

AEB 2451: Economics of Natural Resource Use
Spring 2021

Instructor Information:

Kelly Grogan
1185 McCarty Hall A
kellyagrogan@ufl.edu
352-794-7633

Office Hours:

In-person/Zoom office hours:

Tuesdays 3:00PM – 4:00PM, Thursdays 12:45PM – 1:45PM

<https://ufl.zoom.us/j/2417157921>

- If you are coming in person, please stop by my office during these times, and we will go outside to one of the picnic tables in front of McCarty Hall A
- If these times do not work for you, please email me to set up a different time.

Course Logistics:

Tuesdays 1:55PM – 2:45PM

Thursdays 1:55PM – 3:50PM

Classroom: 170 Pugh Hall A (in-person students only) or Zoom:

<https://ufl.zoom.us/j/92039818099?pwd=YW9YVHllTHNLaG5QZEN3cmt3MkxxZz09>

Meeting ID: 920 3981 8099

Passcode: aeb2451

Teaching Assistant

Moonwon Soh (moonwon.soh@ufl.edu)

Office hours: Wednesdays, 12:45PM – 1:45PM

Zoom link: <https://ufl.zoom.us/j/4188947450>

Course Description:

This course explores the economics underlying a variety of environmental and natural resource issues as well as how economic policies can be used to address these issues.

Course Objectives:

1. Students will be able to identify externalities in a variety of environmental contexts and propose policy instruments to correct these externalities.
2. Students will be able to undertake cost-benefit analysis to determine whether a given environmental policy should be implemented.
3. Students will be able to consider intergenerational equity and allocations in a variety of environmental contexts.
4. Students will be able to propose management options for common pool resources.

Required Knowledge:

There are no prerequisites for this course. However, we will making extensive use of graphs and algebra. If this knowledge has gotten rusty, it is the student's responsibility to re-learn these skills.

Required Textbook:

Tietenberg, Tom and Lewis, Lynne. 2009. *Environmental Economics and Policy*, 6th edition. Pearson.

Suggested "Tools"

This class includes many graphs that may benefit from using color. Purchasing colored pencils or pens is suggested.

UF Grading Policy:

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Course Grade and Assignments:

Your grade will be determined by

- Six problem sets (25% in total, 5% each, lowest score dropped)
- Three exams (39% total, 13% each)
- Resource Roundtable Project (16%)
- Participation (20%)
- Wellness bonus points (up to 6 per exam)

Letter grades will be assigned as follows:

A = 93 and higher

A- = 90 – 92

B+ = 87 – 89

B = 83 – 86

B- = 80 – 82

C+ = 77 – 79

C = 73 – 76

C- = 70 – 72

D+ = 67 – 69

D = 63 – 66

D- = 60 – 62

E = less than 60

Problem Sets:

There will be a total of 6 problem sets. Students are encouraged to discuss problems with others but you are expected to write up your own assignments. Please write on your assignment the names of students with whom you discussed the assignment. Writing up assignments individually implies that assignments or any portion of the assignments will not

be identical. Problem sets should be scanned using the Adobe Scan App and submitted electronically before the start of class. Late problem sets will not be accepted. Make-up work for missed problem sets will not be given. If a student is absent when an assignment is due, (s)he is still responsible for submitting it online before the start of class. The student's lowest problem set score will be dropped.

Exams:

There will be three exams covering portions of the course material. All exams will be open-note, open-book exams. The third exam will occur during the final exam period for the course, which is scheduled for April 29, 3:00PM – 5:00PM. The final exam is not cumulative. Exams will be submitted electronically. In-person students should bring a mobile device with scanning app to class on exam day. Devices should only be taken out at the end of the exam period to submit the exam. There will be no make-up exams. If a serious, unforeseen, and documentable situation arises that prevents a student from taking any of the exams, the average of the other 2 exams will be entered for the missed exam.

Resource Roundtables:

To allow students to explore a natural resource topic of interest in greater depth, class will include 5 Resource Roundtables on topics that include: energy, water use, agriculture, fisheries management, and climate change. During the week of Jan. 18, students will choose one roundtable and one stakeholder role for that roundtable. In the class directly proceeding that topic's coverage, all stakeholders for that roundtable will participate in an in-class roundtable discussion of a specific issue (to be determined based on feedback from students' "About You" handouts). All stakeholders will be given a set amount of time for an opening statement on their position on the issue. After opening statements, all stakeholders will be given a set amount of time to address other stakeholders' statements. Then we will open the floor for open discussion and questions from the rest of the class. All stakeholders will receive peer evaluations from their classmates. Completion of these peer-evaluations will make up students' participation grade on those days. Peer evaluations will make up 50% of the stakeholder's grade, with the instructor's evaluation making up the other 50%.

Participation:

Throughout the semester, we will be utilizing in-class activities and games to demonstrate course concepts. Your participation in these games, and in some instances, the points earned in the game, will earn you participation grade(s) for that day. Classes may include no games, one game, or several games. Every individual game will be weighted equally in your overall participation score. You will be allowed to drop 3 (and only 3) of your lowest participation grades without question or documentation needed in the case of absences. Use these drops wisely. If you become ill or another documentable emergency arises, please provide documentation (doctor's note, note from U Matter, We Care, etc.) of the issue, including class dates impacted, to be excused from participation grades on those days.

Bonus Points:

College can be challenging for students' mental health and well-being. The COVID-19

pandemic is likely to exacerbate this effect. To incentivize activities to support well-being, students will be able to accumulate bonus points, to be applied to each exam, by exploring activities proven to support well-being. Students can earn one point per week by trying one of the practices provided by the University of Berkeley's Greater Good in Action Program (<https://ggia.berkeley.edu/>). To document the activity, the student should complete all sections in the wellness log (included at the end of this syllabus). Students should undertake a new activity each time. (You are welcome to repeat activities that you found beneficial; they just will not count again for your wellness bonus points). The student's wellness log should be scanned and submitted with its corresponding exam.

Lecture Resources

Lectures are recorded and will be made available through e-learning. When applicable, handouts will be used to disseminate clear pictures of graphs and figures. Powerpoint slides will be made available as well, but these slides may not contain all material covered in class or included on exams.

Feedback

I welcome feedback on lecture style, course content, and assignments. Periodically throughout the semester, I will email out a link to an anonymous survey to gather any feedback you may have. You are also always welcome to provide feedback directly to me. I want this course to be the best possible learning experience for all students.

Academic Honesty:

Any student found to be in violation of the Student Honor Code will receive, as a minimum penalty, a grade of "0" on the assignment or exam. Students may also be asked to attend seminars on ethical decision making and/or avoiding plagiarism.

Attendance:

Attendance counts towards your participation grade, so students are strongly encouraged to attend class (in person or online). If circumstances cause an extended absence from class, please talk to me in advance.

Course Outline:

I. Environmental and Natural Resource Economics Concepts & Tools

1. Demand and supply of environmental amenities (Ch. 2)
2. Non-market valuation methods (Ch. 3)
3. Property rights, externalities, public goods (Ch. 4)
4. Sustainable development and intergenerational equity (Ch. 5)
5. Allocations across time and space (Ch. 7)

II. Specific Environmental and Natural Resource Issues

1. *Energy (Ch. 8)
2. *Water Allocation (Ch. 9)
3. *Agriculture (Ch. 11)
4. *Fisheries (Ch. 13)
5. Air Pollution (Ch. 15)
6. *Climate Change (Ch. 15)
7. Forests (Ch. 12)
8. Transportation (Ch. 17)
9. Water Pollution (Ch. 18)
10. Waste (Ch. 19)

*Indicates topic for which we will hold a Resource Roundtable

We will not have pre-specified days for topics in order to allow us to move at a pace most appropriate for this specific class and its students.

Tentative Schedule of Assignments and Exams

Dates subject to change based on progression through material.

	Week	Mon	Tues	Wed	Thurs	Fri
Jan	1	11	12 1st Day of Class	13	14	15
	2	18	19	20	21 PS 1 Given	22
	3	25	26	27	28 PS 1 Due	29
Feb	4	1	2	3	4 PS2 Given	5
	5	8	9	10	11 PS 2 Due	12
	6	15	16	17	18 Exam 1	19
	7	22	23 PS 3 Given	24	25 Recharge Day	26
March	8	1	2	3	4 PS 3 Due	5
	9	8	9	10	11 PS 4 Given	12
	10	15	16	17	18 PS 4 Due	19
	11	22	23	24	25 Exam 2	26
	12	29	30	31	1 PS 5 Given	2
April	13	5	6	7	8 PS 5 Due	9
	14	12	13 PS 6 Given	13	15	16
	15	19	20 Last Day of Class PS 6 Due	21	22	23
	16	26	27	28	29 Final Exam	230

Final Exam: Thursday, April 29, 3:00PM – 5:00PM

PS: Problem Set

Recharge Day: Day for which we have been encouraged to cancel classes. We will not have class on Feb. 25 for this reason.

Resource Roundtables will be scheduled based on progression through course material.

Course COVID Safety Plans (in-person students only)

Requirements for students:

- *Masks:* Students are required to wear a mask covering both their nose and their mouth for the duration of class. The mask should not be removed at any time. Eating and drinking in the classroom is prohibited in order to comply with the campus mask mandate. Gaiters, bandanas, and masks with exhalation valves are prohibited.
- *Entering/ existing classroom:* Please maintain 6' of space between you and your classmates when entering and exiting the classroom. The instructor will wait to begin class until all students in the hallway have had a chance to enter the classroom.
 - *Cleaning:* Upon entering, please utilize the provided wipes to clean off your desk. Before exiting, please use a new wipe to clean the desk for whomever might use it after you.
- *Seating:* Please utilize designated desks to maintain at least 6' of space between you and your nearest classroom neighbor. If you and your neighbor can extend your arms and reach each other, you are too close!
- *Illness:* If you have any COVID-19 symptoms or believe you have been exposed to COVID-19, please do not come to class. All classes will be livestreamed and recorded in Zoom. Students can join synchronously from home or watch later when they are feeling better. As with any other illness, please contact the instructor as soon as possible if you will miss an exam or need additional time to complete an assignment due to illness. Documentation of the illness will be required.
- *Testing:* All students are required to complete a COVID-19 test biweekly to maintain campus clearance. Any student showing as “not cleared” in one.uf.edu will not be allowed to enter the classroom.

Requirements for instructor:

- *Masks:* The instructor will wear a mask covering both her nose and her mouth for the duration of class.
- *Distancing:* The instructor will remain at the front of the classroom to keep 6' of space between herself and students.
- *Illness:* In the event of mild instructor illness, class will move online, and students will be notified of this change by email by 8AM on the day of class or earlier. In the event of more severe illness, class will be canceled, and the class will determine ways to make up missed class time.

Other:

- All assessments will be submitted electronically and returned to students electronically to maintain 6' of space between students and instructor and eliminate transfer of fomite. Please download Adobe Scan (a free app) to facilitate this process.

Contingency Plans if in-person instruction is canceled:

- We will meet synchronously through Zoom during our scheduled class times.
- Exams will be proctored through Zoom.

University COVID Policies

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms ([Click here for guidance from the CDC on symptoms of coronavirus](#)), please use the UF Health screening system and follow the instructions on whether you are able to attend class. [Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms](#).
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. [Find more information in the university attendance policies](#).

University Policies

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://gatorevals.aa.ufl.edu/>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://gatorevals.aa.ufl.edu/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), [or http://www.police.ufl.edu/](http://www.police.ufl.edu/).

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>

Wellness Activity Log, Exam 1

Week	Date Range	Date of Activity	Activity Chosen	Things I liked	Things I disliked	Other Observations	I would like to do this again (Y/N)
1	1/12 – 1/16						
2	1/17 – 1/23						
3	1/24 – 1/30						
4	1/31 – 2/6						
5	2/7 - 2/13						
6	2/14 - 2/18						

Wellness Activity Log, Exam 2

Week	Date Range	Date of Activity	Activity Chosen	Things I liked	Things I disliked	Other Observations	I would like to do this again (Y/N)
6	2/19 – 2/20						
7	2/21 – 2/27						
8	2/28 – 3/6						
9	3/7 – 3/13						
10	3/14 – 3/20						
11	3/21 – 3/25						

Wellness Activity Log, Exam 3

Week	Date Range	Date of Activity	Activity Chosen	Things I liked	Things I disliked	Other Observations	I would like to do this again (Y/N)
11	3/26 – 3/27						
12	3/28 – 4/3						
13	4/4 – 4/10						
14	4/11 – 4/17						
15	4/18 – 4/24						
16	4/25 – 4/29						

