



Department of Economics

Spring 2023

**ECO 764: Public Finance & Fiscal Policy II**  
(SEM, 3 credits)

**Class Time:** Tue Thu 11:00AM—12:20PM EST

**Class Location:** Fronczak 424

**Instructor**

Dr. Monica Tran-Xuan

**Email**

[monicaxu@buffalo.edu](mailto:monicaxu@buffalo.edu)

**Office Location & Hours**

Fronczak 425

Tue and Thu 2:00PM—3:00PM EST or by appointments

(The best way to reach me is via email. Email subject: ECO 764 – your name)

**Course Description**

This Ph.D. course introduces the macroeconomic approach to public finance. The course is divided in three parts. The first part covers the classical Ramsey approach to optimal taxation with applications to commodity, intermediate goods, labor, capital, and wealth taxation. Stochastic taxation and debt management with complete and incomplete markets are also studied. The second part studies fiscal policy in the presence of inequality with applications to tax progressivity and social insurance. The last part deals with policies under lack of commitment and time inconsistency. Concepts of limited commitment, Markov perfect equilibrium, and sustainable equilibrium are covered.

**Learning Outcomes**

Upon successful completion of this course, students are expected to

<b>Learning outcomes</b>	<b>Assessment methods</b>
1. Understand basic macroeconomic concepts and models of public finance	Referee Reports, Research Proposal, Presentations

2. Learn the thought process and how to speak the language of frontier research in macroeconomic public finance	Referee Reports, Research Proposal, Presentations
3. Familiarize with basic computational and data tools in macroeconomic public finance	Referee Reports, Research Proposal, Presentations

This course's learning outcomes are consistent with the goals of the Economics Ph.D. program, which can be found at <https://arts-sciences.buffalo.edu/economics/graduate/phd.html>

**Prerequisites** ECO 609 and ECO 610.

### Course Materials

I will have slides posted on UB Learns. An important reference for this class is

- Ljungqvist, L., and T. J. Sargent (2012). *Recursive Macroeconomic Theory*. MIT Press, Cambridge.

### Course Requirements

Students will be graded on participation, two referee reports, one research proposal, and three presentations throughout the semester. Students are responsible for materials covered in lectures and the readings.

*Participation:* Students should attend every class and participate in each class actively. Students are expected to ask questions and answer or comment on other students' questions.

*Referee report:* Each student is expected to write two referee reports on the papers that they will present during the semester. Each referee report should include a summary of the paper, major comments and suggestions, and minor suggestions. Each report should be 2-3 pages long. Students are expected to choose two papers from the list provided by the instructor. Students are allowed to choose other papers outside the list upon the instructor's approval. The papers should cover topics related to macroeconomic public finance and their latest versions (either working or published ones) must be dated within the last 10 years. No late assignments are accepted except for special circumstances with official documents (doctor's notes, etc.). Students are encouraged to discuss their chosen papers together. The report should be written in LaTeX (using Overleaf, Lyx, etc.). Referee report schedule:

Assignment	Deadline
Referee report 1	February 24
Referee report 2	March 28

*Research proposal:* Each student is expected to write one 5-page research proposal on a topic in macroeconomic public finance. Each research proposal should include motivation, literature review, methodology (model and/or data), and expected results and contributions. No late

assignments are accepted except for special circumstances with official documents (doctor's notes, etc.). Students are encouraged to discuss their chosen papers together. The research proposal should be written in LaTeX (using Overleaf, Lyx, etc.). Research proposal deadline:

<b>Assignment</b>	<b>Deadline</b>
Research proposal	May 5

*Presentations:* Each student is expected to present three times in the second half of the course: the two papers that they write referee reports on and their research proposal. There will be an Excel sign-up sheet.

Paper presentations: Each paper presentation should have two parts. The first part covers key research questions, methodologies, and main results of the paper. The second part includes the discussions of the paper which include student's comments on the paper's contributions to the literature and major problems of the paper. Each presentation should last for an hour, and there will be a 15-minute discussion afterwards.

Research proposal presentations: Each research proposal presentation should include motivation, research questions, proposed methodology (model and/or data), and expected results and contributions. Each research proposal presentation should last for 35 minutes.

## Grading Policy

The final total score for the course will be determined as follows:

Participation	10%
2 Referee reports	30%
1 Research proposal	15%
3 Presentations	45%

I will follow this grading rubric in determining your final letter grade:

<b>Letter grade</b>	<b>Final total score</b>
A	93-100
A-	87-92
B+	80-86
B	75-79
B-	70-74
C+	65-69
C	60-64
C-	55-59
D	45-54
F	00-44

Students have a responsibility to participate in the course evaluation process. For the "Incomplete" grade, please refer to the [graduate school's Incomplete Policy](#).

## Academic Content

This is the list of course topics and reading materials that may be covered in this course. The instructor reserves the right to modify/adjust course materials during the semester.

### 1. Ramsey Approach to Optimal Fiscal Policy

#### i. Static taxation

- Atkinson, A. and J. Stiglitz (1972), The structure of indirect taxation and economic efficiency, *Journal of Public Economics* 1, 97–119.
- Chari, V. V., & Kehoe, P. J. (1999). Optimal fiscal and monetary policy. *Handbook of macroeconomics*, 1, 1671-1745.
- Diamond, P. and J. Mirrlees (1971), Optimal taxation and public production I: production efficiency, *American Economic Review* 61, 8–27.
- Diamond, P. and J. Mirrlees (1971), Optimal Taxation and Public Production II: Tax Rules, *American Economic Review* 61, 261-278.
- Diamond, P. (1975), A Many-Person Ramsey Tax Rule, *Journal of Public Economics* 4, 335-342.
- Ramsey, F. P. (1927), A Contribution to the Theory of Taxation, *Economics Journal* 37:47-61.

#### ii. Dynamic taxation

- Albanesi, S. and R. Armenter (2008), Understanding Capital Taxation in Ramsey Models, Working Paper, Columbia University.
- Albanesi, S. and R. Armenter (2008), Intertemporal Distortions in the Second Best, Working Paper, Columbia University.
- Atkeson, A., V.V. Chari, and P. Kehoe (1999), Taxing Capital Income: A Bad Idea, *Federal Reserve Bank of Minneapolis Quarterly Review* 23, 3-18.
- Barro, R. (1979), On the Determination of the Public Debt, *Journal of Political Economy*, 87, 940–71.
- Bassetto, Marco and Narayana Kocherlakota (2004), On the irrelevance of government debt when taxes are distortionary, *Journal of Monetary Economics*, Elsevier, vol. 51(2), pages 299-304, March.
- Chari, V. V., & Kehoe, P. J. (1999). Optimal fiscal and monetary policy. *Handbook of macroeconomics*, 1, 1671-1745.
- Chamley, C. (1986), Optimal Taxation of Capital Income in General Equilibrium with Infinite Lives, *Econometrica* 54, 607–22.
- Judd, Kenneth L. (1985), Redistributive Taxation in a Simple Perfect Foresight Model, *Journal of Public Economics* 28, 59–83.
- Jones, L., R. Manuelli and P. Rossi (1997), On the Optimal Taxation of Capital Income, *Journal of Economic Theory* 73, 93–117.
- Saez, E. (2002), Optimal Progressive Capital Income Taxation in the Infinite Horizon Model, *NBER Working Paper 9046*.
- Straub, L., & Werning, I. (2020). Positive long-run capital taxation: Chamley-Judd revisited. *American Economic Review*, 110(1), 86-119.

**iii. Stochastic fiscal policy**

- Aiyagari, S. R., Marcat, A., Sargent, T. J., & Seppälä, J. (2002). Optimal taxation without state-contingent debt. *Journal of Political Economy*, 110(6), 1220-1254.
- Angeletos, G. M. (2002). Fiscal policy with noncontingent debt and the optimal maturity structure. *The Quarterly Journal of Economics*, 117(3), 1105-1131.
- Chari, V.V., Christiano, L. and P. Kehoe (1994) Optimal fiscal policy in a business cycle model, *Journal of Political Economy* 102, 617–52.
- Lucas, R. and N. Stokey (1983), Optimal Fiscal and Monetary Policy in an Economy without Capital, *Journal of Monetary Economics*, 12, 55–93.
- Buera, F., & Nicolini, J. P. (2004). Optimal maturity of government debt without state contingent bonds. *Journal of Monetary Economics*, 51(3), 531-554.

**iv. Fiscal policy in life-cycle models**

- Atkinson, A. B. (1971), Capital Taxes, the Redistribution of Wealth and Individual Savings, *Review of Economic Studies*, Blackwell Publishing, vol. 38(114), pages 209-227, April.
- Atkinson A. and A. Sandmo (1980), Welfare Implications of the Taxation of Savings, *Economic Journal* 90, 529-549.
- Auerbach, A. J. (1985), The Theory of Excess Burden and Optimal Taxation, *Handbook of Public Economics*, in: A. J. Auerbach & M. Feldstein (ed.), *Handbook of Public Economics*, edition 1, volume 1, chapter 2, pages 61-127 Elsevier (Also available as NBER working paper 1025).
- Erosa, A. and M. Gervais (2002), Optimal Taxation in Life-Cycle Economies, *Journal of Economic Theory* 105, 338-369.
- Conesa, J. C., Sagiri Kitao and Dirk Krueger (2007), Taxing Capital? Not a Bad Idea After All!, *NBER Working Papers 12880*.
- Stiglitz, Joseph E. (1987), Pareto Efficient and Optimal Taxation and the New Welfare Economics, *Handbook of Public Economics*, in: A. J. Auerbach & M. Feldstein (ed.), *Handbook of Public Economics*, edition 1, volume 2, chapter 15, pages 991-1042 Elsevier. (also available as NBER working paper 2189).

**2. Fiscal Policy, Inequality, and Redistribution****i. Optimal taxation with heterogenous agents**

- Aiyagari S. Rao (1995), Optimal Capital Income Taxation with Incomplete Markets, Borrowing Constraints, and Constant Discounting, *Journal of Political Economy* 103 (1995), 1158-1175.
- Aiyagari, S. Rao and Ellen McGrattan (1998), The Optimum Quantity of Debt, *Journal of Monetary Economics*, 42:447-469.
- Bhandari, A., Evans, D., Golosov, M., & Sargent, T. J. (2013). Taxes, debts, and redistributions with aggregate shocks (No. w19470). *National Bureau of Economic Research*.

- Bhandari, A., Evans, D., Golosov, M., & Sargent, T. J. (2017). Fiscal policy and debt management with incomplete markets. *The Quarterly Journal of Economics*, 132(2), 617-663.
- Werning, Iván (2007), Optimal Fiscal Policy with Redistribution, *Quarterly Journal of Economics*.

## ii. Tax progressivity and redistribution

- Boar, C., & Midrigan, V. (2020). Efficient Redistribution (No. w27622). *National Bureau of Economic Research*.
- Heathcote, J., Storesletten, K., & Violante, G. L. (2017). Optimal tax progressivity: An analytical framework. *The Quarterly Journal of Economics*, 132(4), 1693-1754.
- Krueger D. (2006), Public Insurance against Idiosyncratic and Aggregate Risk: The Case of Social Security and Progressive Income Taxation, *CESifo Economic Studies*, Oxford University Press, vol. 52(4), pages 587-620, December.
- Krueger, D., & Ludwig, A. (2016). On the optimal provision of social insurance: Progressive taxation versus education subsidies in general equilibrium. *Journal of Monetary Economics*, 77, 72-98.

## iii. Wealth inequality and taxation

- Benhabib, J., Bisin, A., & Luo, M. (2017). Earnings inequality and other determinants of wealth inequality. *American Economic Review*, 107(5), 593-97.
- Guvenen, F., Kambourov, G., Kuruscu, B., Ocampo-Diaz, S., & Chen, D. (2019). Use it or lose it: Efficiency gains from wealth taxation (No. w26284). *National Bureau of Economic Research*.
- Saez, E., & Zucman, G. (2016). Wealth inequality in the United States since 1913: Evidence from capitalized income tax data. *The Quarterly Journal of Economics*, 131(2), 519-578.

## 3. Fiscal Policy without Commitment

- Chari, V. V., Patrick J. Kehoe, and Edward C. Prescott. (1988). Time consistency and policy. No. 115. *Federal Reserve Bank of Minneapolis*, 1988.
- Chari, Varadarajan V., and Patrick J. Kehoe. Sustainable plans. (1990): *Journal of political economy* 98(4), 783-802.
- Farhi, Emmanuel, Christopher Sleet, Ivan Werning, and Sevin Yeltekin. (2012). Nonlinear capital taxation without commitment. *The Review of Economic Studies*, 79(4), 1469-1493.
- Klein, P., Krusell, P., & Rios-Rull, J. V. (2008). Time-consistent public policy. *The Review of Economic Studies*, 75(3), 789-808.
- Phelan, Christopher, and Ennio Stacchetti. Sequential equilibria in a Ramsey tax model. (2001). *Econometrica*, 69(6), 1491-1518.
- Tran-Xuan, M. (2020) Optimal Redistributive Policy in Debt Constrained Economies. Working Paper.
- Tran-Xuan, M. (2020) Redistribution, Sovereign Debt, and Optimal Taxation. Working Paper.

## Course Website

All relevant course materials, assignments, and exams will be posted on UB Learns (<https://ublearns.buffalo.edu/>). Students are expected to submit their works on UB Learns. Please check the website regularly.

Please do not share course documents and links to others who do not officially register with the course without the instructor's approval. If you receive such requests, please forward it to the instructor.

## Class Policies

Students are encouraged to actively participate in class discussions and respect the instructor and other students. Any student found disturbing the academic environment in the class would be asked to leave. Reentry into the class will be permitted at the discretion of the instructor.

## Academic Integrity

Academic integrity is critical to the learning process. It is your responsibility as a student to complete your work in an honest fashion, upholding the expectations your individual instructors have for you in this regard. The goal is to ensure that you learn the content in your courses in accordance with UB's academic integrity principles, regardless of whether instruction is in-person or remote. Please refer to (<http://grad.buffalo.edu/succeed/current-students/policy-library.a-to-z.html#academic-integrity>) for more details.

Students are expected to have appropriate citation of sources used and acknowledgment of collaboration and help in your work. Failure to abide by such policies will result in a failing grade of the course.

Proper citation is one of the most important aspects of academic writings, and it can be challenging for students who are new to this. UB Library provides useful resources at <https://research.lib.buffalo.edu/citingsources/home>.

Thank you for upholding your own personal integrity and ensuring UB's tradition of academic excellence.

## Accessibility Resources

If you have any disability which requires reasonable accommodations to enable you to participate in this course, please contact the Office of Accessibility Resources in 60 Capen Hall, 716-645-2608 and also the instructor of this course during the first week of class. The office will provide you with information and review appropriate arrangements for reasonable accommodations, which can be found at <http://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html>.

## **Critical Campus Resources**

### **Sexual Violence**

UB is committed to providing a safe learning environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. If you have experienced gender-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), UB has resources to help. This includes academic accommodations, health and counseling services, housing accommodations, helping with legal protective orders, and assistance with reporting the incident to police or other UB officials if you so choose. Please contact UB's Title IX Coordinator at 716-645-2266 for more information. For confidential assistance, you may also contact a Crisis Services Campus Advocate at 716-796-4399.

### **Mental Health**

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You can learn more about these programs and services by contacting:

#### *Counseling Services:*

120 Richmond Quad (North Campus), 716-645-2720

202 Michael Hall (South Campus), 716-829-5800

#### *Health Services:*

Michael Hall (South Campus), 716-829-3316

#### *Health Promotion:*

114 Student Union (North Campus), 716-645-2837



**Tentative Course Schedule**

<b>Week</b>	<b>Topic</b>	<b>Assignment</b>	<b>Deadline/ Date</b>	<b>Learning Outcomes</b>
1	Static taxation			1,2,3
2	Dynamic taxation			1,2,3
3	Stochastic policy			1,2,3
4	Life-cycle models	Referee report 1	February 24	1,2,3
5	Taxation with heterogenous agents			1,2,3
6	Tax progressivity			1,2,3
7	Time-consistent fiscal policy			1,2,3
<b>8</b>	<b>Spring Break</b>			
9	Presentations: Paper 1	Referee report 2	March 28	1,2,3
10	Presentations: Paper 1			1,2,3
11	Presentations: Paper 1			1,2,3
12	Presentations: Paper 2			1,2,3
13	Presentations: Paper 2			1,2,3
14	Presentations: Paper 2, Research Proposals	Research proposal	May 5	1,2,3
15	Presentations: Research proposals			1,2,3