

University of Southern California
Economics for Natural Resources and the Environment (ENST 387)
Class Day/Time: MWF 11:11:50am Location: WPH 103
Instructor: Dr. Monalisa Chatterjee
Office: CAS 110, Office Hours: MW: 2.30 - 3.30 pm or by appointment
monalisc@usc.edu
(calendly.com/monalisa-chatterjee)

This class will introduce students to the basic concepts of environmental and resource economics, principles and methods that are used to develop economics policy responses to environmental problems. We look at how fundamental thinking in economics is applied to environmental policy around issues such as traditional and “green” energy, the energy-water nexus, air quality, and environmental management, with an emphasis on resource sustainability and conservation.

This course is built both on lectures and on student discussions, class activities etc. Students are expected to review and/or study the required text assignment before lectures. Students will be also asked to prepare short presentations on specific issues discussed in the course.

Readings:

1. Textbook: Tietenberg & Lewis (T&L). *Environmental & Natural Resource Economics*, 10th edition. ISBN: 9780133479690. Other editions of the textbook are OK to use.
2. Other readings will be posted on the Blackboard on the weekly basis.

Course goals:

1. Understand and learn to use fundamental economics concepts in environmental policy
2. Learn to identify the economic expression of a policy action
3. Develop statistical expressions to connect ecological issues with economic and social processes.
4. Learn about specific environmental problems and the role economics is playing in addressing these issues

Learning objectives:

Please refer to <https://dornsife.usc.edu/environmental-studies/learning-objectives/> for more information.

Ground rules for classroom -

- Share responsibility for including all voices in the conversation.
- Listen respectfully.
- Be open to changing your perspectives based on what you learn from others.
- Understand that we are bound to make mistakes in this space.
- Understand that your words have effects on others.
- Take pair work or small group work seriously.

- Understand that others will come to these discussions with different experiences from yours.
- Make an effort to get to know other students. Introduce yourself to students sitting near or in breakout groups with you.
- Understand that there are different approaches to solving problems.

Grading

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|---|-----|
| Midterm Exam | 25% |
| Final Exam | 35% |
| Research Paper | 20% |
| Homework/class activities/Presentations | 20% |

Grading Scale

Course final grades will be determined using the following scale

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|----|--------|
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |

Research paper:

The writing assignment of the course is an original research paper of **minimum 10 pages** (excluding bibliography, double-spaced, 1-inch margins). This will be on a topic of the student's choice, refined in collaboration with the instructor and reflecting the student's research interests. The instructor will provide additional guidelines on the required diversity of sources. When you submit the paper, submit a hard copy to the instructor AND upload the paper on the Blackboard in "Assignments."

Grading and Correction of Grades

Excerpts for this section have been taken from the University Grading Handbook, located at <http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html>. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) "should only be assigned in unique or unusual situations... for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) "is assigned when work is not completed because of documented illness or other 'emergency' occurring after the twelfth week of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks)."

Tentative Course Schedule

| Date | Topic | Readings (these are tentative, I may change some as we get closer to the week. All changes will be posted on blackboard, Chapter # may be different if you are using a different edition) |
|---|--|---|
| WEEK 1 (AUG 23) | Course Objectives and Structure. Introduction. | <ul style="list-style-type: none"> • T&L, Ch. 1. Visions of the Future |
| WEEK 2 (AUG 30) | The Economic Approach: Property Rights, Externalities, and Environmental Problems | <ul style="list-style-type: none"> • T&L, Ch. 2 • https://ourworldindata.org/fertilizer-and-pesticides |
| WEEK 3 (SEPT 6) September 6 th is a holiday | Evaluating Trade-Offs: Benefit-Cost Analysis and Other Decision-Making Metrics | <ul style="list-style-type: none"> • T&L, Ch. 3 • Cost of near-roadway and regional air pollution-attributable childhood asthma in Los Angeles County |
| WEEK 4 (SEPT 13) | Valuing the Environment: Methods: I | <ul style="list-style-type: none"> • T&L, Ch. 4 • “California High-Speed Rail Benefit-Cost Analysis (BCA)” |
| WEEK 5 (SEPT 20) | Valuing the Environment: Methods: II | <ul style="list-style-type: none"> • Assessing the Economic Benefits of Reductions in Marine Debris: A Pilot Study of Beach Recreation in Orange County, California |
| WEEK 6 (SEPT 27) | Overpopulation | <ul style="list-style-type: none"> • State of world population 2016 |
| WEEK 7 (OCT 4) | Natural Resource Economics | <ul style="list-style-type: none"> • TBD |
| WEEK 8 (OCT 11) | Midterm – Oct 11th | Research paper topic finalized by October 18th |
| Fall Recess – Oct 14 - 15 | | |

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|--------------------------------|---|---|
| WEEK 9 (OCT 18) | Water | <ul style="list-style-type: none"> • Water supply: Public or private? An approach based on cost of funds, transaction costs, efficiency and political costs • Huge LA River Restoration Report Recommends \$453MM Plan Curbed Los Angeles, September 13th, 2013 • T&L, Ch. 9 |
| WEEK 10 (OCT 25) | Land and agriculture | <ul style="list-style-type: none"> • Promoting sustainable land development patterns through impact fee programs |
| WEEK 11 (NOV 1) | Sustainable Development | <ul style="list-style-type: none"> • Measuring sustainable welfare: A new approach to the ISEW • T&L, Ch. 5 |
| WEEK 12 (NOV 8) | Pollution | <ul style="list-style-type: none"> • T&L, Ch. 14 |
| WEEK 13 (NOV 15) | Pollution and waste | <ul style="list-style-type: none"> • T&L, Ch. 8 |
| Thanksgiving Break Week | | |
| WEEK 14 (NOV 29) | Class Presentations | |
| Final Exam | December 8th 11am -1 pm | |

Policy on Missed Lecture, Assignments, or Exams

UNPLANNED ABSENCES: You may be excused from an exams only in the event of a documented illness or emergency as outlined by university policy. No other excuses for missing exams will be accepted. If you miss a class, quiz or graded activity due to medical illness you must present a valid medical excuse to the Instructor within 48h of the missed examination or quiz. The excuse cannot be to attend a dental appointment, a conference, or other similar reasons. The reason for missing an examination or quiz must be of a medical nature or totally unavoidable (e.g., a verified automobile collision on the day and time of the examination). Notify the Instructor in writing that you were seen by a physician, making sure that you include: 1) the physician's name and telephone number, and 2) a statement authorizing us to discuss with the doctor whether you were too ill to take the examination. Note that neither you nor the physician need tell us the nature of your illness. If the excuse is verified, we will accommodate needs. An invalid excuse, or the excuse turned in late, will result in a score of zero for the activity missed. If you miss the final examination and have provided a valid medical excuse within 72 hours of

the examination time, a final course grade of incomplete (IN) will be recorded and you will be permitted to take a make-up final examination during the following semester.

PLANNED ABSENCES: Students who wish to miss an examination for observance of a religious holiday should be aware of the University's policy on such absences, published at: <http://orl.usc.edu/religiouslife/holydays/absences.html>. Requests for such absences should be made by email to the Instructor at least 2 weeks in advance of the absence. If the absence is approved, a reasonable accommodation will be provided.

Students with Disabilities

Students requesting academic accommodations based on a disability are required to register with the Office of Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Be sure that the letter is delivered as early in the semester as possible. DSP is located in STU 301 and is open from 8:30 a.m. to 5:00 p.m., Monday through Friday. The telephone number of DSP is 213-740-0776. If a student's approved accommodation is limited to extra time on examinations, accommodation will be provided. For any other accommodation, such as a private room, translator, etc., students must make prior arrangements with the DSP office 2 weeks before the exam date. For more information please visit the following website:

http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Academic Conduct

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/student/scampus/part-b>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, intimate partner violence, stalking, and harassment are prohibited by the university. You are encouraged to report all incidents to the *Office of Equity and Diversity/Title IX Office* <http://equity.usc.edu> and/or to the *Department of Public Safety* <http://dps.usc.edu>. This is important for the health and safety of the whole USC community. Faculty and staff must report any information regarding an incident to the Title IX Coordinator who will provide outreach and information to the affected party. The sexual assault resource center webpage <http://sarc.usc.edu> fully describes reporting options. Relationship and Sexual Violence Services <https://engemannshc.usc.edu/rsvp> provides 24/7 confidential support.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://ali.usc.edu>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* <http://dsp.usc.edu> provides certification for students

with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.