

# AEC 445G: Introduction to Resource and Environmental Economics

## *Course Syllabus for Spring 2022*

### *Class Meetings*

Times reserved for In-person obligations:

Tuesday	11:00 am -12:10 pm
Thursday	11:00 am -12:10 pm

The class has been randomly divided into two groups: **Group Martes** and **Group Jueves**.

Each group will have their own weekly instruction schedule consisting of *one In-person Instructional Period* with the instructor, *one Asynchronous Instructional Period* to be completed each week at the student's own pace, and *one In-person Recitation and Assessment Learning Period* with the teaching assistant (which is optional except for assessments such as quizzes). On weeks with exams all students will meet in person in Garrigus B-52 on Tuesday for the exam and Thursday for a post-exam assessment.

### Group Martes's Weekly Schedule

- |   |                           |
|---|---------------------------|
| • <b>In-person Instruction</b> (Garr. B-52)                   | Tues. 11:00 am -12:10 pm  |
| • <b>Asynchronous Instruction</b> (See Canvas Modules)        | <i>Self-paced</i>         |
| • <b>In-person Recitation &amp; Assessment Learning</b> (TBD) | Thurs. 11:00 am -12:10 pm |

### Group Jueves's Weekly Schedule

- |   |                           |
|---|---------------------------|
| • <b>In-person Recitation &amp; Assessment Learning</b> (TBD) | Tues. 11:00 am -12:10 pm  |
| • <b>Asynchronous Instruction</b> (See Canvas Modules)        | <i>Self-paced</i>         |
| • <b>In-person Instruction</b> (Garr. B-52)                   | Thurs. 11:00 am -12:10 pm |

### *Instructor*

Dr. Steven Buck (Assistant Professor, Dept. of Agricultural Economics)

Email: steven.buck@uky.edu

Office: 406 Barnhart (CEBA 406)

Office Hours: See the schedule on the Canvas Course Homepage. Also, you are always welcome to email me to schedule an appointment.

### *Teaching Assistant*

Munib Inam (Ph.D. Student, Dept. of Agricultural Economics)

Email: munib.inam@uky.edu

Office Hours: See the schedule on the Canvas Course Homepage. Also, you are always welcome to email me to schedule an appointment.

### *Course Structure*

I believe in-person instruction in small groups helps establish social connection and a community that adds significant value to the learning process, the learning experience, and, ultimately, learning outcomes. I also believe asynchronous instruction can complement in-person instruction in ways that also add value to a course as well as affording the instructor and class the opportunity to meet in two smaller groups. Including a weekly asynchronous instructional module also opens an in-person class meeting period for reviewing materials with the teaching assistant and completing assessments without taking up instructional time. For the above reasons, the structure of this course will include both in-person and asynchronous instruction.

**Reflections on In-person Instruction:** Upon returning to in-person instruction after distance learning in response to the pandemic, I asked myself, “What is the purpose of having students meet in-person for class if we can achieve the same thing using distance learning?”. To me, the answer is that in-person class meetings should strive to do that which cannot be easily replicated with distance learning. Based on my understanding of the science on social interactions and learning, in-person meetings—especially those with small class sizes—have significant potential to create meaningful social connections leading to peer-to-peer and student-to-instructor interactions that support learning. In-person meetings of small classes can support peer-to-peer and student-to-instructor interactions that facilitate learning in multiple ways including through:

- (i) Increased concentration and focus to follow the small group’s conversation/discussion arc;
- (ii) instant feedback on conceptual errors and for helping target instruction towards areas of student interest and to content that requires additional discussion for student mastery; and
- (iii) active engagement with material involving shared speaking, drawing, movement, and supervised problem-solving.

**Reflections on Asynchronous Instruction:** This is an in-person course that will also include a significant asynchronous portion. I am working hard to take advantage of lessons learned from teaching under the COVID Pandemic to improve this course and my instruction, while also managing on-going COVID risks occurring this semester (e.g. Omicron surge). One key lesson for me from teaching over the past two years is that some course content can be effectively delivered via asynchronous instruction and lecture videos. Asynchronous instruction confers the benefit of flexibility in terms of when and where students receive and process course material, and lets them work through content at their own pace. They can even re-visit portions of video lectures when notes or memory of content is incomplete.

## Communication

Email is generally the best way to contact me. Please allow 24 hours for a response.

## Required Materials

- You will need a computer with Internet access to complete many of the assignments outside of class (e.g., home, on-campus lab).
- Phone or tablet camera.
- Rocketbook or similar notebook and/or phone application/system for generating easy-to-read pdf scans (with a small file size) of hand-written work for uploading to Canvas and for inclusion in a digital learning log.

## Goals

By the end of this class, students should be able to:

- Conduct a benefit-cost analysis that takes into account environmental benefits and costs of projects.
- Apply economic principles and tools to analyze environmental and natural resource issues.
- Discuss the economic forces underlying the economics of environmental regulation and how various policies may improve (or worsen) the outcomes.
- Develop a way of thinking about issues, rather than memorize a set of “answers.”

## Grading

Your total points will determine your overall course grade according to the following scale:

Table 2. Letter grade determination

Letter Grade	Points
A	900 pts. or more
B	800 – 899 pts.
C	700 – 799 pts.
D	600 – 699 pts.
E	599 pts. or less

Points for this course will be allocated as described in Table 2.

Table 2. Grade Composition

Category	Points	Weight (%)
1. Assignments	350 pts.	35%
2. Quizzes (5)	150 pts.	15%
3. (a) Exam 1	150 pts.	15%
(b) Exam 2	150 pts.	15%
(c) Final Exam	200 pts.	20%
Total	1000 pts.	100%

### 1. Assignments (*Graded and Ungraded*)

Assignments involve outside-of-class work that will help you prepare for in-class discussion, reinforce what we cover during in-person and asynchronous instruction, or both.

**Graded assignments** will come in the form of problem sets, reading assignments, podcast-based assignments or learning log activities.

- For Problem Sets, you will work math-based and graphical problems similar to ones discussed in class and the reading assignments. You will generally submit your answers online via a Canvas Quiz. You should expect to submit a digital copy of your written work and/or Excel spreadsheet within your Canvas quiz. There are eight Problem Sets planned for the semester; each problem set is worth 15 – 30 points. The tentative due dates for Problem sets are listed the Course Schedule.
- For graded Reading Assignments, you will be expected to take notes and respond to questions on the reading. You will be evaluated based on your notes, a completed reading guide, a Canvas quiz or a combination of these.
- The remainder of the points for the Assignments portion of your grade will come from your Learning Log activity submissions (approximately 100 – 150 points). For the Learning Log assignments, there will be more varied activities related to in-class activities, reading assignments, problem set assignments, asynchronous instructional videos, and metacognition. There will also be a **required** closing assignment that includes a summary of your learning log and a related in-class activity during the week of April 18<sup>th</sup> – 22<sup>nd</sup>. Completion of this closing assignment is a requirement of the course.

**Ungraded assignments** will typically come in the form of assigned readings, assigned short videos, assigned podcasts and completion of the asynchronous instructional modules. Ungraded assignments will generally be included within the modules for Asynchronous Instruction or the weekly modules for lecture materials and supplements. While ungraded

assignments do not contribute to your grade, you are still expected to complete them and are fair game on quizzes and exams. Sometimes ungraded assignments may form the basis or partial basis for a learning log activities (e.g., submitting a note-taking guide from an asynchronous video lecture or reading guide notes corresponding to an assigned reading).

## *2. Quizzes, Quiz Solutions & Quiz Re-takes*

**Quizzes.** There will be **five quizzes** given during each group's In-person Recitation and Assessment Learning periods. Quizzes will usually be written assessments though some may be administered via Canvas in the computer lab (CEB 246). Quiz content will be announced in advance and will cover material from the assignments, in-class material, asynchronous instructional videos, assigned readings, podcasts and supplemental lecture materials. Make-up quizzes will only be offered for excused absences.

**Quiz Solutions.** Time-permitting, quiz solutions will be reviewed and discussed immediately following the quiz as prompt feedback has been shown to be critical for learning from mistakes. In fact, the primary purpose of the quizzes is learning as opposed to assessment. I truly believe in the neuroscience that we learn from our mistakes.. This is why I use the phrase "Assessment Learning", which suggests learning by assessment, instead of "Learning Assessment", which suggests an assessment of learning. Nonetheless, these quizzes will account for a portion of your course grade. Each quiz will be worth 30 points.

**Quiz Re-takes.** Consistent with my comments that quizzes are an opportunity to learn from mistakes, I will offer quiz re-takes which will replace at least 50% of your original quiz score. In order to be eligible for a quiz re-take you must have taken the original quiz (or make-up) and you may be required to submit evidence of studying (e.g. a completed note-taking guide or reading guide corresponding to the original quiz content; such evidences will be announced in advance of the re-takes). In order to serve as an exam study device, quiz re-takes will occur during your In-person Recitation and Assessment Learning period the week prior to an exam (see Course Schedule). Make-up quiz re-takes will only be offered for excused absences.

## *3. Exams & Post-Exam Assessments and the Final Exam*

There will be **two exams** given during our usual class time, and each exam will have a post-exam assessment during the next class meeting. The purpose of the post-exam assessment is for students to learn from their exam mistakes. The post-exam assessment are an opportunity for students to improve their exam score—students' grades cannot be hurt by completing them. Details on the post-exam assessment will be provided before Exam 1 and Exam 2. Questions will cover material from the assignments, in-class material, asynchronous instructional videos, reading materials, quizzes and recitation meetings. Make-up exams will only be offered for excused absences. The tentative make-up exam period is on Wednesday, April 27<sup>th</sup> anytime from 8 am – 6 pm. There is a **final exam** during finals week.

**Exam Dates** (All exams will be administered and taken in B-52 of the Garrigus Building)

Exam 1

2/15 (Tues)

Re-assessment for Exam 1	2/17 (Thurs)
Exam 2	3/29 (Tues)
Re-assessment for Exam 2	3/31 (Thurs)
Final Exam	5/5 (Thurs) from 10:30 am – 12:30 pm

## Prerequisites and Math

*Principles of Microeconomics* (ECO 201) is a prerequisite for this course. I assume that you have previously learned the concepts and skills from that course, and we will build on that knowledge. We will review that material at the beginning of the semester, but if you struggled with the prerequisite then you may need additional study.

Working with economic models for this class involves a significant amount of math, mostly algebra with linear functions and some geometry. You should be comfortable working with graphs and solving equations. Spreadsheets (e.g., Excel) will be used for some topics.

**Absence Policy:** Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor. Students should inform the instructor as soon as possible if they will miss a class meeting.

## University Policies

The document linked below describes several UK-wide policies that will be important to you.

- [University Policies](#)

**Midterm Grades** for undergraduates, midterm grades will be posted in myUK by the deadline established by the University Senate and published in the Academic Calendar, URL here: <http://www.uky.edu/registrar/content/academic-calendar> .

**Senate’s Academic Policy Statements**, URL here: <https://www.uky.edu/universitysenate/acadpolicy> .

**Academic Offenses (Cheating, Plagiarism, and Falsification or Misuse of Academic Records):** Here is the URL to the Senate maintained web page of Rules Regarding Academic Offenses <https://www.uky.edu/universitysenate/ao>.