



Department of Economics

Spring 2021

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

Class Time: Tuesday and Thursday, 12:45 PM – 2:00 PM EST

Delivery Mode: Remote, Real-time, and Recorded

Class Location: Zoom Virtual Room, link available on UB Learns

Instructor

Email

Dr. Monica Tran-Xuan

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Legal name: Thu Xuan Anh Tran

Office Location & Hours

Zoom Virtual Room, link available on UB Learns

Tuesday, Thursday 2:00 PM – 3:00 PM EST, or by appointment

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

Policies around Zoom Recordings

This course will be offered remotely. Real-time lectures will be conducted via Zoom, recorded, and posted on UB Learns. Students who are taking this course are encouraged to attend the real-time lectures. Links for real-time lectures will also be posted on UB Learns according to the class schedule. Students may opt-out from identification in the recordings by muting their audio, not enabling video, and not typing into the Chat window.

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

Learning outcomes	Assessment methods
1. Understand basic macroeconomic concepts and models of public finance	Problem set, Referee Report, Presentation
2. Learn the thought process and how to speak the language of frontier research in macroeconomic public finance	Problem set, Referee Report, Presentation
3. Familiarize with basic computational and data tools in macroeconomic public finance	Problem set, Referee Report, Presentation

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. Basic programming skill will be needed in some of the assignments.

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

There will be one problem set, one referee report, and one presentation at the end of the class. Students are responsible for materials covered in lectures and the readings.

Problem set is due at the beginning of the class on the due date. No late assignments are accepted except for special circumstances with official documents (doctor's notes, etc.). Students are encouraged to work together on problem sets, but each student must submit individual solutions and acknowledge whom the students work with on the first page. The solutions should be electronic (using LaTeX and its applications such as Overleaf, Lyx, etc.) in a form of a report. The computational part should be done in a programming language of the student's choice. Tentative problem set schedule:

Assignment	Deadline
Problem set	March 19th

Referee report: Each student is expected to write a referee report on the paper that they will present at the end of the class. The paper should cover topics related to macroeconomic public finance.

The paper's latest version (either working or published) must be dated within the last 10 years. The referee report is due at the beginning of the class on the due date. 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 electronic (Word, LaTeX and its applications such as Overleaf, Lyx, etc.). Tentative referee report schedule:

Assignment	Deadline
Referee report	April 9th

Presentation: Each student is expected to present the paper that they write a referee report on at the end of the class. The presentation should have three parts. The first part covers key research questions, methodologies, and results of the paper. The second part includes the student's comments on the paper's contribution to the literature and problems of the paper. The third part should cover a research idea built upon the paper: what is the new research question? How can you use the paper to answer the question? The presentation schedule will be determined on the second half of the class. Each presentation should last for an hour, and there will be a 15-minute discussion afterwards.

Grading Policy

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

Participation	10%
Problem set	20%
Referee report	30%
Presentation	40%

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

Letter grade	Final total score
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+	50-54
D	45-49
F	00-44

Students have a responsibility to participate in the course evaluation process. For the "Incomplete" grade, please refer to the grading procedure at <http://grad.buffalo.edu/Academics/Policies-Procedures/Grading-Procedures.html>.

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., Marcet, 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.

4. Dynamic Contracts and Social Insurance

i. Limited commitment

- Aguiar, M., Amador, M., & Gopinath, G. (2009). Investment cycles and sovereign debt overhang. *The Review of Economic Studies*, 76(1), 1-31.
- Kehoe, T. J., & Levine, D. K. (1993). Debt-constrained asset markets. *The Review of Economic Studies*, 60(4), 865-888.
- Kocherlakota, N. R. (1996). Implications of efficient risk sharing without commitment. *The Review of Economic Studies*, 63(4), 595-609.
- Thomas, J., & Worrall, T. (1988). Self-enforcing wage contracts. *The Review of Economic Studies*, 55(4), 541-554.

ii. Insurance and incentives

- Atkeson, A., & Lucas Jr, R. E. (1992). On efficient distribution with private information. *The Review of Economic Studies*, 59(3), 427-453.
- Thomas, J., & Worrall, T. (1990). Income fluctuation and asymmetric information: An example of a repeated principal-agent problem. *Journal of Economic Theory*, 51(2), 367-390.

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, links to lectures, office hours, or other course meetings 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. There should be no eating during class times. 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.

Health and Safety Guidelines

While your attendance and participation are essential components of this course, it is critical that you follow public health guidelines. Social Distancing is required when meeting in person to comply with university social distancing policies. Any student exhibiting COVID-19 symptoms should not come to campus to participate in coursework. If you need to miss assignment deadlines due to illness, you must notify the instructor by email as soon as possible and no later than 24-hours after. At that time, you are also expected to make arrangements to complete missed work. In addition, all students must complete the daily mandatory health check at <https://buffalo.edu/health-check>.

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

Week	Topic	Assignment	Deadline/ Date	Learning Outcomes
1	Static taxation			1,2,3
2	Dynamic taxation			1,2,3
3	Stochastic policy			1,2,3
4	Life-cycle models			1,2,3
5	Taxation with heterogenous agents			1,2,3
6	Tax progressivity			1,2,3
7	Wealth taxation	Problem set	Mar 19	1,2,3
8	Time-consistent fiscal policy			1,2,3
9	Limited commitment			1,2,3
10	Insurance and incentives	Referee report	Apr 9	1,2,3
11	Student Presentations	Presentation		1,2,3
12	Student Presentations	Presentation		1,2,3
13	Student Presentations	Presentation		1,2,3
14	Student Presentations	Presentation		1,2,3