Applied Health Economics and Health Policy

Department: Fudan International Summer Session 2023

Course Code	PHPM170001		
Course Title	Applied Health Economics and Health Policy		
Credit	2	**Credit Hours**	36+3 tutorial hours (one credit hour is 45 minutes)
Course Nature	□Specific General Education Courses □Core Courses ■General Education Elective Courses □Basic Courses in General Discipline □Professional Compulsory Courses □Professional Elective Courses □Others		
Course Objectives	By the end of this semester, students are expected to: (1) have a firm understanding in the importance and limitations of various econometric models when solving health economics issues; (2) be able to correctly interpret results from various models and critically evaluate them; (3) gain a unique interdisciplinary perspective; (4) be able to keep on exploring the health economics and econometric fields.		
Course Description	Health economics is an active and growing field that concerns the production and consumption of health and health care. Theoretical and empirical findings by health economists have guided government decision making about resource allocation and health policies. It is critical that professional across the entire health sector to understand the economics and the empirical evidence about how the healthcare market functions. The goal of the course is two folded. One is to enhance students' understanding of the key economic concepts and theoretical models that are widely used to analyze heath economic issues. For instance, social-economic determinants of health and health behavior, demand and utilization of health services, impacts of policies or regulations on the behavior of hospitals and physicians, etc. The second is to provide students with the basic ability to evaluate and interpret empirical findings from popular econometric methods. For instance, interrupted time series, difference-in-differences, regression discontinuity, instrumental variable techniques, etc. Reflecting the increased interest in global health, this course takes a global view in the sense that the analysis is not country-specific, but applies to countries all over the world. Excerpts of published research from China, the US, and other major developing regions will be involved in the discussion.		

Course Requirements (Pre-requisites):

Have some basic knowledge in statistics. For instance, knowing the concept of probability density, mean, standard deviations, and etc.

Teaching Methods:

Lectures + discussions

Instructor's Academic Background:

Dr. Qian is an associate professor at the School of Public Health, Fudan University. She now serves as an adjunct faculty at Duke Kunshan University in Fall 2022. Dr. Qian earned her Ph.D. in Economics from Lehigh University (US) in 2015. Her research areas are health economics and applied econometrics. Her recent research focuses on non-price determinants of health behaviors, patient and provider responses to incentives, and the impact of telemedicine on health care. Portions of her first-authored articles have been published in well-known economics and public health journals, such as *Journal of Health Economics*, *Social Science & Medicine*, and *Preventive Medicine*.

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Course Schedule:

Session (3 credits)	Topic	Learning objective
1	Course overview	(1) Introduction to the course (2) The scope of health economics
2	Basics of Econometrics	(1) OLS estimator and the sampling properties (2) Coefficient interpretation (3) Fixed effects and interaction
3	Empirical challenges with observational data	(1) Omitted variable bias (2) Introduction to popular health policy evaluation tools.
4	Demand for Health	(1) The Grossman model (2) Instrumental techniques (3) Education and health outcome
5	Demand for	(1) Regression discontinuity design

	Healthcare services	(2) Insurance policy, healthcare utilization and health outcome
6	Demand for insurance	(1) Adverse selection (2) Moral hazard
7	The physician market	(1) Physician responses to financial and non-financial incentives (2) Difference-in-differences method (3) The impact of telemedicine
8	The hospital market	(1) Measures and impacts of hospital competition (2) Hospital integration (3) Waiting time and hospital efficiency
9	Pharmaceutical firms	(1) The economics of innovation (2) Regulations of the pharmaceutical industry
10	Health policy evaluation	(1) Evaluation and comparison of international health care systems (2) Payment models and reforms
11	China's health system reform	(1) China's health system reform overview: Theory and evidence
12	Final presentation	(1) Student presentation (2) peer evaluation

The design of class discussion or exercise, practice, experience and so on:

Students are expected to attend all lectures and get familiar with required readings.

There will be a total of 3 problem set (PS) each week (except for the last one) with 2-3 short answer questions regarding the most important message from the lecture. Each PS accounts for 20% of the final grade. Students may work cooperatively. However, each student must turn in his or her own answers using his or her own words. Late assignments will not be accepted.

As the final project, students are also expected to choose an empirical and health-oriented article from the Journal of Health Economics for an oral presentation at the end of the semester. Students are encouraged to browse through all issues and select the paper that interests them most. The purpose of the in-class presentation is twofold: (1) providing students an opportunity to apply what have learned in the lecture to critical evaluation on results; (2) acquainting the students with some of the current literature in the health economics field. During the presentation, students are the instructor and thus have the responsibility to help the class understand the paper as they do. The structure of the presentation should include motivation (introduction), research

question, empirical strategy, results, discussion and conclusions, and comments.

Grading & Evaluation:

Grading policy: (1) attendance 10%; (2) problem sets 60% (3 @ 20 points each); (3) Final presentation 30%

Final grades will be curved. Grade A will be assigned to students who ranked above the top 30th percentile.

Teaching Materials & References (Including Author, Title, Publisher and Publishing time):

Students can use slides and handouts as the core learning materials. Illustration cases and discussions will be extended from the reading list below:

Cutler DM, and Lleras-Muney A. 2010. "Understanding differences in Health Behaviors by Education." Journal of Health Economics, 29: 1-28. (Cutler, 2010)

Qian M, Chou SY, and Lai E. 2020 "Confirmatory bias in Health Decisions: Evidence from the MMR-autism controversy." Journal of Health Economics, 70: 102284. (Qian, 2020)

Ma M. 2019. "Does children's education matter for parents' health and cognition? Evidence from China." Journal of Health Economics, 66: 222-240. (Ma, 2019)

Cawley J, and Meyerhoefer C. 2012. "The medical care costs of obesity: An instrumental variables approach." Journal of Health Economics, 31(1): 219-230. (Cawley, 2012)

Luigi Siciliani, Anderson Stanciole, and Rowena Jacobs, 2009. "Do waiting times reduce hospital costs?," Journal of Health Economics, 28, 771-780. (Siciliani, 2009)

Royer, H., 2009. "Separated at Girth: US Twin Estimates of the Effects of Birth Weight," American Economic Journal: Applied Economics, 1 (1), 49–85. (Royer, 2009)

Cantor J, et al., 2022. "The impact of the COVID-19 pandemic and policy response on health care utilization: Evidence from county-level medical claims and cellphone data," Journal of Health Economics, 82:102581. (Cantor, 2022);

Leemore Dafny, 2005. "How do prices respond to price changes?," American Economic Review, 95 (5): 1525-1547. (Dafny, 2015)

Chen Y, et al. 2013. Evidence on the impact of sustained exposure to air pollution on life expectancy from China's Huai River policy. PNAS, 110, 12936–12941 (Chen, 2013)

Zhang Y, Salm M, van Soest A. 2018. "The effect of retirement on healthcare utilization: Evidence from China." Journal of Health Economics, 62: 165-177. (Zhang, 2018)

Shigeoka H. 2014. "The effect of patient cost sharing on utilization, health and risk protection." American Economic Review 104(7): 2152-2184. (Shigeoka, 2014)