

University of Florida
 College of Agricultural and Life Sciences
 Food and Resource Economics Department

AEB245I Economics of Natural Resource Use

Spring Term 2020

3 Credit Hours

Location: Room 143, UF Plant City, FL, 33563.
 Wednesdays: 1:00 – 4:00 pm

Instructor and Contact Information



Instructor:	Luis Moisés Peña Lévano, Ph.D.	
Office:	1200 N Park Rd, Office # 104, Plant City , FL, 33563	
Communication:	Canvas Email (<i>Luis Pena-Levano</i>)	
Office hours:	In Person	Wednesdays (12:15 pm - 1 pm)
	Online	Wednesdays (9 - 10 am), by appointment.

Communication must be only via Canvas email during business hours: Monday to Friday from 8 am to 4:30 pm. The title of the email must be concise and with key information. When e-mailing, please summarize in **one paragraph** of no more than *three lines* the e-mail question so that I can more effectively addressing your concerns. If you are stuck on a specific procedure, please send the picture of the problem and where you are specifically having the issue. This will help to answer more efficiently any doubts. If you do not put an effort in the question, I will not provide you the hints to solve it – **Courteous and professional** e-mails can expect a prompt reply. Emails outside business hours will be answered the next business day.

The professors reserve the right to change the terms and dates stated in this Course Syllabus depending on upcoming or unexpected events. Any changes will be communicated in class, via the Gatorlink e-mail listserv, and posted on E-Learning Canvas. It is solely the student's responsibility to stay informed of any changes

General Course Information

Required Textbook: Environmental economics. Field & Field: McGraw-Hill. 3rd edition. 2001.

ISBN: 978-0-0780-2189-3

- You will need a copy of the book. This book is the base of this class and summarize different examples of current events that apply the economic principles on current cases.

Course Description: Economics of Resource Use (AEB2451) has the intention to provide an understanding of how human actions may affect agricultural sustainability, the environment, and natural resources. In this course, the primary goal is to enhance student understanding of environmental economics, and how to communicate complex concepts to a lay audience. Guest lectures on environmental issues and communication will provide a means for understanding how the incentives that underlie human decision-making impact the environment and the design of environmental policy. In this course, we apply fundamental economic theory as well as provide communication techniques to analyze a broad range of contemporary environmental issues. The professor will provide scenarios to allow students to grapple with how to effectively apply economic concepts and communicate an agricultural issue. In this course, the instructor will take a closer look at issues related to the management of natural resources including water, energy, land and fisheries as they each present challenges in a policy setting. The students will also learn about current global issues in environmental economics as well as reviewing similar situations with respect to environmental degradation and agricultural sustainability in other countries.

The course also intends to provide guest speakers from academia and business who have expertise in topics including agricultural sustainability, communication, the environment, and resource economics. This is an applied course with diverse case studies, discussion tables and laboratories that aim to improve the learning experience. In addition, AEB2451 proposes field trips to different facilities and research centers at Florida to provide experiential learning opportunities for students.

This is an upper-division course and it is structured and taught accordingly. The importance in the curriculum means you should plan on spending time outside to review the in-class and online lectures. During exam weeks, the time-commitment will be significantly higher. A lower study input will more than likely adversely affect your grade.

Prerequisites: There are no prerequisites for this course. It meets the requirements for Social and Behavioral (S) under the general education guidelines. However, a grade of C or better is required to earn general education credit and the course cannot be taken S-U (<http://gened.aa.ufl.edu/>)

Course objectives: After the successful completion of this course, students should:

1. Understand how economic incentives influence individual and group behavior and how this knowledge can be used to explain and address environmental challenges.
2. Recognize and analyze policies related to agricultural and life science
3. Develop an ability to identify the range of economic costs and benefits of a particular environmental policy and the tools that can be used to estimate these costs and benefits.
4. Improve critical thinking skills to assess the tradeoffs inherent to a broad range of contemporary environmental issues.
5. Develop effectively messages to communicate about topical policy issues in sustainable agriculture, environmental and natural resources using appropriate multimedia and social media
6. Apply economic concepts to an environmental issue with the goal of developing skills to communicate in an effective manner through creative work.

Brief course outline: The material in AEB245 I is divided in ten units

MODULE 1 - ENVIRONMENTAL ECONOMICS	
UNIT 1. THE HEART OF ECONOMICS	
1	1 Economy and economics 2 The market 3 The principles of economics 4 Consumer and producer surplus
Activity 1 - Understanding Agricultural Economics	
2	A Agricultural Issues in Economics B Land-Grant University
UNIT 2. ECONOMICS OF ENVIRONMENTAL QUALITY	
3	5 Notion of pollution 6 Open resources and public goods 7 Production possibility frontier 8 Externalities 9 Benefit and cost
UNIT 3. ENVIRONMENT & ECONOMY	
3	10 Incentives and environmental policy 11 Principles of profits and costs
4	12 Foundation of Natural Resource Economics 13 The fundamental balance
Activity 2 - Case Study	
4	C Apalachicola-Rural Community

MODULE 2 - POLLUTION AND CONTROL	
UNIT 4. THE POLLUTION CONTROL MODEL	
5	14 Damages 15 Abatement cost 16 The pollution control equilibrium 17 The equimarginal principle
Field Trip	
6	Lake Apopka
Activity 3 - Case Study	
7	D Crisis Communication
UNIT 5. ENVIRONMENTAL ANALYSIS TOOLS	
8	18 Environmental analysis 19 Financial tools 20 Risk analysis tools
Field Trip	
9	Zephyrillis Springs Learning Lab

MODULE 3 - ECONOMIC POLICY	
UNIT 6. B/C ANALYSIS: COST	
10	21 Types of costs
	22 Borrowing and Leasing
	23 Salvage value and depreciation
UNIT 7. B/C ANALYSIS: BENEFITS	
10	24 Benefits as avoided societal costs
	25 Survey and statistical methods
	26 Revealed preferences
	27 State preferences
UNIT 8. BENEFIT COST-ANALYSIS	
11	28 Evaluation of environmental policies
	29 Benefit-Cost Analysis
Guest lectures: Law in Agriculture	
12	E Agricultural and Environmental Law
	F Water economics
Activity 5 - Case Study	
13	G Water analysis

MODULE 4 - ENVIRONMENTAL POLICIES	
UNIT 9. DESCENTRALIZED & STANDARD POLICIES	
14	30 Types of standards
	31 The economics of standards
	32 Laws and property rights
	33 Technological innovations and voluntary actions
UNIT 10. COMMAND-AND-CONTROL POLICIES	
14	34 Emission taxes
	35 Abatement subsidies
	36 Cap-and-trade system
Symposium	
15	UNIT 11. NATURAL RESOURCES
	Energy
	Water
	Minerals
	Land
	Forest
	Fisheries
	Ecosystems
	UNIT 12. DEVELOPMENT AND ENVIRONMENT
	Climate change mitigation
International agreements	
Globalization	
Economic growth and the environment	
Activity 6 - Communication App. In Economics	
16	H Science communication

Evaluation of Performance and Grading

Grades: You have the *opportunity* to earn up to **1000** points throughout the semester. Your final grade in AEB245 I will be based composed by the following items described on the right figure.

Description	Quantity	Unit Value	Total
Laboratory	6	20	120
Activities	5	25	125
Reflections	2	25	50
Assignments	6	50	300
Quizzes	7	25	175
Small PPT	1	30	30
PPT Symposium	1	100	100
Final Exam	1	100	100
TOTAL			1000

- Laboratories:** These assignments are intended to be solved under the guidance of the professor during class. They involve concepts and math applications in environmental economics and natural resources. You must print each laboratory before class, fill it out and upload it to Canvas. Each lab practice is worthy 20 points.
- Activities and case studies:** These in-class activities involve discussions and conceptual application into agricultural economics or case studies, in which the student must apply the economic concepts to address specific issues and solve it during the course period. Each in-class activity is worthy 25 points.
- Reflections:** There will be two guest lecturers. For each lecture, there will be given a questionnaire worthy of 25 points each.
- Assignments:** Homework assignment is provided every two weeks. Each assignment must be clearly written showing the reasoning step by step. Late homework submissions are **no accepted** and there are **no make-up opportunities** given.
- Quizzes:** Every two weeks, there will be quiz that will evaluate economic applications and review concepts. Each of them is worthy 25 points.
- Small PPT:** Each student will be assigned a special topic. In the small presentation, the student must develop the presentation and record it. The duration of the video must be only 3 minutes. The topics will be assigned the first two weeks of classes. Together with the small PPT, you also need to provide a half page summary of your topic.
- Symposium Presentation:** A final presentation will be given at the end of the class, in a special symposium that will be organized at the end of the semester. It is currently scheduled for **April 15th**. It is expected the presentation to last between 10 to 12 minutes. It accounts for 10% of your final grade, and it will be evaluated by the guest. It is expected to provide a one-page summary for the judges and colleagues. All final presentation are included in the final exam, one question per presentation.
- Final Exam:** A **comprehensive mandatory Final Exam** is given during the final exam week on **Monday 27th [at 10:00 am] (!)**. Be prepared for the final exam to last three hours. All students are required to take the Final Exam and it will count as 10% points of your final course grade. Early or late exams are not given. Please plan accordingly.

All deadlines are posted in Canvas. It is your responsibility to check continuously the Home Page of the Class.

Attendance: Attendance is important for this class. The success in this class depends in great amount upon participation and quality of effort expended in this course. Absences may be costly. Rolls will be taken. Students

are allowed one absence/tardiness without justification. Students with more than one unexcused class absence or late arrival will be penalized 2% of the final grade for each unexcused absence up to a maximum of 6% penalty.

Lids down / Text Messaging and Cell Phone Policy: Laptops are not permitted in class unless instructed by the professor. Text messaging, cell phones and other forms of cyber communication are not to be used in class and must be turned off prior to class and during exams. **TEXT MESSAGING WILL NOT BE ALLOWED IN CLASS! TEXT MESSAGING IN CLASS WILL COUNT AS AN UNEXCUSED ABSENCE.**

On the other side, there are **two** ways to obtain bonus points:

(1) Participating actively in class provides up to **15 bonus points**.

(2) If all the students in the class fill out the end of the semester course feedback, this will allow to provide 2 extra questions in the exam for **20 extra points**. In addition, it unlocks the possibility to replace the lowest quiz with the **Quiz 00** (*Syllabus Quiz*)

Final Grade	Minimum Score
A	925
A-	890
B+	865
B	830
B-	800
C+	770
C	730
C-	700
D+	670
D	630
D-	600
F	0

FINAL GRADE

Final course grades will have the following benchmarks out on **1000** possible grade points as described on the left figure. Please note that grades are **not 'rounded'** or **'adjusted'** at the end of the term. Haggling over grades at the end of the semester is NOT entertained. Of course, if I did a mistake in grading your exam I will gladly give you the correct points. If you believe that your exam is incorrectly graded or that your grade is incorrectly posted, please contact me via e-mail (i.e., in writing) as soon as possible. You have **2 business days** after the grade has been posted to voice your concern. After 2 days have passed, your **posted grade will be assumed to be correct and accurate**.

For general information about grading and grading policy at the University of Florida, please refer to: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>.

Make-Up Exams: Make-up exams **are not given**. This policy applies for missing a mid-term, except for extreme circumstances, there are several days as option that you can take the exam. Should you miss the Final Exam for any reason, you will need to talk to Dr. Luis Peña-Lévano to evaluate the situation.

Extenuating Circumstances

Exception Exceptions to the Missed Assignment Policy reflect excused University events that fall under the 12-day rule or are of a very serious nature. These exceptions are referred to as "Extenuating circumstances" and require formal, letter-head documentation from a physician, hospital, UF faculty/academic advisor, or an email from the UF Dean of Students Office sent to the instructor's UF email address, within 24 hours of assignment deadline. A health-clinic note on the day an assignment is due does not warrant extenuating circumstances and the "Missed Assignment" Policy (above) will apply.

Student Responsibility for Online Submissions

Students are responsible for ensuring and verifying that all of their assignment files are uploaded successfully in to Canvas. The instructor cannot be responsible for internet connections or failures.

Students are strongly advised against using wireless connections to complete quizzes or upload assignments. Wireless connections have been problematic in previous semesters with students losing all points due to upload failure. A hard-wired connection can be located at any UF computer lab on campus or any public library to submit graded assignments. **TO REPEAT**, wireless connections are problematic, and quizzes or assignment uploads may not be saved (without any warning) and therefore locating a hard-wired connection is recommended to submit any graded assignments.

Exam day policy: Please arrive with your ID five minutes early, if possible, to get seated and get your books/bags stowed away so that the exam can be started on the stated time. If you need to use the bathroom, please do so before the exam begins.

Online course evaluation: Student assessment of instruction is an important part of efforts to improve teaching and learning. As a motivation, if all students complete the faculty evaluation there will be 2 extra questions which accounts for **20 extra bonus points**. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>

Summary of the calendar: The following calendar provides the description of which module, unit and activity will be covered:

Week #	Month	Days of the Week					Module	Description	Due (Friday)
		M	T	W	R	F			
1	Jan	6	7	8	9	10	1	U-1	Quiz 1
2		13	14	15	16	17		A-1	Hmw 1
3		20	21	22	23	24		U-2,3	Quiz 2
4		27	28	29	30	31		A-2	Hmw 2
5	Feb	3	4	5	6	7	2	U-4	Quiz 3
6		10	11	12	13	14		FT	Hmw 3
7		17	18	19	20	21		A-3	Quiz 4
8		24	25	26	27	28		U-5	Hmw 4
9	Mar						3		
10		9	10	11	12	13		U-6,7,8	Quiz 5
11		16	17	18	19	20		GL	Reflection
12		23	24	25	26	27		FT	Quiz 6, Ref-2
13	Apr	30	31	1	2	3	4	A-4	Hmw 5
14		6	7	8	9	10		U-9,10	Quiz 7
15		13	14	15	16	17		SY-11,12	PPT
16		20	21	22				A-5	Hmw 6
17		27							

U: Refers to Unit, A: Activity, FL: Field Trip, SY: Symposium, PPT: Power Point Presentation, Hmw: Homework Assignment, Ref: Reflection

Other Important Information

Students are responsible for all deadlines/critical dates and policies set forth by the University of Florida. Deadlines/critical dates are published on the University of Florida Office of the University Registrar's web-site, <http://www.registrar.ufl.edu/>. Current academic policies are presented in the University of Florida Undergraduate Catalog, <https://catalog.ufl.edu/ugrad/current/Pages/home.aspx>. Please familiarize yourself with this information.

Students Requesting Classroom Accommodation: The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services, and mediating faculty-student disability related issues. Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodations. Students with disabilities should follow this procedure as early as possible in the semester. This must be done at least 10 days prior to any accommodation is needed.

UF Counseling Services: The life of a college student can sometimes be overwhelming. Resources are available on-campus to help students manage personal issues or gain insight into career and academic goals. Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's various counseling resources. The following resources are available for all UF students:

- For general student affairs: Dean of Students Office, 392-1261 (after hours, please call 392-1111);
- For mental health consultations: Counseling & Wellness Center, 392-1575 (24/7 phone access);
- For students experiencing distress: U Matter, We Care, 294-2273, www.umatter.ufl.edu;
- For physical health consultations: Student Health Care Center, 392-1161;
- For victims of sexual assault: Office of Victim Services, 392-5648 (after hours, please call 392-1111);
- For career guidance: Career Resource Center, 392-1602, www.crc.ufl.edu.

Software Use: All faculty, staff, and students of the University of Florida 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.

Academic Honesty: In 1995 the UF student body enacted an honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students. In their words, **the Honor Code Preamble:** In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."** The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the

whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Student Responsibility: Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

Faculty Responsibility: Faculty members have a duty to promote honest behavior and to avoid practices and environments that foster cheating in their classes. Teachers should encourage students to bring negative conditions or incidents of dishonesty to their attention. In their own work, teachers should practice the same high standards they expect from their students.

Administration Responsibility: As highly visible members of our academic community, administrators should be ever vigilant to promote academic honesty and conduct their lives in an ethically exemplary manner. This policy will be vigorously upheld at all times in this course.

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Any instances of academic dishonesty will be reported to Student Judicial Affairs.

Student complaints: The University of Florida believes strongly in the ability of students to express concerns regarding their experiences at the University. The University encourages its students who wish to file a written complaint to submit that complaint directly to the department that manages that policy.

- For a residential course, please read the following link:
https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf
- For an online course, please follow this link:
<http://www.distance.ufl.edu/student-complaint-process>

By enrolling in this course, you are agreeing to the terms outlined in this syllabus.

I wish everyone a rewarding and productive semester 😊