

HEALTH ECONOMICS
ECON 450/001
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
FALL 2021 SYLLABUS¹

LOGISTICS

Instructor: Andrés Hincapié
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Gardner 101

Department: Economics
Credit Hours: 3.0

Lectures:
T/Th 2:00-3:15 PM
Phillips - Rm 0265

Class site:
<https://sakai.unc.edu/portal/site/econ450.fa21>

Office Hours:
Monday 4:30-6:30 PM
Confirm attendance via email
ZOOM meeting is also possible at:
<https://unc.zoom.us/j/96761325760?pwd=SWRSLzZJaFA4e1V3aTV4YkxHTjFWUT09>
Passcode: he21falloh
(If this time does not work for you email me and we will find a time.)

Prerequisites:
ECON 400 and 410, a grade of C or better in both courses is required.
Permission of the instructor for students lacking the prerequisites.

Textbook:
Bhattacharya, Jay, Timothy Hyde, and Peter Tu. *Health Economics*. Palgrave Macmillan, 2014.

COURSE DESCRIPTION

Health and health care are often contentious topics of discussion. The attention the public pays to the topic is not misplaced. National health care expenditures as a percent of the GDP have been growing over the last 50 years but the U.S. ranks low among developed nations in public health measures such as life-expectancy and infant mortality.

In this class we will study the market for health and health care focusing on basic economic concepts to understand the choices of agents in these markets as well as interactions between agents (consumers, firms, and the government). The course **largely relies on mathematical, economic models** to develop the fundamental ideas in health economics; hence, students are expected to be familiar with multivariate calculus and intermediate microeconomics. The course is specially aimed at Economics undergrads but students from other fields with some background in economics and mathematics should also benefit from taking the course. Students should expect to learn the main features of health care markets.

¹This version was compiled on November 1, 2021. I will notify you of any updates to the syllabus.

The course will generally follow the textbook with added materials from the academic literature. The slides will be fairly self-contained but reading the textbook will help you understand concepts even further.

COURSE GOALS AND KEY LEARNING OBJECTIVES

The course aims for students to:

- become familiar with basic national trends describing health and the healthcare sector as well as empirical results describing demand for healthcare.
- understand the Grossman model of health production and its implications.
- know some of the hypotheses explaining health disparities across socio-economics groups and to be able to analyze them in the context of an economic model.
- understand economic arguments explaining unhealthy behaviors.
- know basic characteristics of the market for physicians and to have a basic understanding of the role hospitals play in the supply of healthcare.
- understand the concept of insurance and why individuals demand it.
- understand and distinguish the concepts of adverse selection and moral hazard, and to be able to identify health-related situations in which they might emerge.
- become familiar with the role of innovation and technology in healthcare markets.
- understand common issues associated with designing health policies.
- recognize the main approaches to healthcare provision adopted by nations around the world and their main motivations and obstacles.
- have a basic understanding of different econometric methods that economists use to study health and healthcare.

GRADING

You have two alternatives to choose from depending on whether or not you want part of your grade to depend on participation. I will send a poll for this during the first week. **If you do not choose an alternative the default is no participation (Alternative B)** so that students asked to actively participate are the ones who selected to do so. If you join the course after the poll is finished and you would like to be in alternative A please notify me via email. Otherwise you will be allocated to alternative B.

Alternative A:

- Midterm (x2): 15%
- Final: 24%
- Problem sets (x3): 30%
- Participation: 8%
- Student presentations: 8%

Alternative B:

- Midterm (x2): 19%
- Final: 24%
- Problem sets (x3): 30%
- Participation: 0%
- Student presentations: 8%

- If you choose **Alternative A** you are agreeing on being asked questions regarding the content of the class during the class. If you are asked a question it does not mean you will be penalized if your answer is not fully correct. Instead, what I expect is that you pay attention and that you provide the class with the thought process that led to your answer. Class participation is a way to foster engagement and explore different ways of thinking about the economic concepts. In that sense, errors are welcome as an essential part of the learning process. If reading of a specific academic paper is required for a discussion I will make sure to notify you in a timely fashion.
- Groups of at most two people may work together in their problem sets and turn in one single set of solutions. Solutions to the problem sets will be made available in a timely fashion to allow for exam preparation.
- Student presentations will be done by groups selected by the students themselves. Students can propose their own topic or select from a number of academic papers provided by the instructor. The number of members in the group, as well as the time allocated for each presentation, will depend on the number of students in the class.
- All exams are open book but closed electronic devices. The **final exam** is cumulative. Anything discussed in class can enter in the exams unless stated otherwise, even if it was not part of a problem set. For exams and problem sets students will get numeric grades on a 100 point base. For those opting into **Alternative A**, at the end of the semester your participation will be deemed as “null,” “low,” “medium,” or “high,” which corresponds to scores 0, 70, 85, 100. At the end of the semester, final numerical grades will be approximated to their closets integer and converted back to letter grades when reported to the system using the following conversion table:²

²I generally do not curve grades.

Letter Grade	Lower Limit	Upper Limit
A	95	100
A-	90	94
B+	87	89
B	83	86
B-	80	82
C+	77	79
C	73	76
C-	70	72
D+	65	69
D	60	64
F	0	59

- *Skip card.* Students are allowed to skip at most one of the midterms (MT1 or MT2) and allocate that percentage to the **final** without providing any excuses. If a student would like to use this feature they have to send me their request via email at the latest an hour prior to the time of the midterm they would like to skip.
- Inquiries regarding re-grades are allowed only within a week of receiving your grade. Due to time limitations to report final grades, requests for regrading the final exam are not allowed.

POLICIES AND EXPECTATIONS

Attendance. Following university policy: No right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences: Authorized University activities; disability/religious observance/pregnancy, as required by law and approved by Accessibility Resources and Service and/or the Equal Opportunity and Compliance Office (EOC); 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 EOC. Instructors may work with students to meet attendance needs that do not fall within University approved absences.

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 that honor code, please consult honor.unc.edu.

Class Conduct. During class and office hours you shall refer to your fellow students and to your instructor with respect and civility—hopefully this applies throughout your life in general. No discriminatory language or behavior will be allowed in the class. I only answer unprofessional emails every sixth Friday of each month. So to increase your likelihood of me replying you should avoid improper treatment such as overly casual salutation words (e.g. “Buddy,” “Yo,” “Dude”).

Mask Use. This semester, while we are in the midst of a global pandemic, all enrolled students are required to wear a mask covering your mouth and nose at all times in our

classroom. This requirement is to protect our educational community — your classmates and me – as we learn together. If you choose not to wear a mask, or wear it improperly, I will ask you to leave immediately, and I will submit a report to the Office of Student Conduct. At that point you will be disenrolled from this course for the protection of our educational community. Students who have an authorized accommodation from Accessibility Resources and Service have an exception. For additional information, visit Carolina Together.

Accessibility Resources and Services. UNC facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in barriers to fully accessing University courses, programs and activities. Accommodations are determined through the Office of Accessibility Resources and Service (ARS) for individuals with documented qualifying disabilities in accordance with applicable state and federal laws. See the ARS Website for contact information: <https://ars.unc.edu> or email ars@unc.edu.

Counseling and Psychological Services (CAPS). CAPS is strongly committed to addressing the mental health needs of a diverse student body through timely access to consultation and connection to clinically appropriate services, whether for short or long-term needs. Go to their website: <https://caps.unc.edu/> or visit their facilities on the third floor of the Campus Health Services building for a walk-in evaluation to learn more.

Title IX 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/>. Please contact the University’s Title IX Coordinator (Elizabeth Hall, interim – titleixcoordinator@unc.edu), Report and Response Coordinators in the Equal Opportunity and Compliance Office (reportandresponse@unc.edu), Counseling and Psychological Services (confidential), or the Gender Violence Services Coordinators (gvsc@unc.edu; confidential) to discuss your specific needs. Additional resources are available at safe.unc.edu.

OTHER RESOURCES

The academic papers in the “Reading” column of the schedule will be posted in “Reserves” on Sakai. If you ever need assistance from a librarian, Nancy Lovas is the economics librarian. She is available to work with you on your research if you were to need it. You can email or meet with her to talk about developing a research question, identifying databases, how to search for information, literature reviews, finding datasets, and more. You can make an appointment with Nancy at <https://calendar.lib.unc.edu/appointments/business> or contact her via email at nancy64@email.unc.edu.

Tentative Schedule - Fall 2021

Week	Day	Date	Unit	Topic	Suggested Readings	Comments
1	Th	8/19	Intro	Intro	Ch 1*, Cutler, Rosen, and Vijan (2006), Fuchs (2012)*	
2	Tu	8/24	Demand	Demand for health care	Ch 2*, Finkelstein et al. (2012), Keeler et al. (1988) (Summary)	
2	Th	8/26	Demand	Grossman model	Ch 3*, Grossman (1972)	
3	Tu	8/31	Demand	Grossman model	Kim and Ruhm (2012)	
3	Th	9/2	Demand	Health disparities	Ch 4*, Roseboom et al. (2001), Galama and van Kippersluis (2013)	HW1 S1 Posted
4	Tu	9/7	Demand	Health "bads"	Becker, Grossman, and Murphy (1994), Leibenstein (1950)	HW1 S1 Due
4	Th	9/9	Demand	Health "bads"	Becker and Murphy (1988), Gilleskie and Strumpf (2005), Leibenstein (1950)	HW1 S2 Posted
5	Tu	9/14	Supply	Supply of health care 1	Ch 5*, Schulman et al. (1999), Chan and Dickstein (2017)	HW1 S2 Due
5	Th	9/16	Supply	Supply of health care 2	Ch 6*, Gaynor, Mostashari, and Ginsburg (2017), Gong (2018)	HW1 S3 Posted
6	Tu	9/21	Review	Review session for MT 1		HW1 S3 Due
6	Th	9/23	EXAM	MIDTERM 1		
7	Tu	9/28	Information	Demand for insurance	Ch 7*	
7	Th	9/30	Information	Demand for insurance	Ch 7*	HW2 S1 Posted
8	Tu	10/5	Information	Demand for insurance	Ch 7*	HW2 S1 Due
8	Th	10/7	Information	Adverse selection	Ch 8*, Akerlof (1970)	
9	Tu	10/12	NO CLASS			HW2 S2 Posted, University Day
9	Th	10/14	Information	Adverse selection	Ch 9*	
10	Tu	10/19	Information	Adverse selection	Ch 9*, Ch 10*	HW2 S2 Due, HW2 S3 Posted
10	Th	10/21	NO CLASS			Fall Break
11	Tu	10/26	Review	Review session for MT 2		HW2 S3 Due
11	Th	10/28	EXAM	MIDTERM 2		
12	Tu	11/2	Information	Moral hazard	Ch 11*	
12	Th	11/4	Innovation	Health technology assessment	Ch 14*	Presentation rules, HW3 S1 Posted
13	Tu	11/9	Innovation	Demand under innovation	Hamilton et al. (2021)*, Papageorge (2016)	HW3 S1 Due
13	Th	11/11	Health Policy	Beveridge and Bismark models	Ch 15*, Ch 16*, Ch 17*, Ringard (2012), Or et al. (2010), Ringard (2012)	HW3 S2 Posted
14	Tu	11/16	Health Policy	American model	Ch 18*	
14	Th	11/18		Student Presentations		HW3 S2 Due
15	Tu	11/23		Student Presentations		
15	Th	11/25	NO CLASS			Thanksgiving Break
16	Tu	11/30	Review	Review session for FINAL		
Finals	Tu	12/7	EXAM	12:00-3:00PM		

Notes: The class schedule is subject to changes depending on how the class develops. Readings marked with a star are the most relevant for the class. Other readings are suggested.

References

- Akerlof, George A. 1970. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism." *The Quarterly Journal of Economics* 84 (3):488–500.
- Becker, Gary S., Michael Grossman, and Kevin M. Murphy. 1994. "An Empirical Analysis of Cigarette Addiction." *The American Economic Review* 84 (3):396–418.
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- Chan, David C. and Michael J. Dickstein. 2017. "Price-setting by Committee: Evidence from Medicare." Mimeo, Stanford and NYU.
- Cutler, David, Allison B. Rosen, and Sandeep Vijan. 2006. "The Value of Medical Spending in the United States, 1960-2000." *The New England Journal of Medicine* 355 (9):920–927.
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- Fuchs, Victor R. 2012. "Major Trends in the U.S. Health Economy since 1950." *The New England Journal of Medicine* 366 (11):973–977.
- Galama, Titus J. and Hans van Kippersluis. 2013. "Health Inequalities through the Lens of Health Capital Theory: Issues, Solutions, and Future Directions." *Res Econ Inequal.* 21:263–284.
- Gaynor, Martin, Farzad Mostashari, and Paul B. Ginsburg. 2017. "Making Health Care Markets Work: Competition Policy for Health Care." *JAMA* 317 (13):1313–1314.
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- Gong, Qing. 2018. "Physician Learning and Treatment Choices: Evidence from Brain Aneurysms." Working Paper, University of North Carolina at Chapel Hill.
- Grossman, Michael. 1972. "On the Concept of Health Capital and the Demand for Health." *The Journal of Political Economy* 80 (2):223–255.
- Hamilton, Barton, Andrés Hincapié, Robert Miller, and Nicholas Papageorge. 2021. "Innovation and Diffusion of Medical Treatment." *International Economic Review* 62 (3):953–1009.
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- Kim, Beomsoo and Christopher J. Ruhm. 2012. "Inheritances, Health and Death." *Health Economics* 21 (3):127–144.
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- Papageorge, Nicholas W. 2016. "Why Medical Innovation is Valuable: Health, Human Capital, and the Labor Market." *Quantitative Economics* 7 (3):671–725.
- Ringard, Ånen. 2012. "Equitable access to elective hospital services: The introduction of patient choice in a decentralised healthcare system." *Scandinavian Journal of Public Health* 40:10–17.
- Roseboom, Tessa J., Jan H.P. van der Meulen, Anita C.J. Ravelli, Clive Osmond, David J.P. Barker, and Otto P. Bleker. 2001. "Effects of Prenatal Exposure to the Dutch Famine on Adult Disease in Later Life: an Overview." *Molecular and Cellular Endocrinology* 185:93–98.
- Schulman, Kevin, Jesse Berlin, William Harless, Jon F. Kerner, Shyrl Sistrunk, Bernards J. Gersh, Ross Dubé, Christopher K. Taleghani, Jennifer E. Burke, Sankey Williams, John Eisenberg, and José J. Escarce. 1999. "The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization." *The New England Journal of Medicine* 340 (8):618–626.