California State University, Channel Islands
Econ 490 COURSE SYLLABUS

Faculty: **Zhong John Lu, PhD, Department of Economics**

Location: California State University Channel Islands (CSUCI)/Smith Decision Center 1908 (Hybrid and per instructor's discretion)

Time: Mondays/Wednesdays: 1:30 – 2:45 pm

Office Hours : Sage Hall 2151
Tuesdays: 1:30 – 2:30 pm or by appt

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Key Deliverables and Due Dates:

- Individual Presentation#1 [The Economics of the (Choose One) Market]: See Table 1 (5%)
- Individual Presentations#2 [The Industrial Organization of the (Choose One) Sector in the U.S.]: 10/3, 10/5, and 10/10 in class (25%) -- See Table 2
- Individual Presentations#3 [Economics Analysis of the (Choose One) Treatment or Policy]: 11/14, 11/16, and 11/21 (20%) -- See Table 3
- Term Paper based on Project #3 (min. word count = 3,000 without references): Due on Monday, 11/30, in class (25%)
- Final Exam (take home exam): Due on Monday, 12/5, at midnight (20%)
- Attendance counts for 5% of the course grade

1. Course Description

This course will enable students to understand and apply the basic framework and analytical tools of economics in the examination of complex organizational, management and policy issues in healthcare. Though many paradigms are useful in studying health systems (including but not limited to clinical sciences, management and organizational theories, political science, etc.), familiarity with the principles of economic analysis is essential for understanding alternative ways of organizing and financing health care. Economics tells us that all economic actions produce responses, and that all components of health systems interact with one another so that changes in one component are likely to produce responses in other components, often in unexpected ways. Economics also highlights the role of incentives in changing both personal and organizational behavior.

The course starts with an in-depth review (or introduction to some) of the basic models and theories in the Economics of Industrial Organization, highlighting economic ideas at a more intuitive level. Whenever possible, these elementary models will be applied to healthcare sector examples by both instructor and students. While the instructor will lead the discussions on health insurance, hospital, physician services, and biopharmaceutical sectors, student will take the lead on the smaller sectors in healthcare, including dentistry, nursing, nursing home, home health, physical therapy, nutritional supplements, and medical device sectors. The second half of the course will be devoted to the understanding and real-world application of various methods of economic evaluation in healthcare, including cost-benefit, cost-effectiveness and cost-utility analysis. The concepts of value-based pricing (VBP) and value of statistical life (VSL) will be covered in some details. Students will utilize these analytical tools to evaluate and critique an adopted or accepted treatment modality or public policy.

2. Learning Objectives

- Provide an economic perspective in the analysis of broad healthcare policies and issues
- Utilize economic tools to explain a variety of personal and organizational behavior in the production and consumption of healthcare
- Evaluate the basic theory of health insurance, asymmetry of information, and adverse selection in the insurance of market, and role played by various private and public third party payers in the cost, quality, and access of healthcare in the US
- Examine physician's role as an economic agent: an entrepreneur, a firm, and a supplier of labor on the market for healthcare inputs
- Evaluate the changing competitive landscape of the hospital sector and its impact on cost, price, and quality of healthcare
- Apply the basic paradigms of economic evaluation to the adoption decision of new biopharmaceuticals, as well as new healthcare initiatives and policies
- Discuss impact on efficiency and societal welfare from current waves of horizontal merger and vertical integration in the healthcare sector in the U.S.

3. Course Topics

The following broad topics will be covered in this course:

- What is Health Economics? Why Is It Important?
- Demand For Healthcare
- Demand for Health Insurance
- The Structure-Conduct-Performance Paradigm in Industrial Organization and Its Application to the Healthcare Sector
- Market Concentration and Market Power in the Healthcare Market
- The Supply for Physician Services
- The Supply for Hospitals
- The Biopharmaceutical Market
- The Supply for Health Insurance
- Mergers and Integrations in the Healthcare Market
- Economic Evaluation of Healthcare Programmes

4. Required and Recommended Textbooks

4.1 Required Readings (Articles only)

There is a packet of 12 articles that you are required to read for this class. Some topics covered in these articles may be used for the third projects/term papers.

4.2 Recommended Readings (Books)

[1] Methods for the Economic Evaluation of Healthcare Programmes, 3rd edition, by Drummond, Sculpher, Torrance, O'Brien, and Stoddart. Oxford University Press, 2007. ISBN = 978-0-19-852944-6. (Chapters recommended: 5, 6, 7)

[2] The Economics of Industrial Organization, 5th edition, by Shepherd and Shepherd. Waveland Press, 2003. ISBM=978-1577662785. (Chapters recommended: 1, 2, 3, 4, 6, 7, 9, 11, 12, and 14)

[3] The Structure of American Industry, 13th Edition, by James Brock. Waveland Press, 2015. ISBM=978-1478627326.

Additional readings, case studies, and current events, to be provided by the instructor on an as needed basis. Sources often include peer-reviewed articles in economics and healthcare journals, and articles published in the NYT, WSJ, the Economist, etc.

5. Detailed Grade Components

5.1 Attendance

Due to particularly small size, nature of course materials, and type of projects, I will structure this class in a more or less hybrid format. Please note the following:

1) All must attend in-person whenever there is a scheduled student presentation, whether you are the presenter or not. Each unexcused absence during these lectures reduces your total grade by 1%, with maximum of 5% loss over the semester.

2) All must attend in-person during the first two lectures and the last lecture in the semester.

3) Outside those specified in 1) and 2), we will hold in-person lectures on Mondays, and virtual classes on Weds. The instructor has the discretion to change the format as needed.

4) Office hours will be strictly in-person, unless the university switchs to completely virtual format.

5) All students are expected to be in >90% attendance (in-person or virtual). This being a very small class, we need all to be fully on deck to maximize classroom synergy.

5.2 Project/Topic Selection

In addition to a take-home final exam, each individual student will be responsible for three projects which lead to three presentations and one term paper (which is tied to the 3rd project).

The following tables provide the topics for selection for Projects #1 and #2, respectively (first come – first serve):

Table 1 Selection List for Project/Topic #1

Economic Conduct and Performance in the Market Structure of	**Order of Presentation (over 3 lectures)**	**Requirements: 10-15 mins, 6-8 slides; 5 min Q&A.**
Perfect Competition	1st	
Monopoly	1st	
Monopolistic Competition	2nd	
Oligopoly	2nd	
Monopsony	3rd	
Horizontal Mergers	3rd	

Table 2 Selection List for Project/Topic #2

Industrial Organization of the … Industry (Choose One)	**Dates and Order of Presentation (over 3 lectures)**	**Requirements: 25 mins, 15-20 slides; 5 min Q&A.**
Dentistry Services	Determined by concensus	
Veterinary Services	Determined by concensus	
Hospice Care	Determined by concensus	
Nursing Home	Determined by concensus	
Retirement Home	Determined by concensus	
Home Health Services	Determined by concensus	
Physical Therapy	Determined by concensus	
Mental Healthcare	Determined by concensus	
Nutritional Supplement	Determined by concensus	
Medical Device	Determined by concensus	

The selection of the 3rd projects (for both paper and presentation) is TBD at this moment. Ideally, in examining the healthcare sector you select for Project#2 (from Table 2), you will identify an interesting and important topic/issue to you to look further into, from an economic perspective, and you will then follow up by conducting additional literature review and synthesis for your Project#3. However, if you cannot come up with a topic, I have a long backup list of contemporary healthcare issues requiring further economic analysis.

Regardless of whether you select the Project#3 topic on your own, or receive it from me, the analytical part in this project consists mainly of an in-depth literature review and synthesis of 8-

10 recently published, peer-reviewed articles on the selected topic. You will provide empirical support or rebuttal on this topic, based on your research - You don't have to take a definitive stand on the topic if your research does not warrant it.

Your term paper will summarize your review, synthesis, and critique, and your presentation will highlight the key points. Your critical review must include an analysis of the economic and/or statistical method(s) used, quality or relevance of data sources, interpretation of results, and study limitations. It would also be helpful to identify areas for future research.

Table 3 Selection List for Project/Topic #3: TBD (Appendix A)

5.3 Final Exam:

Cumulative, open-book, open-source, take-home final exam. All essay questions, with some requiring calculation and mathematical analysis. The list of questions will be given on the last lecture day, and is due back (electronically) **on 12/5 (date of scheduled final exam).**

5.4 Evaluation & Grading

- Attendance 5%
- Presentation 1 5%
- Presentation 2 25%
- Presentation 3 20
- Comprehensive term paper 25%
- Final Exam 20%

5.5 Grading Rules:

A/A+/A-	88-100%;
B/B+/B-	78-87%;
C/C+/C-	68-77%;
D/D+/D-	56% to 68%;
F	<56%

Final course grade cut-offs may change slightly based on grade distributions at the instructors' discretion.

6. Academic Dishonesty

This course will follow the CSUCI Policy on Academic Dishonesty (SP01-57). Academic dishonesty includes cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess. The course instructors have the initial responsibility for detecting and dealing with academic dishonesty. If the Instructors believe an act of academic dishonesty has occurred, the instructors are obligated to discuss the matter with the student(s) involved. Instructors will ensure that there is reasonable evidence of academic dishonesty. However, if circumstances prevent consultation with

student(s), instructors may take whatever action (subject to student appeal) as deemed appropriate.

7. CSUCI Disability Statement

CSU Channel Islands is committed to equal educational opportunities for qualified students with disabilities in compliance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The mission of Disability Accommodation Services is to assist students with disabilities to realize their academic and personal potential. Students with physical, learning, or other disabilities are encouraged to contact the Disability Accommodation Services office at (805) 437-8510 for personal assistance and accommodations. Handouts are available in alternative accessible formats on request.

Tentative Course Schedule
(subject to change at instructor discretion)

Lecture Topic	No of Lectures (estimates)	Readings Required unless indicated with "opt"
Section 1. Course introduction and Syllabus; What is Health Economics?	3	Articles: Atul Gawande David Merrille
Section 2. Demand for Healthcare; Demand for Health Insurance	3	Articles: Mark Pauly Raj Chetty Alain Enthoven (opt)
Section 3. Industrial Organization: The Structure – Conduct - Performance paradigm and Applications	6	EIO Chapters Chaps 1-5 (opt)
Section 4. The Supply-Side of Healthcare: Hospitals; Physician Services; Biopharmaceuticals; Health Insurance	6	Articles: Robert Berenson Emily Gee EIO Chapters Chaps 7-12 (opt)
Section 5. The Economic Evaluation of Healthcare Programmes: Cost-Effectiveness Cost-Utility Cost-Benefit	6	Articles: Casey Mulligan David Howard Linda Ryen MEE Chapters 5, 6, 7 (opt)
Section 6: Other Special Topics in Healthcare Economics	3	Articles: John Donohue Douglas Allen Darius Lakdawalla (opt)
Section 7. Recap US Health Spending	1	Articles: David Cutler

MEE = Methods of Economic Evaluation of Healthcare Programmes
EIO = Economics of Industrial Organization
Opt=optional and recommended

Appendix A

ECON 490/Special Topics in Economic Analysis:

Economics Of Healthcare

List of Case Studies for Research, Presentation, and Term Paper

1) HOW TO DETERMINE THE ECONOMIC VALUE OF A HUMAN LIFE? COMPARISON OF DEVELOPED ECONOMIES.
   Economics of Value of Life
   https://www.bloomberg.com/graphics/2017-value-of-life/

2) IS DIRECT TO CONSUMER (DTC) ADVERTISING EFFECTIVE IN RAISING THE DEMAND FOR BRANDED PHARMACEUTICALS?
   Monopolistic Competition and Advertising
   https://business-ethics.com/2018/05/08/direct-to-consumer-drug-advertising-spikes-demand/

3) EXAMINATION OF THE NURSING HOME INDUSTRY IN CALIFORNIA: MARKET STRUCTURE AND QUALITY OF CARE
   Oligopoly and Competition
   https://www.nytimes.com/2015/04/15/business/as-nursing-homes-chase-lucrative-patients-quality-of-care-is-said-to-lag.html

4) DOES THE HOSPITAL HAVE MONOPSONISTIC POWER IN THE MARKET FOR NURSES?
   Monopsony Power and Price
   https://www.wsj.com/articles/why-arent-americans-getting-raises-blame-the-monopsony-1478215983
   http://economics.emory.edu/home/documents/documents/Depasqualechristina_1.pdf

5) IMPACT OF HOSPITAL MERGERS ON COST OF CARE AND QUALITY OF CARE?

   Economics of Horizontal Mergers
   https://www.nytimes.com/2019/02/11/upshot/hospital-mergers-hurt-health-care-quality.html

6) IMPACT OF PHYSICIAN-HOSPITAL INTEGRATION ON COST OF CARE AND QUALITY OF CARE?
   Economics of Vertical Integration
   https://hms.harvard.edu/news/unintended-costs-health-care-integration

7) IS THE NEWLY APPROVED ALZEIMER DRUG, ADUCANUMAB, COST-EFFECTIVE?
   Incremental Cost-Effectiveness Analysis
   https://icer.org/news-insights/press-releases/icer-publishes-final-evidence-report-and-policy-recommendations-on-aducanumab-for-alzheimers-disease/

8) DO HOSPITAL MERGERS IMPROVE QUALITY OF CARE?
https://www.nytimes.com/2019/02/11/upshot/hospital-mergers-hurt-health-care-quality.html
https://www.aha.org/guidesreports/2017-01-24-hospital-merger-benefits-views-hospital-leaders-and-econometric-analysis

9) DO HOSPITAL MERGERS DECREASE COST OF CARE?
https://www.fiercehealthcare.com/practices/consolidation-trend-continues-8-000-more-hospital-owned-practices-14-000-more-hospital
https://www.aha.org/guidesreports/2017-01-24-hospital-merger-benefits-views-hospital-leaders-and-econometric-analysis

10) DO PHYSICIAN-HOSPITAL INTEGRATION IMPROVE QUALITY OF CARE?
https://patientengagementhit.com/news/healthcare-mergers-integration-detract-from-patient-satisfaction
https://www.nejm.org/doi/full/10.1056/NEJMp1101959?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed

11) DO PHYSICIAN-HOSPITAL INTEGRATION INCREASE COST OF CARE?
https://hms.harvard.edu/news/unintended-costs-health-care-integration
https://www.nejm.org/doi/full/10.1056/NEJMp1101959?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed

12) DO PHYSICIAN GROUP MERGERS LEAD TO IMPROVED QUALITY OF CARE?
https://www.ncbi.nlm.nih.gov/pubmed/12963570

13) DO INSURANCE MERGERS LEAD TO HIGHER PREMIUMS FOR HEALTH INSURANCE?
https://catalyst.nejm.org/the-risks-of-health-insurance-company-mergers/

14) IS COVID-19 INFECTION RATE INVERSELY RELATED TO LEVEL OF PUBLIC HEALTH FUNDING
    a. U.S. State-by-State comparison

       Pre-read:
       https://www.milbank.org/quarterly/articles/covid-19-and-underinvestment-in-the-public-health-infrastructure-of-the-united-states/
       Theory and background:
       Economics of Externality (covered in class)
       Data: *primary data collection required*

15) TRADE-OFF ANALYSIS OF C-19 PANDEMIC RESPONSE POLICIES IN THE US: CRITICAL REVIEW OF THE LITERATURE ON ITS APPLICABILITY TO C-19
    (Systematic and Comprehensive Literature Review)
    a. NEGATIVE TRADE-OFFS:
        i. Isolating elderly detrimental for their mental and physical health?
        https://www.psychologicalscience.org/news/isolating-the-elderly-is-bad-for-their-health.html (full article provided by instructor if topic is chosen)

ii. Economic Analysis of Society-wide Lockdown to Reduce Covid-19 Transmission: is it cost-effective? https://www.sciencemag.org/news/2020/03/modelers-weigh-value-lives-and-lockdown-costs-put-price-covid-19

iii. Unemployment and mental health in working age adults https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5544462/#:~:text=Long%2Dterm%20unemployed%20have%20at,also%20its%20cause%20(17)

iv. C-19 lockdowns and delay of elective and preventive medical treatments: is there a problem? https://www.cnbc.com/2020/04/14/doctors-worry-the-coronavirus-is-keeping-patients-away-from-us-hospitals-as-er-visits-drop-heart-attacks-dont-stop.html

b. POSITIVE "TRADE-OFFS":

i. Lockdown reduces environmental pollution and its related morbidity and mortality https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.10043

ii. C-19 lockdowns and delay of elective and preventive medical treatments: is there a benefit? https://www.cnn.com/2020/05/27/opinions/unexpected-side-effect-less-medical-care-covid-19-welch-prasad/index.html