

University of Massachusetts Amherst  
Department of Resource Economics

ResEcon 397 Economics of Water Policy—Fall 2022  
TuTh 10:00AM to 11:15AM  
Draper Hall, Room 124

Professor: Dr. David Keiser

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Office hours: Wednesdays 11am – noon and by appointment. Zoom link: <https://umass-amherst.zoom.us/j/97187553104>

**Course Objective:**

This course offers a broad overview of domestic and global water policy issues. In particular, the course will explore these issues through the lens of economics. The class explores both water quality and water quantity topics. U.S. topics will include a discussion of major environmental and health statutes such as the Clean Water Act and Safe Drinking Water Act. Environmental justice impacts will be discussed. Global topics will cover a range of subjects including the importance of sanitation and safe drinking water in developing countries. Issues of water scarcity in both domestic and global settings will be explored. Foundational economic topics will cover supply and demand models, non-market valuation techniques, and water pricing.

**Prerequisites:**

None. An introductory course in microeconomics may be helpful, but I will cover all material required for the course.

**Texts**

- There is no required textbook for this class. I will assign weekly reading from a variety of sources including academic journal articles, newspaper articles, and web-based resources. Lectures and discussion will also be important for understanding the course material.

**Grades:**

Grades will be calculated according to the following percentages:

<b>Task</b>	<b>Percentage</b>
Class Participation	25%
Reading Assignments	25%
Midterm	15%
Class Project	35%
<b>Total</b>	<b>100%</b>

I will use the following grading-scale:

- **A** : 94 – 100; **A-** : 90 – 93
- **B+** : 88 – 89; **B** : 84 – 87; **B-** : 80 – 83
- **C+** : 78 – 79; **C** : 74 – 77; **C-** : 70 – 73
- **D+** : 68 – 69; **D** : 64 – 67; **D-** : 60 – 63
- **F** : < 60

I encourage feedback throughout the semester to make sure my goals and your expectations are being met. I will distribute evaluations mid-semester.

### **Note on Class Participation**

This is a relatively small class, which will allow for extensive discussion of class topics. I expect for you to show up to class and actively participate in discussion. You are allowed 2 non-excused absences for the semester. Each additional unexcused absence will deduct 5% from your class participation grade. I will assess participation based on your engagement in class. If you feel uncomfortable speaking up or responding to questions, please let me know. We can find alternative ways for you to engage, including sending e-mails to me with your thoughts on the week's materials. **I will be very flexible this semester due to COVID. Please do not come to class if you are ill or are required to be in quarantine. I will make sure we can find a reasonable way to catch you up on class materials.**

### **Note on Reading Assignments**

This component of the course is closely related to class participation. I will assign weekly reading for our materials. I do not expect for you to understand everything you read! However, I do expect that you will do the reading and answer the corresponding questions that I assign. We will then explore these questions in class.

### **Class Project**

I hope to grant you a lot of freedom in creating a class project that will be interesting, engaging, and educational. We will discuss more details in class, but I would like for you to study a particular water policy issue that interests you. I then would like for you to choose your own way of teaching the class about this issue. I am open to ideas. A few that I have in mind include creating your own podcast episode about a water issue of interest, designing a youtube video with animation, conducting interviews of experts in the field and writing a newspaper article about the issue. I would like to provide you with a creative outlet that matches your interest. The main goal is for you to dive deep into a water policy issue of interest and produce an informative, in-depth discussion of the main points. Please make sure to include how economics plays a part.

### **Virtual Instruction**

Currently, I plan to teach in-person this semester. However, given the uncertainties of COVID, there may be times when the course will need to go remote. If this happens, I will make every effort to deliver a high-quality instructional experience, despite the circumstance of COVID.

We will also have at least three guest lectures this semester. These will all be virtual and I will expect each of you to attend.

**Communication Channel:**

I will make class announcements using Moodle throughout the semester. It is your responsibility to make sure that your account is activated and that you check it regularly.

**Accommodation Statement**

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

**Diversity, Equity, and Inclusion**

The Department of Resource Economics, as is the larger University, is committed to fostering inclusive learning environments. This course is designed to support the needs of all students and honor the diversity of identities, backgrounds, and experiences of all learners via thoughtful dialogue, readings, and assignments. Students are asked to help foster inclusion through their words and actions, to hold one another accountable to these ideals whenever possible, and to consult the instructor if there are related questions, concerns, or improvements that can be made including ways in which the instructor's methods may fall short of these goals.

**Personal Wellness**

I want to emphasize that your physical and mental health are important to me. Family emergencies, physical or mental illness, personal crises, or childcare issues can significantly affect your academic performance. If you encounter any issues that severely affect your ability to engage in this course, please contact me so that we can work out a fair resolution. You do not need to tell me all the details of your situation, and you may also speak with someone from student services who can help me determine adequate accommodations without revealing sensitive information to me.

**Academic Honesty Statement**

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent ([http://www.umass.edu/dean\\_students/codeofconduct/acadhonesty/](http://www.umass.edu/dean_students/codeofconduct/acadhonesty/)).

## **COVID Protocols**

For the health and safety of all members of our campus community, students are expected to follow all COVID-related policies on campus. Those policies are detailed here: <https://www.umass.edu/coronavirus/faqs>. In particular, if you test positive, regardless of your vaccination status, you must isolate for a minimum of five days and wear a mask on days 6-10. If you test positive using UMass testing facilities, a UMass public health case manager will call and give you specific instructions. If you test positive through a different facility, isolate in place and report your results to the Public Health Promotion Center immediately by emailing [testing@umass.edu](mailto:testing@umass.edu).

## Learning Objectives

This course contributes to the following student learning objectives for undergraduate students in the Department of Resource Economics:

<b>Student Learning Objective (SLO)</b>	<b>Component(s) of the Course that Meet the objective</b>
SLO #1: Creatively apply the acquired knowledge from their respective fields to make optimal choices in their professional and personal lives.	We will meet several guests through the semester that will help you understand different potential career paths where this knowledge can be applied.
SLO #2: Understand and master microeconomics as a foundational theory.	Theories covered in the course.
SLO #4: Acquire a broad knowledge in related fields in order to be well-versed in current economic and policy issues.	We covered many topics in water policy and touch on several other disciplines to understand how economics can inform water policy.
SLO #5: Communicate effectively: orally, in writing, and using current digital and multimedia technologies.	Class projects including writing and presentation components. Class discussion requires effective oral communication.
SLO #8: Consistently foster safe, fair, open, and diverse professional and social environments.	Classroom environment
SLO #9: Continually integrate new knowledge gained from a variety of sources, with ability to discern the quality of the source, in order to make well-informed decisions.	Our class project will require students to achieve this objective.
<b>Experiential Goal</b>	
EG #2: Experience active learning strategies: flipped classrooms, debate, field trips, economic experiments and games, presentations, student-response system (e.g., iClicker, Google Forms), etc.	Student presentations and discussion.
EG #4: Conduct independent and group research.	Class project
EG #6: Interact with alumni	Alumni will occasionally serve as guest lectures.

## **Class Outline:**

I would like to cover the topics presented below. Some changes to this outline may occur throughout the semester depending on how far we get on various topics. Suggested readings will be given in class.

### **Part 1: Foundational Economic Methodologies**

Week 1: Introduction to Water Policy and the Role of Economics (9/6)  
-Special Water Conference on 9/8

Agenda:

<https://atkinson.cornell.edu/projects/social-cost-of-water-pollution-workshop/2022-agenda/>

Zoom Link:

<https://cornell.zoom.us/j/94042150662?pwd=STg5NDhhbG54K1RuWkJPtDJXZXZsUT09>

Week 2: Cost-Benefit Analysis and Water Policy; Communicating Water Issues (9/13)

Week 3: Non-Market Valuation Techniques and Water Quality (9/20)

Week 4: The Economics of Water Quantity (9/27)

### **Midterm (Date TBD)**

### **Part 2: US Water Resources**

**-Guest Lecture (Remote) from Kabir Thatte at DIGDEEP (Date TBD)**

Week 5: The Clean Water Act (10/4)

Week 6: Special Topics on Water Quality (10/11)

Week 7: The Safe Drinking Water Act (10/18)

Week 8: Water Scarcity (10/25)

**-Guest Lecture (Remote) on 10/20 from Will Mulhern (YAnalytics)**

### **Part 3: Global Issues**

Week 9: Sanitation (11/1)

Week 10: Safe Drinking Water (11/8)

Week 11: Climate Change and Water Scarcity (11/15)

**-Guest Lecture (Remote) on 11/15 from Dr. Esha Zaveri (Economist, World Bank)**

**Part 4: Class Projects**

Week 12 and 13: Class wrap-up and Presentations (11/29 and 12/6)