

## COURSE INFORMATION

ECON 455 Section 1. Environmental Economic Theory. 3 Credits.  
Department of Economics  
Spring 2023  
Tuesday/Thursday 11:00 – 12:15pm, Gardner Room 106

## INSTRUCTION TEAM

Instructor: Paige Weber  
Office: Gardner 300-E  
Email: paigeweber@unc.edu  
Office Hours: Tuesdays 2-3pm.  
Zoom link: <https://unc.zoom.us/j/97207016377>

Instructional assistant: Stephanie Hutson  
Email: smhutson@unc.edu

## COURSE MODE

This course will be offered in person, unless otherwise announced via Canvas. Virtual attendance options will be available for those that need it for an excused absence type of reason. We will follow the University's policy and guidance on excused absences. **If you cannot attend the class for an excused type of reason, email me with subject line: Econ 455 Virtual Class Request. I will not be recording the zoom lectures to encourage in person attendance and/or synchronous virtual attendance.**

## CATALOGUE DESCRIPTION

A rigorous economic analysis of environmental issues, with particular emphasis on the problem of designing appropriate institutions and regulations under private information and the interaction between economic and ecological systems. Topics include emission fees and marketable permits, pollution models, carbon regulation, and ecosystem service markets.

## TARGET AUDIENCE

The primary audience for this course is students majoring in Economics. Students will apply and extend their knowledge of microeconomic principles to environmental issues.

## COURSE PREREQUISITES

[ECON 400](#) and [410](#); a grade of C or better in [ECON 400](#) and [410](#) is required.

## COURSE GOALS

1. The primary goal is to apply economic theory to understand the principles of environmental protection. This will be achieved by applying concepts learned in lecture to homework problems.

2. The secondary goal is to help students to understand the interactions between economic and environmental systems. Again, this will be achieved by applying concepts learned in lecture to homework problems.

### CLASS STRUCTURE

There will usually be an hour of lecture, with 15 minutes for working through problems in class at least once per week.

### WELLNESS DAYS

We will not hold lecture on University wellness days that occur on lecture days: Tuesday February 14, Thursday April 6

### Course content

#### **1. Microeconomics Review (1 week: 1/10, 1/12)**

Class notes Chapter 1

#### **2. Economics of Public Goods and Pollution (3 weeks: 1/17, 1/19, 1/24, 1/26, 1/31, 2/2)**

Class notes Chapter 2, 3

#### **3. Standards, Taxes, Permits (2 weeks: 2/7, 2/9, [Wellness: 2/14], [Review: 2/21], [Exam: 2/23], 2/28)**

Class notes, Chapter 4

Exam 1: Th 2/23

#### **4. Private Information (3 weeks: 3/2, 3/7, 3/9, [Spring break: 3/14, 3/16,] 3/21, 3/23, 3/28)**

Class notes Chapter 5

#### **5. Spatial and Temporal Models (1 week: 3/30, 4/4, [Wellness: 4/6], [Review: 4/11], [Exam: 4/13])**

Class notes Chapter 6

Exam 2: Th Apr 13

#### **6. Carbon Regulation (1.5 week: 4/18, 4/20, 4/25)**

Class notes Chapter 7

#### **7. Review class (4/27)**

Review course material to prep for exam

Final: May 5, 12pm

### COURSE REQUIREMENTS

There are three exams. The first two exams take place during the normal class time. The final exam will take place during the scheduled final exam period for the course.

### GRADING

The two in-class exams count for 20 and 20 percent of the grade in the class. The final exam counts for 35 percent and the homework counts for 25 percent.

There are around 8 problem sets. I will assign these once we get through the corresponding lecture material. Once assigned, you will generally have a 1 week to complete. Please submit all homework on Gradescope and use the option on Gradescope to identify which problems are on which pages. (This could be done by scanning with an app such as Genius Scan or Adobe Scan or taking clear pictures of handwritten work). FYI, a random subset of problems from each problem set will be graded.

Your final grade will be the **higher of**: the letter grade equivalent to the raw point score **OR** your letter grade from a curve with a distributed centered around B to B+. In past courses this is usually the curved grade.

Raw points:

A-: 90, 91

A: 92-100

B+: 88, 89

B: 82-87

B-: 80, 81

C+: 78, 79

C: 72-77

C-: 70, 71

D: <70

F: <60

### COURSE POLICIES

There are no make up exams. If you miss one, then you will receive a zero on that exam. Late homework will not be accepted. However, I understand that things come up every once in awhile – as such, **the lowest homework grade will be dropped**. You do not need to notify us about this for this to occur. The final exam is given in compliance with the UNC final exam regulations and according to the UNC Final Exam calendar, and will be on Friday, May 5, 12pm.

### COURSE RESOURCES

A comprehensive set of class notes is provided for free by the professor. These notes are posted on the Canvas page for the class.

### IMPORTANT DATES

Please plan to take these tests in person for now.

Thursday, February 23, during class	Exam 1
Thursday, Apr 13, during class	Exam 2
Friday, May 5, 12pm	Final Exam

### SYLLABUS CHANGES

The professor reserves the right to make changes to the syllabus, including homework due dates and test dates. These changes will be announced as early as possible.

### ECON AID CENTER

We have an undergraduate Econ Aid for this class! Please consider seeking peer to peer tutoring if you have trouble: <https://econ.unc.edu/undergraduate/econaid/>.

## **University of North Carolina at Chapel Hill Information for Undergraduate Classes Spring 2022**

### **Attendance Policy**

**University Policy:** As stated in the University's [Class Attendance Policy](#), no right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences:

1. Authorized University activities
2. Disability/religious observance/pregnancy, as required by law and approved by [Accessibility Resources and Service](#) and/or the [Equal Opportunity and Compliance Office](#) (EOC)
3. Significant health condition and/or personal/family emergency as approved by the [Office of the Dean of Students](#), [Gender Violence Service Coordinators](#), and/or the [Equal Opportunity and Compliance Office](#) (EOC).

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**University Approved Absence Office (UAAO):** The [UAAO](#) website provides information and FAQs for students and faculty related to University Approved Absences.

**Note:** Instructors have the authority to make academic adjustments without official notice from the UAAO. In other words, it is not required for instructors to receive a University Approved Absence notification in order to work with a student. In fact, instructors are encouraged to work directly with students when possible.

### **Honor Code**

All students are expected to follow the guidelines of the UNC honor code. In particular, students are expected to refrain from “lying, cheating, or stealing” in the academic context. If you are unsure about which actions violate the honor code, please see me or consult [honor.unc.edu](https://honor.unc.edu).

### **Spring 2022 Course Delivery (College of Arts and Sciences)**

As long as it is possible to do so safely, we will be meeting in person this semester. I understand the ongoing COVID-19 pandemic may require changes to this plan and will be monitoring the situation closely. If I need to change the format of the course temporarily due to outbreaks of illness, I will announce this via email and the course Canvas site.

### **Mask Use (In-Person Instruction Modes)**

This semester, while we are in the midst of a global pandemic, all enrolled students are required to wear a mask covering your mouth and nose at all times in our classroom. This requirement is to protect our educational community—your classmates and me—as we learn together. If you choose not to wear a mask, or wear it improperly, I will ask you to leave immediately, and I will submit a report to the [Office of Student Conduct](#). Students who have an authorized accommodation from Accessibility Resources and Service have an exception. For additional information, see [Carolina Together](#).

### **Acceptable Use Policy**

By attending the University of North Carolina at Chapel Hill, you agree to abide by the University of North Carolina at Chapel Hill policies related to the acceptable use of IT systems and services. The Acceptable Use Policy (AUP) sets the expectation that you will use the University’s technology resources responsibly, consistent with the University’s mission. In the context of a class, it’s quite likely you will participate in online activities that could include personal information about you or your peers, and the AUP addresses your obligations to protect the privacy of class participants. In addition, the AUP addresses matters of others’ intellectual property, including copyright. These are only a couple of typical examples, so you should consult the full [Information Technology Acceptable Use Policy](#), which covers topics related to using digital resources, such as privacy, confidentiality, and intellectual property.

Additionally, consult the University website “[Safe Computing at UNC](#)” for information about the data security policies, updates, and tips on keeping your identity, information, and devices safe.

### **Accessibility Resources and Services**

The University of North Carolina at Chapel Hill facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, including mental health disorders, chronic medical conditions, a temporary disability or pregnancy complications resulting in barriers to fully accessing University courses, programs and activities.

Accommodations are determined through the Office of Accessibility Resources and Service (ARS) for individuals with documented qualifying disabilities in accordance with applicable state and federal laws. See the ARS Website for contact information: <https://ars.unc.edu> or email [ars@unc.edu](mailto:ars@unc.edu).

### **Counseling and Psychological Services**

CAPS is strongly committed to addressing the mental health needs of a diverse student body through timely access to consultation and connection to clinically appropriate services, whether for short or long-term needs. Go to their website: <https://caps.unc.edu/> or visit their facilities on the third floor of the Campus Health Services building for a walk-in evaluation to learn more. Students can also call CAPS 24/7 at 919-966-3658 for immediate support.

### **Title IX Resources**

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in

the community. Reports can be made online to the EOC at <https://eoc.unc.edu/report-an-incident/>. Please contact the University's Title IX Coordinator (Elizabeth Hall, interim—[titleixcoordinator@unc.edu](mailto:titleixcoordinator@unc.edu)), Report and Response Coordinators in the Equal Opportunity and Compliance Office ([reportandresponse@unc.edu](mailto:reportandresponse@unc.edu)), Counseling and Psychological Services (confidential), or the Gender Violence Services Coordinators ([gvsc@unc.edu](mailto:gvsc@unc.edu); confidential) to discuss your specific needs. Additional resources are available at [safe.unc.edu](http://safe.unc.edu).

### **Policy on Non-Discrimination**

The University is committed to providing an inclusive and welcoming environment for all members of our community and to ensuring that educational and employment decisions are based on individuals' abilities and qualifications. Consistent with this principle and applicable laws, the University's [Policy Statement on Non-Discrimination](#) offers access to its educational programs and activities as well as employment terms and conditions without respect to race, color, gender, national origin, age, religion, creed, genetic information, disability, veteran's status, sexual orientation, gender identity or gender expression. Such a policy ensures that only relevant factors are considered and that equitable and consistent standards of conduct and performance are applied. If you are experiencing harassment or discrimination, you can seek assistance and file a report through the Report and Response Coordinators (see contact info at [safe.unc.edu](http://safe.unc.edu)) or the [Equal Opportunity and Compliance Office](#), or online to the EOC at <https://eoc.unc.edu/report-an-incident/>.

### **Diversity Statement**

I value the perspectives of individuals from all backgrounds reflecting the diversity of our students. I broadly define diversity to include race, gender identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. I strive to make this classroom an inclusive space for all students. Please let me know if there is anything I can do to improve. I appreciate suggestions.

### **Undergraduate Testing Center**

The College of Arts and Sciences provides a secure, proctored environment in which exams can be taken. The center works with instructors to proctor exams for their undergraduate students who are not registered with ARS and who do not need testing accommodations as provided by ARS. In other words, the Center provides a proctored testing environment for students who are unable to take an exam at the normally scheduled time (with pre-arrangement by your instructor). For more information, visit <http://testingcenter.web.unc.edu/>.

### **Learning Center**

Want to get the most out of this course or others this semester? Visit UNC's Learning Center at <http://learningcenter.unc.edu> to make an appointment or register for an event. Their free, popular programs will help you optimize your academic performance. Try academic coaching, peer tutoring, STEM support, ADHD/LD services, workshops and study camps, or review tips and tools available on the website.

### **Writing Center**

For free feedback on any course writing projects, check out UNC's Writing Center. Writing Center coaches can assist with any writing project, including multimedia projects and application essays, at any stage of the writing process. You don't even need a draft to come visit. To schedule a 45-minute appointment, review quick tips, or request written feedback online, visit <http://writingcenter.unc.edu>.

### **Grade Appeal Process**

If you feel you have been awarded an incorrect grade, please discuss with me. If we cannot resolve the issue, you may talk to our departmental director of undergraduate studies or appeal the grade

through a formal university process based on arithmetic/clerical error, arbitrariness, discrimination, harassment, or personal malice. To learn more, go to the [Academic Advising Program](#) website.

**University of North Carolina at Chapel Hill**  
**Information for Undergraduate Classes**  
**Spring 2023**

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### **Counseling and Psychological Services**

UNC-Chapel Hill is strongly committed to addressing the mental health needs of a diverse student body. The [Heels Care Network](#) website is a place to access the many mental health resources at Carolina. CAPS is the primary mental health provider for students, offering timely access to consultation and connection to clinically appropriate services. Go to their website <https://caps.unc.edu/> or visit their facilities on the third floor of the Campus Health building for an initial evaluation to learn more. Students can also call CAPS 24/7 at 919-966-3658 for immediate assistance.

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