

**UNIVERSITY OF TORONTO
DEPARTMENT OF ECONOMICS**

ECONOMICS 2601H1S – ‘SPRING’ 2022

PUBLIC ECONOMICS II

Course Description:

This course has two components.

First, it offers a comprehensive introduction to the economics of *externalities*, both theoretically and empirically. In doing so, it provides a natural foundation for the economic analysis of public policy, given that many of the most interesting and challenging economic issues we face involve externalities, in one way or other. (Here, think of issues related to global warming – see below.)

In line with this primary focus, the course will characterize externalities from a theoretical perspective, consider how they can be measured, and draw out the practical implications they have for the (optimal) organization of economic activity. Along the way, the course will cover public goods theory, the theory and empirics of local public goods provision (especially, education), and environmental regulation. We will also consider equity, or rather, *inequity*.

Second, having cultivated the perspective of a Public Economist, we will turn our attention to (a subset of the) pressing issues of our time, and the way economic analysis can help address these. Here, we will be paying particular attention to what has been termed “*the climate crisis*” and a *biodiversity crisis* that is accompanying it. The economics of these issues is evolving rapidly: we will endeavour to stay current!

The course has **four goals**: first, to familiarize you with some basic theory that students of Public Economics should know; second, to acquaint you with relevant empirical methods in applied research, including the way that theory and empirics can be combined fruitfully in the form of a *structural* model; third, to give you experience critiquing existing research; and fourth, to introduce you to some of the interesting – fascinating, even – work in the field, with a view to identifying promising areas for new research.

Instructor:

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I will use Quercus. (The course web page above will serve as a backup.)

Lectures:

Tuesday 5:10PM – 7:00PM in SS581.

After the end of January, office hours will be held directly after class (or email me to fix a time).

Before then, office hours will be held on Monday 12-1PM, via Zoom (or by appointment).

Grading:

Final Examination	51%
Short Homework Assignments (3)	9%
Referee Reports (2)	20%
Class Participation	20%

The final examination for the course will take place sometime in early/mid-April. It will be based heavily on the material we cover in the course, including the papers discussed in class (see below). In preparation for the final, I will post sample problems on Quercus/the course website, to give you a feel for the sorts of question that may appear.

There will be three short homework assignments, each worth 3 percent of the overall grade. I will give these out during class: they will be due back the following week. Their purpose is to get you to engage with the material being covered at that stage. (There may be some purely ‘bonus’ assignments too, for students who wish to score in excess of 100 percent!)

We will spend an increasing amount of time as the course progresses discussing interesting or important (or both) papers in the field, some of which are listed in the Course Outline below. I will distribute a set of questions related to each of these papers beforehand to provide a basis for class discussion. Please read these papers carefully, and work through the corresponding questions. As incentives for doing so, note that some of these questions will appear on the final exam, and the “Class Participation” component of the overall grade will be based in part on your contribution to the class discussion.

“Class Participation” will have other parts also. These include quick micro-assignments (worth one percent of the overall grade) and mini-presentations based on assigned questions from the readings; when students have done the mini-presentations in the past, they have typically been *excellent*.

To ensure that your critiquing skills are on track, I will be assigning two referee reports for you to write. One of these will be handed out in mid-February; you will have a couple of weeks to work on it. The second will be assigned in March and will be due on or before the last day of class. Together, the assignments are worth 20 percent of the total grade: 8 percent for the first and 12 percent for the second.

We are interested in Public Economics research. Therefore, there is a research proposal/paper. It is optional for MA students, not optional for PhDs. For the latter, the paper accounts for 34 percent of the overall grade, and the other course elements above are

weighted 66 percent. (For the Mas choosing this option, it is worth 20 percent of the overall grade, and the above components are weighted 80 percent.) The paper is intended for students who wish to get to grips with a strand of literature in Public Economics, to think seriously about it, and how to improve it. Research focusing on the climate crisis would be one *very* good place to start!

For PhD students, a worthwhile research paper will identify an interesting research topic in the field, pose a clear research question, demonstrate that the question remains unanswered, and propose a sensible way of answering it. PhD students should speak to me about possible ideas for their proposed project early in the course, sooner the better.

MA students wishing to pursue the paper option should also have a word with me early on. For MAs, an informed and up-to-date survey of the relevant literature focused on an interesting question would suffice.

Textbooks:

The lectures are intended to be reasonably self-contained. That said, for the first part of the course, I will refer (in passing) to sections from several sources:

Laffont, Jean-Jacques, *Fundamentals of Public Economics*, MIT Press, 1988. (This is a great, concise book, by someone with a deep understanding of the fundamentals.)

Cornes, Richard and Todd Sandler, *The Theory of Externalities, Public Goods and Club Goods*, Second Edition, Cambridge, 1996.

Mas-Colell *et al.* Chapter 11 is also a valuable resource, as are other parts of this very comprehensive book. Budding microeconomists should read, and study, “Mas-Colell” a lot. (Varian’s graduate *Microeconomic Analysis* book offers a concise treatment of several of the same topics. We will also refer to Varian, especially at the front end.)

For econometric background,

Wooldridge, Jeffrey M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2002 (or more recent)

is an excellent reference. I would recommend that students interested in carrying out empirical work in economics buy a copy. (Wooldridge also has an introductory text that supplies lots of intuition, which is developed more formally in the graduate book listed above. Both books are worth owning, even though they are not cheap.)

I’d also recommend reading a book that addresses how to write well. At some level, economics is a persuasive subject: in economics, and in professional life more generally, a premium attaches to being able to write clearly and well. You should therefore practise, and pay lots of attention to, the art of writing.

Stephen Pinker's *The Sense of Style* offers a fascinating treatment of the art, from a 'neuroscience' perspective. It is worth thinking about what he has to say about the "classic style."

The *Economist* magazine is nothing short of essential reading for an applied economist who wishes to be – and remain – informed.

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Graduate Public Economics

COURSE OUTLINE (briefly)

The Lectures will cover the topics listed below. [Note: We might not get right to the bottom of the list, the order is not strict, and additional papers are likely to be added as we proceed...]

Starred (*) readings are recommended, providing useful background material. We will **discuss** readings marked with a **D** in class; please read them prior to the class discussion. For each of these, I will make a set of questions available beforehand to provide a basis for that.

All the ‘D’ readings and all the starred readings will be made available.

Topic 1: **Preliminaries: Welfare Theorems**

*Laffont, Introduction.

*Cornes and Sandler, Chapter 2.

*Varian, Hal R. (1992), *Microeconomic Analysis*, 3rd Edition, Norton: Chapter 17 (and for a more general coverage including firms, see Chapter 18). (Mas-Colell *et al.* Chapters 10 and 16 are excellent also.)

Topic 2: **Externalities - Theory**

Characterization of Externalities

*Laffont, Chapter 1.

*Cornes and Sandler, Chapter 3.

*Mas-Colell *et al.* Chapter 11.

Responses to Externalities

*Cornes and Sandler, Chapter 4.

*Mas-Colell *et al.* Chapter 11.

D Chu, C.Y. Cyrus and C. Wang (1998), “Economy of Specialization and Diseconomy of Externalities,” *Journal of Public Economics*, **69**: 249-61.

D Kandel, Eugene and Edward P. Lazear (1992), “Peer Pressure and Partnerships,” *Journal of Political Economy*, **100**(4): 801-817.

Topic 3: **Measuring Externalities - Empirics**

Peer Effects in ‘Production’

D Evans, William, Wallace Oates, and Robert Schwab (1992), “Measuring Peer Group Effects: A Study of Teenage Behavior,” *Journal of Political Economy*, **100**: 966-991.

*Mas, Alexandre, and Enrico Moretti (2009), “Peers at Work,” *American Economic Review*, **99**(1): 112-45.

Neighborhood Effects

D Borjas, George J. (1992), “Ethnic Capital and Intergenerational Mobility,” *Quarterly Journal of Economics*, February: 123-50.

D Bertrand, Marianne, Erzo Luttmer, and Sendhil Mullainathan (2000), “Network Effects and Welfare Cultures,” *Quarterly Journal of Economics*, August.

D Sethi, Rajiv and Rohini Somanathan (2004), “Inequality and Segregation,” *Journal of Political Economy*, **112**(6), 1296-1321.

Identification

*Angrist, Joshua D. and Alan B. Krueger (2001), “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments,” Princeton University Working Paper #455 (<http://www.irs.princeton.edu>).

D Deaton, Angus (2010), “Instruments, Randomization, and Learning about Development,” *Journal of Economic Literature* **48**(2): 424-455.

*Heckman, James J. (2010), “Building Bridges between Structural and Program Evaluation Approaches to Evaluating Policy,” *Journal of Economic Literature* **48**(2): 356-398.

Topic 4: **Public Goods Theory**

D Samuelson, Paul (1954), “The Pure Theory of Public Expenditures,” *Review of Economics and Statistics*, **36**: 387-9.

*Atkinson, Anthony B. and Joseph E. Stiglitz (1980), *Lectures on Public Economics*, Chapter 16, New York: McGraw-Hill.

Topic 5: **Club Theory, Local Public Goods, and the Tiebout Hypothesis**

*Atkinson, Anthony B. and Joseph E. Stiglitz (1980), *Lectures on Public Economics*, Chapter 17, New York: McGraw-Hill.

*Rubinfeld, Daniel (1987), “The Economics of the Local Public Sector,” *Handbook of Public Economics*, Vol. II, eds. by A. Auerbach and M. Feldstein, Elsevier, North Holland. (I don’t think there is a better introduction to the basic theory, even today.)

Benabou, Rolando (1993), “Workings of a City,” *Quarterly Journal of Economics*, August: 619-652. (This is a brilliant paper, way ahead of its time.)

Topic 6: **Valuing Local Public Goods**

D Black, Sandra E. (1999), “Do Better Schools Matter? Parental Valuation of Elementary Education,” *Quarterly Journal of Economics*, May: 577-599.

*Bayer, Patrick, Fernando Ferreira, and Robert McMillan (2007), “A Unified Framework for Measuring Preferences for Schools and Neighborhoods,” *Journal of Political Economy*, **115**(4): 588-638.

Topic 7: **Competition and the Provision of Public Goods**

Theory

D Epple, Dennis, and Alan Zelenitz (1981), “The Implications of Competition among Jurisdictions: Does Tiebout Need Politics?” *Journal of Political Economy* **89**(6): 1197-1217.

Empirics

D Hoxby, Caroline Minter (2000), “Does Competition Among Public Schools Benefit Students and Taxpayers?” *American Economic Review* **90**(5): 1209-1238.

Empirics: Estimating Equilibrium Models

Epple and Sieg (1999), and more...

Topic 8: **Education**

The Technology

*Todd, Petra E. and Kenneth I. Wolpin (2003), “On the Specification and Estimation of the Production Function for Cognitive Achievement,” *Economic Journal*, **113**: F3-F33.

Shaikh, Hammad (2021), “Improving Online Learning Through Course Design: A Microeconomic Approach.”

Class Size

Hanushek (1986), Krueger (1999), Krueger and Whitmore (2001), Angrist and Lavy (1999), Hoxby (2001), Gilraine (2019), and more

Teacher Effects

Chetty *et al.* (2014a,b), Rivkin *et al.* (2005), and more

Incentives

Macartney (2014)

Topic 9: **Environmental Issues**

Henderson (1996), Greenstone (2003), *Mueller, Mendelsohn and Nordhaus (2011), Boskovic (2015), etc.

Topic 10: **Climate “Change”**

*Stern (2006), *Nordhaus (2007), *Weitzman (2007, etc.), etc.

Topics 11+: **Deforestation, Species Preservation, Green Accounting, Incentives for Green Innovation, etc.**