

(This version: August 14, 2023)

ECON 440-001 Analysis of Public Finance
University of North Carolina at Chapel Hill
Fall 2023 Syllabus¹

Credit Hours: 3

Prerequisites: ECON 400 and 410 (C or above)

Lectures: T/Th 3:30 - 4:45 PM. In-person in GA309.

Instructor: Dr. Qing Gong (she/her/hers)

Office: Gardner Hall 201

Email: qinggong@email.unc.edu

Office Hours: T/Th 5-6 PM. Sign-up required (link: <https://calendly.com/qgong/prof-gong-office-hours>)
Link for Zoom meetings: <https://unc.zoom.us/j/99173967396>

Course synopsis: In this course, we will study the role of government in the economy. The main goal is to develop a set of tools for analyzing the role the government plays and the impacts of its policies on the lives of its citizens. In particular, we will begin by discussing why government intervention is needed in a market economy; we then examine government expenditures (e.g. social security, education, health care) and government revenues (different types of taxation).

We will cover a wide range of classic topics in public finance, with a focus on current policy issues on the environment, social security, health care, education, taxation, etc. Some examples are:

- What affects people's vaccination decisions? What's the implication on individual and public health? When is it time for the government to intervene?
- What are market failures? Is government intervention the only remedy to market failures?
- What are the popular voting rules? What are the determinants of voter turnout? What does the Median Voter Theorem imply about candidates' platforms in primary vs general elections?
- What is the difference between a fully funded social security system and the pay-as-you-go system? What is the nature of the U.S. social security system?
- Why do people value health insurance? What causes some insurance markets to unravel? What are the twin problems with the U.S. health care system?
- What's the reason for the "marriage penalty" in the U.S. tax system?
- How will government programs like the EITC and stimulus checks affect people's decisions and their economic wellbeing?

Textbook: Jonathan Gruber, *Public Finance and Public Policy* (6th edition). Worth Publishers, 2019. The textbook is *not* required, and the 4th/5th editions are perfectly good substitutes.

Student learning outcomes: The aim of this course is to provide students with the theoretical, quantitative, and empirical tools that are commonly used in the analysis of public finance topics. Equally importantly, students will gain a clear understanding of the prominent public finance policy issues in the US, with a focus on how they affect government revenues, expenditures, and ultimately the welfare of individuals. While the tools and topics learned in this class are motivated by the central questions in public finance, most of them will be applicable to other empirical contexts and more general settings.

¹ The professor reserves the right to make changes to the syllabus, including project due dates and test dates. These changes will be announced as early as possible.

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Essential resources: It is *absolutely essential* that you have regular access to:

- **Canvas:** Announcements, materials, and assignments will all be posted on our Canvas site (<https://uncch.instructure.com/courses/36502>). Please be sure to check the site regularly and/or turn on notifications to get prompt updates.
- **Gradescope:** All homework assignments will be collected, graded, and returned on Gradescope (<https://www.gradescope.com/courses/572312>). The entry code is **V532RV** in case you need it.

Course requirements and grading policy: Your course grade will be based on three problem sets, three exams, and participation. A numeric grade will be calculated based on the weights specified below, and then converted to a letter grade according to the grading scale in the **Class Policies** attached to the end of this syllabus. Grades will not be curved or “rounded up” at the end of the semester.

Problem sets: 24% in total (8% x 3)

The problem sets include problems indicative of those in the exams and will be assigned throughout the semester. Due to the size of the class and limited TA hours, we could not provide lengthy explanations or corrections while grading. Instead, detailed solutions will be posted in a timely fashion, and students are expected to read them carefully.

Exams: 70% in total (your best one gets 30%, the other two 20% each)

- Midterm 1: Thu. 9/21
- Midterm 2: Thu 11/2
- Final exam: Sat 12/9 at 4-7 pm²
- Practice exams from previous years will be provided before each exam.

Participation: 6%.

Participation in the discussions during lectures is an effective way to assess and, more importantly, help with your learning. Participation is evaluated based on attendance, Q&As in class (some of which require completing the required readings before coming to class), as well as contribution to the in-class activities.

Class schedule: Below is a tentative schedule for the semester, with the corresponding chapters in the Gruber textbook (6th edition).

² See Office of the University Registrar: <https://registrar.unc.edu/academic-calendar/final-examination-schedule-fall/>

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Dates	Topic	Chapter in Gruber 6e
<i>Part I. The Economic Basis for Government Activity</i>		
8/22, 8/24	Introduction to Public Finance and Review of Theoretical Tools	1-3
8/29, 8/31	Externalities and Government Intervention	5-6
9/5, 9/7	Public Goods and Free Riding	7
9/12, 9/14	Public Choice and Political Economy	9
9/19	Review and Discussion 1	
9/21	Midterm 1 (75 minutes, in-class, closed-book, closed-notes)	
<i>Part II. Selected Issues of Government Expenditures and Policy in the United States</i>		
9/26, 9/28	Government Expenditures, Fiscal Federalism, and Education	10-11
10/3, 10/5	Social Insurance, Social Security	12-13
10/10, 10/17	Health Insurance and Uninsurance	14-15
10/24, 10/26	Health Care Reform, Income Distribution and Welfare Programs	16-17
10/31	Review and Discussion 2	
11/2	Midterm 2 (75 minutes, in-class, closed-book, closed-notes)	
<i>Part III. Government Revenue, Government Debts & Economics of Taxation</i>		
11/7	Introduction to Taxation	18
11/9, 11/14	Theory of Tax Incidence	19
11/16	Deadweight Loss and Theory of Optimal Taxation	20
11/21, 11/28	Income Taxation: Theory and Application	21
11/30	Other Types of Taxation	22-25
12/5	Review and Discussion 3	
Sat. 12/9, 4-7pm	Midterm 3, aka the Final (180 minutes, closed-book, closed-notes)	

***** Please carefully read the Class Policies at the end of the syllabus ***
Staying enrolled in this class implies your agreement to these policies**

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Class Policies For ECON 440 Analysis of Public Finance Fall 2023

1. Attendance:

University Policy: As stated in the University's [Class Attendance Policy](#), no right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences:

1. Authorized University activities: [University Approved Absence Office \(UAAO\) website](#) provides information and [FAQs for students](#) and [FAQs for faculty](#) related to University Approved Absences
2. Disability/religious observance/pregnancy, as required by law and approved by [Accessibility Resources and Service](#) and/or the [Equal Opportunity and Compliance Office](#) (EOC)
3. Significant health condition and/or personal/family emergency as approved by the [Office of the Dean of Students](#), [Gender Violence Service Coordinators](#), and/or the [Equal Opportunity and Compliance Office](#) (EOC).

2. Problem sets:

- a. **Submission:** Scanned copies of the problem sets must be uploaded to GradeScope before the specified deadline. It is your responsibility to make sure the uploaded file is correct and legible. Please avoid email submissions if at all possible – they are hard to keep track of, hard to grade, and also hard for you to get feedback or request regrades. Late submissions before solutions are posted will receive discounted grades. Submissions after solutions are posted will not be accepted.
- b. **Collaboration:** You may discuss the reading materials and questions in the problem sets with each other; however, each individual must submit a separate problem set (i.e., you need to write/type up your own answers, not copies of others' answers) and each individual will be graded separately on the assignment.
- c. **What to expect from the instructor:** The problem sets are carefully designed to assist with and assess your learning, and there should be sufficient information for you to solve it with the tools we learned in class. Hence, you should not try to get extensive help from me on how to approach the problems before they are due. While I would be happy to answer clarification questions if there is a reasonable amount of ambiguity, you should not ask for hints, instructions, or answers to the questions, or ask me to check your work. I will give hints to the entire class if there is a particularly challenging problem and will discuss common/typical mistakes after grading is done.

3. Exams (midterms and finals):

- a. **Aids during exams:** All exams are closed-book and closed-notes. You may not communicate or cooperate with your peers during the exams. Simple, non-programmable calculators are allowed in the exams; other calculators (including cellphone calculators) are not allowed.
- b. **Missing exams:** Midterms and finals cannot be rescheduled, nor will there be a make-up exam in case you miss one. So please plan your travels, interviews, work schedules etc., accordingly. The weights of the missed midterms are non-negotiable and cannot be switched to the final exam.
- c. **Exceptions:** Exceptions to **4b.** will only be made for University Approved Absences (see **2** above). Students with this type of absence should contact me *before* the exam (if possible) and provide

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appropriate documentation within two business days of the exam.

4. Grading

- a. **The grading scale:** Participation, problem sets, and exams will be given numeric grades; they are weighted to generate a numeric course grade (0-100), which is then converted to a letter grade using the following table:

Numeric score	Letter grade	Grade points	Numeric score	Letter grade	Grade points
[93, 100]	A	4.0	[77, 80)	C+	2.3
[90, 93)	A-	3.7	[73, 77)	C	2.0
[87, 90)	B+	3.3	[70, 73)	C-	1.7
[83, 87)	B	3.0	[67, 70)	D+	1.3
[80, 83)	B-	2.7	[60, 67)	D	1.0
			[0, 60)	F	0

- b. **Regrading requests:** Please submit requests to re-grade a problem set or an exam *in writing on GradeScope* within 7 calendar days after your work is returned. Please (i) read the solution thoroughly before you submit the request and (ii) include a short note explaining why you believe your answer should be re-evaluated. In such a case, I will re-grade the entire problem set or exam, which may result in an increase or a decrease in your grade.
- c. **Extra credit:** There is no extra-credit work for this course, with one exception.³

5. Course material re-distribution is strictly prohibited.

All course materials are only intended for the currently enrolled students. Any form of re-distribution is strictly prohibited.

6. Textbook affordability.

I support the [Textbook Affordability program](#). I suggest that you make textbook purchase decisions *after* attending the first (two) lectures. Older editions of the book are very good substitutes and much more affordable. I've made digital copies of chapters that are particularly important available on the course reserve and have two copies of the textbook (one 6th edition and one 4th edition) on reserve at the Undergraduate Library.

7. Honor Code

All students are expected to follow the guidelines of the UNC Honor Code. In particular, students are expected to refrain from “lying, cheating, or stealing” in the academic context. If you are unsure about which actions violate the Honor Code, please see me or consult studentconduct.unc.edu.

8. Acceptable Use Policy

By attending the University of North Carolina at Chapel Hill, you agree to abide by the University of North Carolina at Chapel Hill policies related to the acceptable use of IT systems and services. The Acceptable Use Policy (AUP) sets the expectation that you will use the University's technology resources responsibly, consistent with the University's mission. In the context of a class, it's quite likely you will participate in online activities that could include personal information about you or your peers, and the AUP addresses your obligations to protect the privacy of class participants. In addition, the AUP addresses matters of others' intellectual property, including copyright. These are only a couple of typical

³ As a reward for reading the syllabus carefully and thoroughly, you will get *0.5 extra point* for sending me an email before 12/9, 4pm EST with your favorite book or movie (author/director, year, and full title).

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examples, so you should consult the full [Information Technology Acceptable Use Policy](#), which covers topics related to using digital resources, such as privacy, confidentiality, and intellectual property.

Additionally, consult the [Safe Computing at UNC](#) website for information about data security policies, updates, and tips on keeping your identity, information, and devices safe.

9. Accessibility Resources and Service

[Accessibility Resources and Service](#) (ARS – ars@unc.edu) receives requests for accommodations, and through the Student and Applicant Accommodations Policy determines eligibility and identifies reasonable accommodations for students with disabilities and/or chronic medical conditions to mitigate or remove the barriers experienced in accessing University courses, programs and activities.

ARS also offers its Testing Center resources to students and instructors to facilitate the implementation of testing accommodations.

Faculty and instructors with any concerns or questions about accommodations and/or their implementation, are invited to [reach out to ARS](#) to discuss.

10. Counseling and Psychological Services

UNC-Chapel Hill is strongly committed to addressing the mental health needs of a diverse student body. The [Heels Care Network](#) website is a place to access the many mental health resources at Carolina. CAPS is the primary mental health provider for students, offering timely access to consultation and connection to clinically appropriate services. Go to their website <https://caps.unc.edu/> or visit their facilities on the third floor of the Campus Health building for an initial evaluation to learn more. Students can also call CAPS 24/7 at 919-966-3658 for immediate assistance.

11. Title IX and Related Resources

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Reports can be made online to the EOC at <https://eoc.unc.edu/report-an-incident/> or by contacting the University's Title IX Coordinator (Elizabeth Hall, titleixcoordinator@unc.edu) or the Report and Response Coordinators in the Equal Opportunity and Compliance Office (reportandresponse@unc.edu). Confidential resources include Counseling and Psychological Services and the Gender Violence Services Coordinators (gvsc@unc.edu). Additional resources are available at safe.unc.edu.

12. Policy on Non-Discrimination

The University is committed to providing an inclusive and welcoming environment for all members of our community and to ensuring that educational and employment decisions are based on individuals' abilities and qualifications. Consistent with this principle and applicable laws, the University's [Policy Statement on Non-Discrimination](#) offers access to its educational programs and activities as well as employment terms and conditions without respect to race, color, gender, national origin, age, religion, genetic information, disability, veteran's status, sexual orientation, gender identity or gender expression. Such a policy ensures that only relevant factors are considered, and that equitable and consistent standards of conduct and performance are applied.

If you are experiencing harassment or discrimination, you can seek assistance and file a report through the Report and Response Coordinators (email reportandresponse@unc.edu or see additional contact info at safe.unc.edu) or the Equal Opportunity and Compliance Office at <https://eoc.unc.edu/report-an-incident/>.

13. Undergraduate Testing Center

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The College of Arts and Sciences provides a secure, proctored environment in which exams can be taken. The center works with instructors to proctor exams for their undergraduate students who are not registered with ARS and who do not need testing accommodations as provided by ARS. In other words, the Center provides a proctored testing environment for students who are unable to take an exam at the normally scheduled time (with pre-arrangement by your instructor). For more information, visit <http://testingcenter.web.unc.edu/>.

14. Learning Center

Want to get the most out of this course or others this semester? Visit UNC's Learning Center at <http://learningcenter.unc.edu> to make an appointment or register for an event. Their free, popular programs will help you optimize your academic performance. Try academic coaching, peer tutoring, STEM support, ADHD/LD services, workshops and study camps, or review tips and tools available on the website.

15. Writing Center

For free feedback on any course writing projects, check out UNC's Writing Center. Writing Center coaches can assist with any writing project, including multimedia projects and application essays, at any stage of the writing process. You don't even need a draft to come visit. To schedule a 45-minute appointment, review quick tips, or request written feedback online, visit <http://writingcenter.unc.edu>.