

This is the syllabus used for Spring 2024. Minor changes may be made for Fall 2024, but you can expect the general structure and requirements of the class to be similar to the ones presented here.

ECON 4410 — Public finance

Syllabus

University of Pennsylvania
Margaux Luflade
Spring 2024

Course Logistics

Class time and location.

- Monday and Wednesday, 12:00-1:30pm ET
- Location: PCPSE 101

Course instructor. Margaux Luflade, email: mluflade@sas.upenn.edu

Office: Perelman Center for Political Science and Economics (PCPSE), office 603.

Office hours: Monday 3:30-5:30pm, PCPSE 603.

Email policy: You can expect me to respond to emails within 48 hours, and from 9 to 5, Monday through Friday.

Teaching assistant. Rodrigo Morales Mendoza, email: rodmo@sas.upenn.edu

Office hours: Tuesday 2:30-4:30pm, PCPSE 641.

Canvas. All resources for the class will be available on the Canvas course site.

Slides, problem sets, homework solutions, and other relevant resources for the class will be posted on Canvas.

I may occasionally provide additional lecture notes, slides, or extra readings to support in-class discussion. These will also be posted on Canvas.

Course description and material

Synopsis. The main goals of this course are to develop an understanding of why and how the government may intervene in the economy, and to study the effect of government expenditure programs and taxation systems on the welfare and behavior of citizens. This course will include an analysis of the theoretical bases that guide government intervention in the economy; the discussion of a range of issues in public finance with a focus on current policy debates; and the presentation of empirical methods used in economics to evaluate the effect of public policies.

Prerequisites. Econ 2100 (intermediate microeconomics, formerly Econ 101) is the main Econ requirement. Note that this class really builds on Econ 2100, so taking Public Finance without having taken Econ 2100 does not make much sense (on top of exposing you for serious difficulties during the semester). Taking Public Finance concurrently with Econ 2100 is *strongly* discouraged for the same reason.

Math 1400 (Calculus I, formerly Math 104), as well as Math 1410 (Calculus II, formerly Math 114) or Math 1510 (Calculus II with Probability and Matrices, formerly Math 115) are required for this class.

Econ 2300 (Statistics for Economists, formerly 103) is recommended.

Textbook. Lectures and class discussion will mostly follow the following textbook:

Jonathan Gruber, Public Finance and Public Policy (5th Edition) WORTH Publishers, 2016.

The book is available at the Penn bookstore, or may be purchased online. Note: The 4th edition is an acceptable substitute. The newer 6th edition can be used too.

Exam material. Exam questions may cover everything discussed in class, in the problem sets, or on the Canvas discussion board, as well as everything in the relevant chapters of the textbook (we will not cover all the chapters of the book; relevant chapters of the textbook are listed in the tentative lecture schedule at the end of this syllabus), and supplemental documents I may distribute.

Problem set questions, as well as questions I will ask in class to guide our discussion, are designed to be representative of what you may expect during the exams.

Grades and examination

Course grades will be determined by performance on three midterm exams (including one at the very end of the semester) and problem sets, in the following proportions. There will be no extra-credit assignment.

- The best two midterms out of the three will account for 65% of the grade together (32.5% each)
- Problem sets will together account for 25% of the grade
- Participation will account for 10% of the grade

Though the exact distribution of grades varies from year to year, I will target an average grade of B+.

Midterm exams. All exams will take place during the regular class time, in the regular classroom. In terms of material, exams will be cumulative. Collaboration and/or communication between students will *not* be permitted during the exams. The tentative dates for exams are:

- First midterm: Wednesday, February 21st.
- Second midterm: Wednesday, March 27th.
- Third midterm: Wednesday, May 1st.

Problem sets. Problem sets will be assigned weekly and due on Wednesdays at the beginning of class (12pm ET). The full schedule of due dates for problem set is shown along with the lecture schedule at the end of this syllabus. You can either turn in a paper version of your homework in person, or submit an electronic version on Canvas (under Assignments).

Problem sets are an essential element to prepare for the midterms, so it is important that you feel comfortable with the material and methods they cover by the time of the midterm. They are scheduled as weekly assignment, to encourage you to work throughout the semester, and prevent you from falling behind. You are encouraged to come ask questions about the problem set in office hours —again, the goal of the problem sets is to further your understanding of the course material, and to allow you to detect any hole in your understanding well before the midterms.

It is totally fine for students to work in small groups and discuss problem sets. Every student is however responsible for their own and personal write-up, and must turn in an individual version of the homework (no copies similar to study group members). Even if you and your friend came up with the answer discussing

together, you are expected take a moment to write up this answer by yourself, and to justify that answer and explain the reasoning in your own words.

If you need help with problem sets, please feel free to reach out to the instructor and/or the TA. Ample time will be given to the discussion of problem sets in office hours and to answering any question you may have.

Late assignments will not be accepted. You are also responsible for checking that all pages of your answers are stapled or downloaded and submitted.

Problem sets will be assigned at least one full week before they are due, so plan ahead so you can submit on time. Office hours are in purpose scheduled on Monday and Tuesday so that you can come ask questions, and have time to revise your work before the Wednesday submission deadline. Take this as a hint, and plan on starting to work on the problem set before Monday or Tuesday.

I understand that everyone's schedule is different, that unexpected events happen, and that extensions are sometimes needed. If you would like an extension, please reach out (to the instructor) and explain your situation.

Participation. Participation is different from attendance. You need to be active in the class —either in lectures or in office hours (both in-person and on zoom)— to earn points for participation. See at the end of this syllabus for more details and tips. If you have any question or concern about participation, feel free to reach out to the instructor. Note that the later in the semester you reach out, the harder it will be to change your participation record (and therefore grade).

Class policies

Academic integrity. It is your responsibility to be familiar with the University's Code of Academic Integrity, and to abide by its rules. Note the Economics Department's policy on academic integrity, which you can find on the Department's website:

Academic integrity is a very important part of student life, and the Department of Economics takes it seriously [...] Students who are suspected of committing infractions will be reported to the Office of Student Conduct [...] The Department reserves the right to undertake procedures that would catch breaches of academic integrity, should any arise.

Problem sets deadlines. Due dates will be specified for each of the problem sets, as they are assigned. You are expected to turn in your homework by the deadline. You should make arrangements to turn in your work *early* if you expect a conflict to arise at the time the homework is due. *No* deadline extension will be granted to accommodate job interviews —problem sets are assigned and scheduled sufficiently ahead of time for you to have time to complete the homework if you plan ahead and don't start at the last minute. Pages of homework turned in late because of stapling omission or dysfunction will *not* be accepted.

Exam attendance policy. I will follow the Economics Department's policy on exam attendance, which you can find at:

<https://economics.sas.upenn.edu/undergraduate/course-information/course-policies>

In cases where attendance at a midterm or a final exam is mandatory, there are only a few valid excuses for missing an exam. They are:

- Three exams scheduled within one calendar day (for final exams ONLY!) This policy of three exams does not count for midterm exams given during class time.
- An exam is given outside of the regular class schedule and the timing conflicts with another class in which the student is enrolled.

- Observance of a university-recognized religious holiday.
- UPENN Business that takes you away from campus. Absence from campus on UPENN business includes, for example, athletic events in which you are actively participating. In such cases, you need to make arrangements with your professor ahead of the exam date to take the exam at another time (preferably earlier than the schedule date).
- An illness/health emergency.
- A death in your family.
- Documented disabilities that allow you to take the exam under other circumstances.

Examples of reasons that are *not* valid for missing an exam are:

- job internships/ interviews
- beginning fall or spring break early or returning after a scheduled exam
- end of semester early flights
- take home exams
- any other reason you would prefer not to be at the university when the exam is scheduled

Students are responsible for making sure, at the beginning of the term, that they can attend the exams. Registering for a course means that you certify that you will be present for the exam (unless one of the explicitly stated exceptions above arises.)

Students who arrive late to an exam will generally be required to hand in their exam at the same time as other students.

Make-up midterm exams. There will be no make-up midterm exam. If you miss a midterm exam for any reason, you will earn a 0 for that exam. The final grade for the course only taking into account the best two midterm grades out of three, the 0 will be dropped if you score higher than a 0 at the other two midterms.

Regrade policy. Regrade of exams and problem sets may be requested, if you find a clear and compelling error in the way your exam was graded. The procedure for requesting a regrade is to submit to me a one-page typed petition detailing the supposed grading error.

No regrade request will be accepted for exams that are written in pencil and/or look altered.

In addition, note the following economics department's policies on grading requests:

Errors in grading arising from illegible or garbled answers are not subject to correction. [Your answers must be legible. Answers that I and/or the grader cannot read or understand, regardless whether it is due to poor hand-writing, grammar or anything else, will be deemed wrong.]

Students should not approach either the instructor or the TA with an oral request before making their written request. Requests should be focused on the specific error and should be made within a week of the work being returned.

The entire graded work (problem set or examination) should be resubmitted; there is no guarantee that grades will rise as, statistically, positive and negative errors in grading are equally likely.

If the request arises because you think different students have been graded differently, all the affected students should submit their work as a group [and may all be regraded].

Sharing class material. Course documents—including problem sets, practice exams, exams, and their respective solutions—are to be used **exclusively** by students enrolled in this course, and are not to be shared with people outside of this class. Regardless of whether documents are physically distributed in class or posted on the Canvas course site, **any re-posting online (including on any course material sharing website) is prohibited.**

Tentative lecture schedule

Week #	Lecture #	Week day	Date	Lecture topic / slides	HW due	Textbook chapter	Note
1	1	Mon	22-Jan	Intro		2.3	
	2	Wed	24-Jan	Externalities (1/2)		5; 6.1; 6.2	
2	3	Mon	29-Jan	Externalities (2/2)			
	4	Wed	31-Jan	Public goods (1/2)	HW 1	7; 9.1; 10.2	Course selection period ends
3	5	Mon	5-Feb	Public goods (2/2)			
	6	Wed	7-Feb	Causal inference	HW 2	3	
4	7	Mon	12-Feb	Education		11; 10.3	
	8	Wed	14-Feb	Income distribution (1/2)	HW 3	17; 12.5	
5	9	Mon	19-Feb	Income distribution (2/2)			
Wed 21-Feb Midterm 1							
6	10	Mon	26-Feb	Social insurance: theoretical found. (1/2)		12	27-Feb: Last day to drop classes
	11	Wed	28-Feb	Social insurance: theoretical found. (2/2)	HW 4		
Mon 4-Mar Spring break							
Wed 6-Mar Spring break							
7	12	Mon	11-Mar	Social security (1/2)		13	
	13	Wed	13-Mar	Social security (2/2)	HW 5		
8	14	Mon	18-Mar	UI + DI + WC (1/2)		14	
	15	Wed	20-Mar	UI + DI + WC (2/2)	HW 6		22-Mar: last day to change grade type
9	16	Mon	25-Mar	Health insurance (1/2)		15; 16	
Wed 27-Mar Midterm 2							
10	17	Mon	1-Apr	Health insurance (2/2)		15; 16	2-Apr: Last day to withdraw
	18	Wed	3-Apr	Taxation: basics	HW 7	18	
11	19	Mon	8-Apr	Tax incidence		19	
	20	Wed	10-Apr	Tax inefficiencies + Optimal taxation (1)	HW 8	20.1	
12	21	Mon	15-Apr	Optimal taxation (2)		20.2; 20.3	
	22	Wed	17-Apr	Labor taxation	HW 9	21	
13	23	Mon	22-Apr	Capital taxation, lifecycle model		21	
	24	Wed	24-Apr	Tax expenditures	HW 10	22; 23	
14	25	Mon	29-Apr	Review			
Wed 1-May Midterm 3							

Additional readings

Externalities

Josh Barro (2014). *Don't Want Me to Recline My Airline Seat? You Can Pay Me*. New York Times, August 27, 2014.

Robert Stavins (1998). "What Can We Learn from the Grand Policy Experiment? Lessons for SO₂ Allowance Trading." *Journal of Economic Perspectives*, Vol 12, No. 3: 69–88.

Christina Anderson *et al.* (2018) *Three Far-Flung Cities Offer Clues to Unsnarling Manhattan's Streets*. New York Times, February 26, 2018.

Public goods

John Tierney (2000) *A Tale of Two Fisheries*, NY Times Magazine, August 28, 2000.

Education

Dennis Epple, Richard Romano, and Miguel Urquiola (2017). "School Vouchers: A Survey of the Economics Literature." *Journal of Economic Literature*, 55(2): 441–92.

Derek Neal (2018). *Information, Incentives, and Education Policy*. Harvard University Press.

Income distribution

Hanming Fang and Michael Keane (2006). “Assessing the Impact of Welfare Reform on Single Mothers.” Brookings Papers on Economic Activity, 2004, Volume 1: 1–116.

Welfare reform A patchy record at 20. The Economist, August 20, 2016

Poverty in America: No money no love. The Economist, August 20, 2016

SNAP Back to Reality. NPR, The Indicator from Planet Money, May 17, 2018.

Social insurance

Martin Feldstein (2005). “Rethinking Social Insurance.” NBER Working Paper No. 11250.

Jessica Greene (2018). *Medicaid Recipients’ Early Experience with the Arkansas Medicaid Work Requirement.* Health Affairs, September 5, 2018.

Social security

Martin Feldstein (2005). “Structural Reform of Social Security.” Journal of Economic Perspectives, Spring 2005: 33–55.

Health insurance

John H. Cochrane, *After the ACA: Freeing the market for health care.* October 18, 2012.

Karl Denninger (2017). *The Bill to Permanently Fix Health Care for All.* Market Ticker Blog.

Hanming Fang (2017). “The Economic Realities of Replacing the Affordable Care Act.” Wharton Public Policy Initiatives Issue Brief, Volume 5, No. 3.

Milton Friedman (2001). *How to Cure the Health Care.* The Public Interest. Winter 2001.

Paul Howard and Stephen T. Parente (2010). *Toward Real Health Care Reform.* National Affairs, 2010.

Paul Krugman, *Health Care Reform Myths.* March 12, 2010, New York Times.

Empirical Methods

Joshua Angrist and Alan Krueger (1999). “Empirical Strategies in Labor Economics.” Handbook of Labor Economics, Vol. 3, Chapter 23: 1277–366.

On the participation component of the final course grade

Why is participation important? Three main reasons.

- One is that it creates positive externalities during lectures: lectures are much less boring to everyone when students are active rather than when it is me talking non stop (I do my best to be entertaining and interesting but I do admit that I need help from you to make the class lively).
- Another is that a number of comments made by students are things I was not planning on saying or talking about but are actually very related to what we are discussing, truly enrich the discussion, and are useful for everyone to think about.
- Yet another reason is that I want to make sure you know it is perfectly fine and even encouraged to reach out (e.g., come to office hours or ask questions during the lectures) if you have questions or are lost.

Why do I incentivize participation by making 10% of your final grade depend on it?

- First of all, the goal of this policy is *not* to stress you out, and I really don’t want it to.
- The policy was actually suggested by previous students in end-of-the-semester evaluations: before I had this policy only a few students would be very active in class; I asked students to give suggestions in the final evaluations regarding what I should do to encourage participation. The only suggestion I received (and it kept coming back) was: give points for participation!

- I think it is fair to look at students deciding how much to participate as economic agents deciding how much to participate by maximizing their utility (from participating) net of their cost (of participating). Sometimes students underestimate the benefits from reaching out or from participating. The participation points are a way to move up the benefit curve from participating.

How do I try to make the policy fair for everyone? I realize that not everyone has the same utility function, not everyone has the same cost function, and because of that it is hard to have a policy that is “objectively fair” or “works for everyone”, while still maintaining the spontaneous aspect of participation that makes a class lively. Even without a grade incentive, some people would participate a lot because they enjoy it, or because it helps them stay focused (and increase their utility) or because they have a low cost of participating (e.g., they are not shy, they know the answers, they study related topics that give them ideas of good questions). I understand that it may seem unfair to “reward” a behavior that is naturally less costly to certain people, or to “penalize” others for their tastes (some just don’t like participating) or their naturally high costs to participating. To go around this, I want to highlight that there are multiple ways to be an active participant, accommodating many different participation cost functions, and all of which allowing you to have a high participation grade in the class.

- First, and in very practical terms, to get these participation points, you don’t need to ask 10 questions at each lecture; make 10 comments every minute; or answer all my questions at each lecture. Showing you are engaged by, for instance, answering one of my questions in each lecture is good. You also don’t need to be active at every single lecture or every single office hours session. I understand that you all have a lot going on, that you may have to miss class sometimes. That is fine, make an effort to answer a few of my questions on the next lecture and your participation grade will not be affected by you missing class. I understand that you have other classes and all have different schedules. For instance, you may have other assignments that make it that, say, you work hard on Sundays and are tired on Mondays and therefore don’t feel like participating on Mondays. That is okay! Be active on Wednesdays, and your participation grade will not be affected by you not being active on Mondays.
- Lecture vs office hours —I understand that we all have different personalities, that some of us are more shy than others. I understand that some of us are slower than others at taking notes, and participating while you focus on writing what is going in class is hard. You don’t have to be active during the lectures, you can instead/also come to office hours (mine or the TA’s) and ask questions or answer other students’ questions during these office hours. Lectures are just one part of where you can be active.
- Asking questions vs answering questions —Feel free to ask questions during class and contribute to the discussion by connecting to knowledge you have from outside the class. If it is easier, note that in the slides that I distribute before the lectures, there are a number of question prompts that will be discussed in class. These can often be answered with previous knowledge from intermediate micro or our earlier classes, so you can look at these and thinking of answers early if you worry about coming up with participation ideas during class.
- Spontaneous vs prepared participation —At the beginning of each lecture, I will ask for a couple of volunteers to do a 2-min recap (and will give priority to someone who has participated little). You can also prepare those.
- Reacting to class material vs to problem set material —A large chunk of office hours often turn out to be dedicated to discussing problem sets, which you should look at before coming to office hours. Preparing questions/ discussions about problem sets, or working on the problem set before weekly office hours and answering your classmates’ questions during office hours, are both great ways of participating.
- If you have any concern about your participation or think your circumstances are not being taken into account by my criteria, feel free to email me to explain and we will make sure to work something out. Please note that earlier in the semester you reach out, the easier it will be for you and me to work out a solution that ensures you eventually get a high participation grade —if you do not participate for the first

13 weeks of the semester and reach out on week 14 to discuss participation strategies, there is not much I will be able to do to help you then, and you will be stuck with a low participation grade.