Syllabus EC437/537 Winter 2021

James Woods

Course Description

The official description of the course is:

> Examines the rationale, economic principles, and institutions of historic economic regulation. Contemporary theory of the firm and regulatory practice with a focus on energy are analyzed. Prerequisites: Ec 311 or Ec 415.

This is a companion course to EC 438/538 which will address the consequences of energy use and production, and EC 428/538 which is mostly focused on program evaluation, including energy conservation programs.

Prerequisites

The undergraduate section has microeconomic theory, EC 311, or the calculus based version, EC 415, listed as prerequisites. The graduate section requires only graduate standing.

As with most economics courses, the more background you bring to the class, the more get from the class. For this class, it means bringing a background in microeconomic theory and econometrics. Not all students will have a background in both and many of the graduate students from outside of economics will have neither.

Contact Information

Communication will be handled through slack https://utilityeconw21.slack.com. You should have received an invitation, if not just go to that URL and use your @pdx.edu email to sign up. There are reasonable help documents to get you started. https://get.slack.help/hc/en-us/articles/218080037-Getting-started-for-new-users

Slack will be used for IM, email and forum style communication. It even handles voice calls. If you have a question about course material or the course itself, ask in one of the channels, e.g., #general. If you have a personal message that is not intended for others, send a direct message, i.e., @woodsj. The group has global do not disturb hours of 10pm - 8am. If you would like something different, alter your personal settings.

Please note that I am not online all the time, and when I am online I will prioritize well-phrased questions with sufficient detail. I tend to ignore general complaints, questions that can be answered by reading the syllabus or using the search bar.

Office Hours:

- There are no in-person office hours this term. We will use Zoom to meet face-to-face.
- Drop in office hours are Monday 3-4pm and Tuesday 10am-Noon through the last week of classes. I will keep a Zoom meeting up during this time.
- You can schedule one-on-one meetings at https://woodsj.youcanbook.me/.
- I tend to respond quickly in slack but have DnD hours set from 5pm till 7am.

Textbook and Other Resources

The two main texts for the course are:

- Viscusi, W. Kip, et al. Economics of Regulation and Antitrust, Fourth Edition, MIT Press, 2005. ProQuest Ebook Central, https://ebookcentral-proquest-com.proxy.lib.pdx.edu/lib/psu/detail.action?docID=3338843.
- Lesser, Johnathan A. & Leonardo R. Giacchino. Fundamentals of Energy Regulation, ed 2. Public Utilities Fortnightly, 2013.

These will be supplemented with journal articles and books available electronically through the library.

Assessments and Grade Policy

Course grades will be determined by your performance as both a creator of table reads, briefly explained below but expanded on later, your participation in those table reads, homework assignments, a midterm and a final. In short, with the exception of the table read and zoom, it is a traditional class set up.

The porportion of your grade from each task is defined below.

- Table Read Creation and Leadership: 20%
- Table Read Participation: 20%
- Homework: 20%
- Midterm: 20%
- Final: 20%

Table Read Documents

We have all had some experience with remote learning by now and have seen the general lack of productivity and the screens of students with mics and cameras off. I have experimented with breakout rooms, but those fail quickly when students are unprepared either because they have not kept up with their reading, or have not reviewed material from prerequisits for this class. Rather than shaking my fist at the sky in frustration, I'm embracing the problem.

The regular class periods, which will be held in zoom, will look a little strange. About a week before the class meeting, the reading for the day will be scheduled. This could be a chapter or one of the journal articles. I will outline the reading in a google doc with topic headings that closely match the topic headings in the reading. Students will be assigned these sections in round robin fashion and it will be your job to create part of a table read.

A table read is a document about six pages long, that summarizes the arguments in each section, criticizes those arguments, provides a worked problem, links to background material and references, and a few question prompts for other students.

That section is yours. You own it. You are the expert and you will get a grade on how well you did constructing that section. *You will be evaluated on what you have produced based on a provided rubric.*

The table doc will be available to the class at least two days before the meeting. Students can, but are not required to, read the document ahead of time and ask clarifying questions with the comment function in google docs. The owners may respond to these questions or adapt their text to respond.

When class starts, we will all focus on the table read and, well, read it. Continuing to ask for clarifications and helping other people out when they have questions. This could be as simple as a link to a definition, or perhaps outlining a good response to the document to add as an appendix, where we will generally keep worked examples and detailed mathematical logic. If someone needs some more detailed help, we can put them in a zoom breakout room with the owner of the section.

We will then break out of silent mode each owner will then summarize the discussion and answer some of the questions that were asked in the first pass. The owner will then delegate some of the suggested fixes to other students while fixing a few on their own. We will then finish some of the delegated tasks, which could involve a few people jumping in a breakout room to come up with a solution. We will then repeat that process until we are done.

Students will be evaluated based on their contributions to the table read and evaluated by a provided rubric. Please note that this is not intended to be the usual make a comment on the discussion board exercise, where a simple, "I agree!" gives full credit. We are talking about creating diagrams, setting up problems, finding supporting data, references to other sources. It is intended to be a substantive contribution.

These table reads will remain live for the rest of the term and can be used as a reference for the homework assignments and exams.

Homework

These will be due periodically, no more than once per week. If you are familiar with Costa's levels of inquiry, the homework will tend to be level two and one questions.

Exams

There is both a midterm and a final exam in this class. These are different from the homework assignments, which focus on one chapter or article at a time. The questions will require you to synthesize what you have learned, comparing and contrasting, using models and data from multiple sources to support your argument.

These are open-note, open-book exams, but that should indicate that these are more difficult questions. Don't expect to burn through some algebra problems. If you are familiar with Costa's levels of inquiry, these are level three questions. The homework will tend to be level two and one.

A set of potential questions will be distributed ahead of the exams. Only a subset of the questions will be chosen for the exam.

On exam day a google doc will be shared with you. You should complete your work in that document. If you need to include diagrams or mathematical derivations, you can do those on paper, take a photo and upload it to the associated D2L assignment folder. Each photo should be labeled, e.g., figure 1, with corresponding text in your google doc to indicate where the figure should be included.

As per normal, exams are intended to measure individual performance. The work you turn in should be authentically yours. Communication between students during the exam is not allowed.

Topics and Readings

- Introduction to Regulation
  - Making Regulations, Ch 2, Viscusi, W. Kip, Joseph E. Harrington, and John M. Vernon. Economics of regulation and antitrust. MIT press, 2005. http://search.library.pdx.edu/PSU:psu_library:CP71189149050001451
  - Efficiency and Technical Progress, Ch 4, Viscusi, et al (2005)
  - Theory of Natural Monopoly, Ch 11
- Models of Regulation
  - Introduction to Economic Regulation, Ch 10, Viscusi, et al (2005)
  - Posner, Richard A. "Theories of Economic Regulation." The Bell Journal of Economics and Management Science, vol. 5, no. 2, 1974, pp. 335–358. JSTOR, https://www-jstor-org.proxy.lib.pdx.edu/stable/3003113.
  - Stigler, George J. "The Theory of Economic Regulation." The Bell Journal of Economics and Management Science, vol. 2, no. 1, 1971, pp. 3–21 (https://www-jstor-org.proxy.lib.pdx.edu/stable/3003160)
  - Peltzman, Sam. "Toward a more general theory of regulation." The Journal of Law and Economics 19.2 (1976): 211-240. https://www.jstor.org/stable/725163
  - Becker, Gary. "Toward a More General Theory of Regulation." The Journal of Law & Economics, vol. 19, no. 2, 1976, pp. 245–248. https://www-jstor-org.proxy.lib.pdx.edu/stable/725165

  - Becker, Gary S. "A Theory of Competition Among Pressure Groups for Political Influence." The Quarterly Journal of Economics, vol. 98, no. 3, 1983, pp. 371–400.https://www-jstor-org.proxy.lib.pdx.edu/stable/1886017.
- Electricity and Natural Gas
  - Lesser & Giacchino, Ch 1 (Good read on the history of gas and electric regulation)
  - Natural Monopoly Regulation and Electric Power, Ch 12, Viscusi, et al (2005)
  - Lesser & Giacchino, Ch 2 (More small details on electricity than Viscusi and simpler theory)
  - Lesser & Giacchino, Ch 3 (More electricity specific details on Costs.)
- Cost Measurement
  - Lesser & Giacchino, Ch 5
  - Oregon Public Utility Commission, "Regulation of Water Utility Rates and Service" http://www.puc.state.or.us/water/water%20home%20page/Ratemaking%20Explained.pdf
  - Malko, J. Robert, and Robert Skinner. "Selecting a Capital Structure for a Regulated Electric Utility: Some Issues and Directions." The Electricity Journal 24.7 (2011): 49-56. http://stats.lib.pdx.edu/proxy.php?url=http://www.sciencedirect.com/science/article/pii/S1040619011001722
  - Example FERC Case: 156 FERC 61,234 (2016) https://www.ferc.gov/CalendarFiles/20160928194709-EL14-12-002.pdf
  - Example Disallowance, Trojan: Public Utility Commission of Oregon Order 95-322 http://www.puc.state.or.us/admin_hearings/key_puc_cases/95_322.pdf
  - Example Disallowance, Rolling Hills: Public Utility Commission of Oregon Order 08-548 https://apps.puc.state.or.us/orders/2008ords/08-548.pdf
- Cost Allocation
  - Lesser & Giacchino, Ch 6
  - Uniform System of Accounts, 18 CFER Part 101 https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=054f2bfd518f9926aac4b73489f11c67&rgn=div5&view=text&node=18:1.0.1.3.34&idno=18
  - Electric Utility Cost Allocation Manual, National Association of Regulatory Utility Commissioners (1992) http://pubs.naruc.org/pub/53A20BE2-2354-D714-5109-3999CB7043CE
  - Roth, Alvin E., and Robert E. Verrecchia. "The Shapley value as applied to cost allocation: a reinterpretation." Journal of Accounting Research (1979): 295-303. http://stats.lib.pdx.edu/proxy.php?url=https://www.jstor.org/stable/2490320
- Rate setting
  - Lesser & Giacchino, Ch 7
  - Allcott, Hunt. "Rethinking real-time electricity pricing." Resource and energy economics 33.4 (2011): 820-842. https://www-sciencedirect-com.proxy.lib.pdx.edu/science/article/pii/S092876551100042X

As with any evolving field, things happen. I will present some optional topics if time is available. Cap and trade is not on the table for the Oregon Legislature this session, so we will focus on these current Oregon issues. This is subject to change:

- Faruqui, Ahmad, Mariko Geronimo Aydin, and John Higham. "Factors behind the

formation of community choice aggregation." The Electricity Journal 33.10 (2020): 106862. https://stats.lib.pdx.edu/proxy.php?url=https://www.sciencedirect.com/science/article/abs/pii/S1040619020301548
- Costello, Kenneth W. "How PBR can go wrong." The Electricity Journal 33.7 (2020): 106801. https://www.sciencedirect.com/science/article/abs/pii/S1040619020300932

Other Rules

- When completing assignments *The work must be authentically and genuinely your own or group. In other words, if you are copying answers you found online, it is not your work.*
- In this classroom, we support and value diversity. To do so requires that we:
  - Respect the dignity and essential worth of all individuals
  - Promote a culture of respect toward all individuals
  - Respect the privacy, property, and freedom of others
  - Reject bigotry, discrimination, violence, or intimidation of any kind
  - Practice personal and academic integrity and expect it from others
  - Promote the diversity of opinions, ideas, and backgrounds, which is the lifeblood of a university

  For additional information, please see the Office of Affirmative Action & Equal Opportunity at http://www.pdx.edu/diversity/affirmative-action.
- Accommodations are collaborative efforts between students, faculty, and the Disability Resource Center. If you have a documented disability and require accommodation, you must arrange to meet with the course instructor prior to or within the first week of the term. The documentation of your disability must come in writing from the Disability Resource Center (Faculty letter). Students who believe they are eligible for accommodations but who have not yet obtained approval through the DRC should contact the DRC immediately. Reasonable and appropriate accommodations will be provided for students with documented disabilities. For more information on the Disability Resource Center, please see http://www.drc.pdx.edu.
- Academic honesty is expected and required of students enrolled in this course. Suspected academic dishonesty in this course will be handled according to the procedures set out in the Student Code of Conduct.
- I am sympathetic to family emergencies but you must inform me as soon as possible. If the notice is verbal, please email me with your understanding of our agreement. All agreements have to be in writing.

Link to this syllabus https://github.com/woodsjam/Course-Public-Utility-Economics/blob/master/SyllabusPublicUtility.pdf