# HEALTH ECONOMICS ECON 450/001,002 UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

## Spring 2021 Syllabus<sup>1</sup>

### LOGISTICS

ZOOM LINK: https://unc.zoom.us/j/99746888413?pwd= SjVFRVpMY2c5dHVxUVBaNzJKTEw4QT09

Passcode: econ450

Instructor: Andrés Hincapié Pronouns: he/him/his andres.hincapie@unc.edu

Gardner 101

TA: Katsu Nishiyama katsu314@live.unc.edu

Department: Economics

Credit Hours: 3.0

Lectures:

Section 1: T/Th 12:30-1:45 PM Section 2: T/Th 2:00-3:15 PM

Class site:

https://sakai.unc.edu/portal/site/econ450.sp21

Links to class recordings will be posted on the site under "Overview".

Office Hours: Th 5:00-6:30 PM.

\*\*\*Confirm attendance via email\*\*\*

https://unc.zoom.us/j/96761325760? pwd=SWRSLzZJaFA4elV3aTV4YkxHTjFWUT09

Passcode: econ450oh

(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 lack-

ing the prerequisites.

Textbook:

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

2014.

#### Course Description

Health and health care continue to be in the spot light. According to a study by the Pew Research Center, health care ranks fourth in terms of issues voters in 2016 considered "very important." Public attention on the topic is not misplaced. National health care

<sup>&</sup>lt;sup>1</sup>This version was compiled on March 31, 2021. I will notify you of any updates to the syllabus.

 $<sup>^2</sup>$ See http://www.people-press.org/2016/07/07/4-top-voting-issues-in-2016-election/ Health care ranks fourth after "the economy," "terrorism," and "foreign policy."

expenditures as a percent of the GDP have been growing over the last 50 years but we rank low among develop 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 drawing from basic economic concepts to understand the choices of consumers and firms, as well as interactions between consumers, firms, and the government. The course is specially aimed at Economics undergrads. However, students from other social sciences with some background in basic economics and mathematics should also benefit from taking the course. Enrolled students should expect to learn the main features of health care markets, including the economic interactions from which it emerges.

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. Below is the tentative class schedule and a list that introduces some of the relevant readings.

#### Course Goals and Key Learning Objectives

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

#### Alternative A:

Alternative B:

• Midterm (x2): 15%

• Midterm (x2): 20%

• Final: 25%

• Final: 25%

• Problem sets (x3): 9% each

• Problem sets (x3): 9% each

• Participation: 10%

• Participation: 0%

• Student presentations: 8%

• Student presentations: 8%

• If you choose **Alternative A** you are agreeing on being asked questions discussing the content of the class during the class. Notice that if you are asked a question it does not mean that you have to provide a correct answer, I'm more looking for what is your thought process. In that sense errors are welcome as they help us learn.<sup>3</sup>

In general, class participation is a way to foster engagement in class discussions. If reading of a specific academic paper is required for a discussion I will make sure to notify you in a timely fashion.<sup>4</sup>

- Problem sets will be posted at least a week before they are due and solutions will be made available in a timely fashion to allow for exam preparation (see schedule below).
   Groups of at most two people may work together in their problem sets and turn in one single set of solutions.
- Student presentations will be done by groups selected by the students themselves.
   Students will propose the topics and the instructor will approve them. 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.
- Requests for re-grades can be submitted only within a week of receiving your grade. Requests for regrading the final exam are not 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

<sup>&</sup>lt;sup>3</sup>In previous years this was not optional. This year you can choose if you want to be called upon or not. <sup>4</sup>Some of the research articles listed will be fairly advanced for many of you. Hence, I do not expect you to understand all the mathematics and econometrics of the paper, if there are any. Instead, I expect you to be able to read the intro of the paper and glance through the other sections to be able to capture the main ideas of the paper: What is the research question? How is it related to health economics? What's their economic argument? What is the authors' answer? How do they reach that answer? And finally, make sure you build your own opinion regarding whether or not you find the paper compelling or relevant.

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. I do not curve grades. 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
В	83	86
В-	80	82
C+	77	79
$\mathbf{C}$	73	76
C-	70	72
D+	65	69
D	60	64
$\mathbf{F}$	0	59

#### POLICIES AND EXPECTATIONS

Students with university-approved absences may request a make-up examination at a time convenient to both student and instructor.<sup>5</sup> I do not provide extra-credit activities to specific students to "boost" their grade. Hence, your best strategy is to work hard in every assignment and exam.

You are expected to be honest and honorable in your fulfillment of course conduct, course assignments, and course exams. Adherence to the honor code is required.<sup>6</sup> 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.

Finally, due to prior experiences, I avoid answering emails that are written in an unprofessional manner. For reference, here is an acceptable structure for a professional email:

Dear (or other salutation word) Dr. Hincapié,

Content.

Best (or other ending words),

<sup>&</sup>lt;sup>5</sup>See http://catalog.unc.edu/policies-procedures/attendance-grading-examination/

<sup>&</sup>lt;sup>6</sup>See https://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf

#### Héctor Lavoe

Alternative proper salutation words include: "Good morning," "Good afternoon," "Good evening," "Hello," "Hi." Improper salutation words include: "Hey," "Buddy," "Yo," "Dude." In general, just use your common sense to avoid coming across in a disrespectful fashion.

#### 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 - Spring 2021

Week	Day	Date	Unit	Topic	Readings	Comments
1	Т	1/19	Intro	Intro	Ch 1*, Cutler, Rosen, and Vijan (2006), Fuchs (2012)*	
1	TH	1/21	Demand	Demand for health care	Ch 2*, Finkelstein et al. (2012)*, Keeler et al. (1988) (Summary)	
2	Т	1/26	Demand	Grossman model	Ch 3*, Grossman (1972)*	
2	TH	1/28	Demand	Grossman model	Kim and Ruhm (2012)*	
3	Т	2/2	Demand	Health disparities	Ch 4*, Roseboom et al. (2001), Galama and van Kippersluis (2013)*	
3	TH	$^{'}_{2/4}$	Demand	Health "bads"	Becker, Grossman, and Murphy (1994), Leibenstein (1950)	
4	Т	2/9	Demand	Health "bads"	Becker and Murphy (1988)*, Gilleskie and Strumpf (2005)*, Leibenstein (1950)	PS1 Posted
4	$\mathrm{TH}$	2/11	Demand	Health "bads"	Becker and Murphy (1988)*, Gilleskie and Strumpf (2005)*, Leibenstein (1950)	
5	Т	2/16	NO CLASS		Wellness day	
5	TH	2/18	NO CLASS		Class canceled	
6	Т	2/23	Supply	Supply of health care 1	Ch 5*, Schulman et al. (1999), Chan and Dickstein (2017)*	
6	TH	2/25	Review	Review session for MT 1		PS1 Due
7	Т	3/2	EXAM	MIDTERM 1		
7	TH	3/4	Information	Demand for insurance	Ch 7*	
	T	3/9	Information	Demand for insurance	Ch 7*	
8	TH	3/11	NO CLASS		Wellness day	
9	Т	3/16	Information	Adverse selection	Ch 8*, Akerlof (1970)	
9	TH	3/18	Information	Adverse selection	Ch 9*	PS2 Posted
10	Т	3/23	Information	Adverse selection	Ch 9*	
10	TH	3/25	Information	Adverse selection	Ch $10^*$ , Cardon and Hendel $(2001)^*$	
11	Т	3/30	Information	Moral hazard	Ch 11*	
11	TH	4/1	Innovation	Health technology assessment	Ch 14 <sup>⋆</sup>	PS2 Due
12	Т	4/6	Review	Review session for MT 2		Presentation rules
12	TH	4/8	$\mathbf{EXAM}$	MIDTERM 2		
13	Т	4/13	Innovation	Demand under innovation	Hamilton et al. (2020)*, Papageorge (2016)	
13	TH	4/15	Health Policy	Beveridge and Bismark models	Ch 15*, Ch 16*, Ch 17*, Ringard (2012)*, Or et al. (2010)*, Ringard (2012)*	
14	Т	4/20	Health Policy	American model	Ch 18*	PS3 Posted
14	TH	4/22	Other	Economic Epidemiology	Ch 21*	
15	Т	4/27		Student Presentations		
15	TH	4/29		Student Presentations		
16	Т	5/4	Review	Review session for FINAL		PS3 Due
Finals	Т	5/11	EXAM	12:00-3:00PM, Section 1		
Finals	$\mathrm{TH}$	5/13	$\mathbf{EXAM}$	12:00-3:00PM, Section 2		
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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.
- Becker, Gary S. and Kevin M. Murphy. 1988. "A Theory of Rational Addiction." *The Journal of Political Economy* 96 (4):675–700.
- Cardon, James H. and Igal Hendel. 2001. "Asymmetric Information in Health Insurance: Evidence from the National Medical Expenditure Survey." The RAND Journal of Economics 2 (3):408–427.
- Chan, David C. and Michael J. Dickstein. 2017. "Price-setting by Committee: Evidence from Medicare." Mimeo, Standford 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.
- Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and Oregon Health Study Group. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." The Quarterly Journal of Economics 127 (3):1057–1106.
- 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.
- Garber, Alan M. and Jonathan Skinner. 2008. "Is American Health Care Uniquely Inefficient?" The Journal of Economic Perspectives 22 (4):27–50.
- Gaynor, Martin, Farzad Mostashari, and Paul B. Ginsburg. 2017. "Making Health Care Markets Work: Competition Policy for Health Care." *JAMA* 317 (13):1313–1314.
- Gilleskie, Donna B. and Koleman S. Strumpf. 2005. "The Behavioral Dynamics of Youth Smoking." The Journal of Human Resources XL (4):822–866.
- 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. 2020. "Innovation and Diffusion of Medical Treatment." WP.
- 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.
- Kyle, Margaret and Heidi L. Williams. 2017. "Is American Health Care Uniquely Inefficient? Evidence from Prescription Drugs." Working paper, NBER.
- Leibenstein, H. 1950. "Bandwagon, Snob, and Veblen Effects in the Theory of Consumers' Demand." The Quarterly Journal of Economics 64 (2):183–207.
- Maini, Luca and Fabio Pammolli. 2019. "Reference Pricing as a Deterrent to Entry: Evidence from the European Pharmaceutical Market." Working Paper, University of North Carolina at Chapel Hill.
- 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.