

AEC 653: Empirical Environmental & Resource Economics

TR 10:00 – 11:20 AM STAG 213 Fall 2022

Professor

Steven J. Dundas

Department of Applied Economics

Coastal Oregon Marine Experiment Station

212A Ballard Extension Hall

Corvallis, OR 97331



(541) 737-1402



steven.dundas@oregonstate.edu



<http://www.stevendundas.com>



[@SteveDundas](https://twitter.com/SteveDundas)

Office Hours: Mondays 2 - 3 pm and Wednesdays 3 - 4 pm. I am also always available by email appointment.

Course Canvas Site: <https://canvas.oregonstate.edu/courses/1895611>

Prerequisites: AEC 513; AEC 525

Students must be comfortable with a first-year Ph.D. level treatment of micro theory and econometrics. Past graduate training in environmental economics, econometrics, and experience with statistical software and programming will be useful, but are not required.

Course Description: This course introduces empirical methods at the current frontiers of research in environmental and resource economics. General topics include the identification of non-market values, revealed and stated preference methods, environmental policy evaluation and climate econometrics.

Course Objectives: My objectives for this course are to:

1. Familiarize students with the contemporary themes in environmental and resource economics research and in my sub-field of non-market valuation.
2. Provide students with a solid foundation in the recent advances in the empirical methods related to the valuation of environmental goods and services.
3. Increase students' ability to define empirical environmental and resource economic problems, analyze information, and develop research questions.
4. Provide students with a foundation for conducting applied research in environmental and resource economics (e.g. Ph.D. dissertation)



Learning Outcomes: Upon successful completion of this course, a student will be able to:

1. Pursue research on a range of topics in environmental and resource economics and non-market valuation and, for those seeking employment in academia, teach a similar course to this one in the future.
2. Explain the economic models of non-market valuation and have the foundational knowledge to understand the challenges and apply the methods to environmental and resource issues.
3. Describe and critically evaluate the empirical evidence relevant to the application of economic models to environmental and natural resource issues.
4. Frame and discuss environmental and resource issues and policy in terms of economic theory and empirical evidence.

Learning Resources: The readings for this course are primarily journal articles. There are no required textbooks for this course, but I provide the following list of useful references:

- Phaneuf & Requate: *A Course in Environmental Economics; Theory, Policy, and Practice*
NOTE: This is the new (2017) seminal Ph.D. text for environmental economics. Some chapters are provided on Canvas that I obtained from the authors prior to publication but I highly recommend this book for this course and beyond.
- Cameron and Trividi, *Microeconometrics: Methods and Applications*
- Freeman, *Measurement of Environmental and Resource Values*
- Bockstael & McConnell, *Environmental & Resource Valuation w/ Revealed Preferences*
- Manski, *Identification for Prediction and Decision*
- Train, *Discrete Choice Methods with Simulation*
- Angrist and Pischke, *Mostly Harmless Econometrics*
- *Handbook of Environmental Economics, Vol 1-3*

Evaluation

Class and Seminar Participation: 20 %

This course is designed to provide seminar-style discussion of journal articles at the frontier of research in environmental and resource economics. For this to be successful, completing all readings and active participation in class discussion is necessary and expected (8 %). Additionally, the AEC department has the [Applied Economics Working Group](#) that meets each Wednesday at noon during the quarter and the [Applied Economics Seminar Series](#) on occasional Friday afternoons. Each student is encouraged to attend every seminar. The participation requirement here is to submit a one-page summary/critique of three (3) presentations (4 % each). **See Seminar Summary assignment on Canvas for more details.**

Student Lecture: 24 %

Each student will be assigned a recent empirical paper to prepare a presentation and in-class activities to teach the class. See Student Lecture assignment on Canvas for more details.

Referee Reports: 24 %

Each student will be assigned two (2) current working papers to prepare a referee report to a journal editor. You will be asked to summarize the paper, list and discuss the major strengths and weaknesses, and make a recommendation in which quality tier a paper should be published. Reports will be used in this course to gain experience in critically evaluating research papers. See Referee Report assignment on Canvas for more details.

Referee Report #1: Due **Friday October 28th @ 5:00 pm**

Referee Report #2: Due **Friday November 18th @ 5:00 pm**

Research Assignment: 32 %

This is a group research assignment to study a specific type of modeling framework during the quarter. Exercises and/or replication data are provided to gain familiarity with the modeling frameworks. Then, actual data are assigned and will vary based on the framework. Each group will be responsible for preparation of a final paper and an in-class presentation during the final exam period.

Course Gradings

| Assignment | % of Final Grade |
|-------------------------------|------------------|
| Class & Seminar Participation | 20 |
| Referee Reports | 24 |
| Student Lecture | 24 |
| Research Assignment | 32 |
| Total | 100 |

Letter Grades

| | | |
|--------|----------|-------|
| A- | A- | |
| 93-100 | 90-92 | |
| B+ | B | B- |
| 87-89 | 83-86 | 80-82 |
| C+ | C | C- |
| 77-79 | 73-76 | 70-72 |
| D+ | D | D- |
| 67-69 | 63-66 | 60-62 |
| F | Below 60 | |

Course Policies: I am available by appointment for online office hours. **Individual discussions may be one of the most productive parts of the course for you.** I am here to help your learning process and development as a scholar.

Statement Regarding Students with Disabilities: Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Student Conduct and Academic Integrity: Students are required to comply with Oregon State University policies on student conduct and academic integrity. Academic dishonesty (e.g. cheating, plagiarism) and disruptive behavior will not be tolerated in this course. More information on the university's policies can be found here:

http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/code_of_student_conduct.pdf

Religious Holiday Statement: Oregon State University strives to respect all religious practices. If you have religious holidays that are in conflict with any of the requirements of this class, please see me immediately so that we can make alternative arrangements.

Guidelines for a Productive and Effective Online Classroom: Students are expected to conduct themselves in the course in compliance with the university's regulations regarding civility. Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in the remote delivery of this course, paying particular attention to the following:

- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Lauren's Promise: I will listen and believe you if someone is threatening you.

Lauren McCluskey, a 21-year-old honors student athlete, was murdered on October 22, 2018, by a man she briefly dated on the University of Utah Campus. We must all take actions to ensure this never happens again. Any form of sexual harassment or violence will not be excused or tolerated at Oregon State University. All individuals who are participating in university programs and activities have the right to do so fully, free from sexual discrimination, misconduct, and retaliation. The university prohibits



sexual misconduct of any kind, including sexual harassment, intimate partner violence, sexual exploitation, and stalking. When such misconduct occurs, the university will take steps to stop, prevent recurrence, and remedy the impacts of such behavior. **If you feel you are in danger, call 911.**

All Oregon State University employees are considered "Responsible Employees" and must consult with the Office of Equal Opportunity and Access when they are *made aware or have reason to believe that a violation of the Sexual Misconduct and Discrimination policy has occurred.* However, the university makes several confidential offices available to those who have been affected by sexual misconduct or discrimination. The following offices do not report sexual assaults or other sexual misconduct or discrimination claims to other university offices, but can refer students and employees to resources and services both on campus and within the community: [Survivor Advocacy and Resource Center \(SARC\)](#), [Counseling and Psychological Services \(CAPS\)](#), [Student Health Services \(SHS\)](#), and the [University Ombuds](#).

Student Evaluation of Courses: The online Student Evaluation of Teaching system opens to students the Monday of dead week and closes the Monday following the end of finals. Students will receive notification, instructions and the link through their ONID. They may also log into the system via Online Services. Course evaluation results are extremely important and used to help improve courses and the learning experience of future students. Responses are anonymous (unless a student chooses to "sign" their comments agreeing to relinquish anonymity) and unavailable to instructors until after grades have been posted. The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.