

HEALTH ECONOMICS
ECON 450/001,002
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
FALL 2022 SYLLABUS¹

LOGISTICS

Instructor: Andrés Hincapié
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Gardner 101

Department: Economics
Credit Hours: 3.0

Lectures:

Section 1:
T/Th 3:30-4:45 PM
Gardner 007

Section 2:
T/Th 11:00-12:15 PM
Gardner 309

Class site:
<https://sakai.unc.edu/portal/site/econ450.fa22>

Office Hours:
Mondays 4:30-6:00
*****You must confirm attendance via email before the start of office hours*****
ZOOM meeting is also possible at:
<https://unc.zoom.us/j/94040874121?pwd=amEzQ1F0VThSS0h1aEt40WFZNFRGZz09>
Passcode: he22falloh
(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

¹This version was compiled on August 11, 2022. I will notify you of any updates to the syllabus.

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.

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 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 be able to identify health-related environments where 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 various 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 upload a question to Gradescope for this during the first week. **If you do not choose an alternative the default is no participation (Alternative B)**. Hence, students asked to actively participate are the ones who selected to do so. If you join the course after the deadline for answering the question has passed, 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%

- *Participation.* If you choose **Alternative A** you are agreeing to being randomly selected to provide your answer to various questions I ask during class. This means you do need to be present whenever I happen to draw your name for a question. There is no penalty for answers that are not correct. Instead, I hope you realize and embrace the fact that we all learn a little from making mistakes in class (and also in life!). Class participation will help us remain engaged and explore different ways of thinking about the economic concepts. If reading of a specific academic paper is required for a discussion I will make sure to notify you in a timely fashion.
- *Problem set groups.* 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 due time to allow for exam preparation.
- *Presentations.* You will choose your own group. The group 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 allotted for each presentation, will depend on the number of students in the class.
- *Exams.* All exams are open book and no electronic devices are allowed. 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, and which depends on the number of times you were asked a question and were not present to provide an answer. 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:

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.* You are allowed to skip at most one of the midterms (MT1 or MT2) and allocate that percentage to the **final**. You do not need to provide an excuse, you only need to send me your request via email at the latest 12 hours prior to the date of the midterm you would like to skip.
- *Re-grading.* 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

Class Conduct. During class and office hours (and hopefully in your life in general!) I expect we all communicate with respect and civility. I am not a huge fan of discriminatory language so such behavior will be allowed in the class.

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.

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.

Mask Use. (Just in case) If we somehow find ourselves again in the midst of a mask mandate (**I really hope we don't have to go back to this :/**) all enrolled students will be required to wear a mask covering mouth and nose at all times in our classroom. If you choose not to wear a mask, or wear it improperly, I will have to ask you to leave the classroom.

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 2022

Week	Day	Date	Unit	Topic	Suggested Readings	Comments
1	Tu	8/16	Intro	Intro	Ch 1*, Cutler, Rosen, and Vijan (2006), Fuchs (2012)*	
1	Th	8/18	Demand	Demand for health care	Ch 2*, Finkelstein et al. (2012), Keeler et al. (1988) (Summary)	
2	Tu	8/23	Demand	Grossman model	Ch 3*, Grossman (1972)	HW1 S1 Posted
2	Th	8/25	Demand	Grossman model	Kim and Ruhm (2012)	
3	Tu	8/30	Demand	Health disparities	Ch 4*, Roseboom et al. (2001), Galama and van Kippersluis (2013)	HW1 S1 Due
3	Th	9/1	Demand	Health "bads"	Becker, Grossman, and Murphy (1994), Leibenstein (1950)	
4	Tu	9/6	NO CLASS			Wellness day
4	Th	9/8	Demand	Health "bads"	Becker and Murphy (1988), Gilleskie and Strumpf (2005), Leibenstein (1950)	HW1 S2 Posted
5	Tu	9/13	Supply	Supply of health care 1	Ch 5*, Schulman et al. (1999), Chan and Dickstein (2017)	HW1 S2 Due
5	Th	9/15	Supply	Supply of health care 2	Ch 6*, Gaynor, Mostashari, and Ginsburg (2017), Gong (2018)	HW1 S3 Posted
6	Tu	9/20	Review	Review session for MT 1		HW1 S3 Due
6	Th	9/22	EXAM	MIDTERM 1		
7	Tu	9/27	Information	Demand for insurance	Ch 7*	
7	Th	9/29	Information	Demand for insurance	Ch 7*	HW2 S1 Posted
8	Tu	10/4	Information	Adverse selection	Ch 8*, Akerlof (1970)	HW2 S1 Due
8	Th	10/6	Information	Adverse selection	Ch 9*	HW2 S2 Posted
9	Tu	10/11	Information	Adverse selection	Ch 9*, Ch 10*	
9	Th	10/13	Information	Moral hazard	Ch 11*	HW2 S2 Due, HW2 S3 Posted
10	Tu	10/18	Innovation	Health technology assessment	Ch 14*	HW2 S3 Due
10	Th	10/20	NO CLASS			Fall Break
11	Tu	10/25	Review	Review session for MT 2		
11	Th	10/27	EXAM	MIDTERM 2		
12	Tu	11/1	Innovation	Innovation and Pharmaceuticals	Ch 12*	Presentation rules
12	Th	11/3	Innovation	Demand under innovation	Hamilton et al. (2021)*, Papageorge (2016)	HW3 S1 Posted
13	Tu	11/8	Health Policy	Beveridge and Bismark models	Ch 15*, Ch 16*, Ch 17*, Ringard (2012), Or et al. (2010), Ringard (2012)	HW3 S1 Due
13	Th	11/10	Health Policy	American model	Ch 18*	HW3 S2 Posted
14	Tu	11/15	TBD			
14	Th	11/17		Student Presentations		HW3 S2 Due
15	Tu	11/22		Student Presentations		
15	Th	11/24	NO CLASS			Thanksgiving Break
16	Tu	11/29	Review	Review session for FINAL		
Finals		12/3	EXAM	8:00-11:00PM Section 2		
Finals		12/3	EXAM	4:00-7:00PM Section 1		

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.
- Keeler, Emmett B., Joan L. Buchanan, John E. Rolph, Janet M. Hanley, and David M. Reboussin. 1988. *The Demand for Episodes of Medical Treatment in the Health Insurance Experiment*. Santa Monica, CA: RAND Corporation.
- Kim, Beomsoo and Christopher J. Ruhm. 2012. "Inheritances, Health and Death." *Health Economics* 21 (3):127–144.
- Leibenstein, H. 1950. "Bandwagon, Snob, and Veblen Effects in the Theory of Consumers' Demand." *The Quarterly Journal of Economics* 64 (2):183–207.

- Or, Zeynep, Chantal Cases, Melanie Lisac, Karsten Vrangbaek, Ulrika Winblad, and Gwyn Bevan. 2010. "Are health problems systemic? Politics of access and choice under Beveridge and Bismarck systems." *Health Economics, Policy and Law* 5:269–293.
- 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.