections 6.1-6.4 and the VSL discussion 7.3
	12-Apr	Climate Change Overview	9	8	
Week 13	17-Apr	Cost of Carbon			Harris and Roach Chapter 12 (18 in 3rd ed) and Appendix 7.1 (section 6.5 in 3rd ed) https://www.rff.org/publications/explainers/social-cost-carbon-101/ https://www.rff.org/publications/explainers/discounting-101/
	19-Apr	Violence			
Week 14	24-Apr	First Best Carbon Instruments	10	9	https://www.rff.org/publications/explainers/renewables-101-integrating-renewables/
	26-Apr	Sectoral Policy 1: Power and Transport			
Week 15	1-May	Sectoral Policy 2: Carbon Offsets		10	
	3-May	Innovation			
Final	8-May	2:45 PM; Cumulative			

Additional (very optional) help with economic concepts

Discounting	https://www.youtube.com/watch?v=Mol1yT7tczY
Expected Value	https://www.youtube.com/watch?v=q-FAmfkOkYU