

Economics 157 – Health Economics

Meetings: Tuesdays and Thursdays, 12:30-2 PM, 120 Latimer Hall

This syllabus outlines in detail the policies and expectations for this course. “I didn’t read the syllabus” is not an acceptable excuse for overlooking an assignment, being late, or for not understanding any of the course policies.

Economics 157 is an advanced undergraduate course on the economics of health care provision and payment. In addition to being one of the most important “goods” consumed in our lives, health care spending accounts for approximately 20% of GDP in the United States. How we choose to provide and pay for health care has large and direct welfare impacts on the consumers and producers of health care nationwide while also being key ingredients into overall national economic performance.

In this course we will use methods from microeconomics to investigate how different aspects of the health care system function and to assess the implications for different policies designed to improve that functioning. We will use economic tools and techniques from the sub-disciplines of information economics, industrial organization, labor economics, public economics, behavioral economics, and decision theory to think about these questions. The primary goals of the course will be to (i) master different economic techniques in the context of health care markets and (ii) learn about the specific institutional details and policies relevant to those markets.

Below are some key details and policies for the class. Please read this over **in detail** and ask immediately if you have any concerns or questions.

Prerequisites:

The course requires no prior knowledge of health care economics or institutions. The course will use rigorous quantitative analysis, including probability, statistics and mathematical modeling, to study questions in health care economics, so you should feel comfortable with these tools before enrolling in the class. Non-economics majors who have only taken Economics 1 will likely find this course to be quite difficult. Economics majors without a solid understanding of probability and statistics will also likely find the course to be quite difficult.

Required Textbooks:

Health Economics, Jay Battacharya, Timothy Hyde, and Peter Tu, 1st Edition, Palgrave Macmillan, 2013.

Health Care Reform: What It Is, Why It's Necessary, How It Works, Jonathan Gruber, 2012.

Professor's Information and Office Hours

Professor Ben Handel, 521 Evans Hall, email: handel@berkeley.edu

Office Hours: Thursdays 3-4:30 PM, 521 Evans

Office Hours Policy: Professor Handel's office hours are for bigger picture questions about the course material and health economics in general. Prior to exams, his office hours can be used to help review key course concepts that are likely to appear on the exams. In general, they should not be used to review problem set solutions or ask detailed questions about specific problem set questions. The Head Reader's office hours are specifically set aside for those purposes (see below).

Email Policy: Professor Handel is happy to answer emails related to important course logistics not explicitly covered in the syllabus or in class. In addition, he is happy to answer emails about big picture course content and on health economics in general. In general, he will not respond to emails about the details of problem set questions or material already covered in the syllabus. The Head Reader's email access (see below) can be used to ask about details of problem set questions, within reason.

Reader / Grader Information and Office Hours

Head Reader: Tiffany Tsai, email: hsintien@berkeley.edu

Office Hours: Monday 12 – 1 PM and Tuesday 11 AM – 12 PM, located in Evans Hall, Room 630

Office Hours Policy: The Head Reader's Office Hours can be used to ask for help with core course content, problem sets, and exam preparation. During office hours the Head Reader will be happy to review specific aspects of problem set questions (both prior to and after the due date) to the extent it is reasonable to do so (i.e. cannot "give away" the answers ahead of time). Prior to exams, these office hours can be used to review practice questions, problem set questions, or core concepts.

Email Policy: The Head Reader can be emailed outside of office hours for important questions related to the details of core course content, problem sets, or exam preparation. When possible, office hours should be used for these questions. Email should only be used when you cannot attend office hours, or cannot get to your questions there. Excessive emails will be ignored. The course website on Piazza is another good venue for discussing details related to the class, typically with other students.

Graders: Sara Green (sara.green@berkeley.edu) Woody Kongsamut (twkongsamut@berkeley.edu)

Grader Role: The Graders do not hold office hours and can be contacted via email for grading clarifications only in circumstances where there is an obvious grading error on a problem set or exam. See the problem set and exam policies below for the specific policies on regrading.

Course Website

Course materials will be available on the course website on BCourses. The course website is: <https://bcourses.berkeley.edu/courses/1459016>

In addition to serving as a centralized location for all course materials, the course site will be used for submission of some assignments and for dissemination of grades.

Class Webcast

Each class will be recorded and posted online on the course website on BCourses. The webcast will contain audio along with a projection of the on-screen display in the classroom, following along with the in-class presentation. This webcast is provided so that people have an additional resource to review lecture and in-class discussion, and is not a substitute for your presence in class. See the class participation component of your grade below for more details on how in class participation is evaluated and graded.

In Class Electronics Policy

No laptops are allowed during class time. This policy is in place to ensure that those using laptops for non-class purposes do not distract others in class. There is substantial evidence that note-taking by hand helps retention, while lectures will also be available on Webcast if you'd like to take laptop notes later on. Smaller tablets, which are less of a distraction, are allowed in class. Use of phones for non-class purposes is not allowed, except in case of emergency or special importance.

Special Accommodations:

If you require special accommodations for exams or problem sets due to a disability (including learning disabilities) you must speak with (or email) Professor Handel no later than January 30. You will eventually need to obtain an official evaluation form from the Disabled Students' Program to certify your special accommodations, but let Professor Handel know ahead of time so everyone is on the same page.

Health Economics News and Blogs

You may wish to visit the following blogs to engage more with health economics, especially in the context of current policymaking. There is no obligation to visit these sources, but you will find that they provide interesting discussions of the issues from class in the context of actual policy problems.

The Morning Consult
<http://themorningconsult.com/>

The Incidental Economist
<http://theincidentaleconomist.com/>

The Health Care Blog
<http://thehealthcareblog.com/blog/tag/economics/>

The Health Affairs Blog
<http://healthaffairs.org/blog>

The Health Care Economist
<http://healthcare-economist.com/>

Course Assignments and Grading:

There are 900 possible points for the semester. Your grade will depend on the following factors, with points indicated in parentheses:

Non-Exam Grades

Problem Sets (20%)	<u>180 points (3 @ 60 points each)</u>
Class Participation (10%)	<u>90 points</u>

Exams

Midterm # 1 (February 23 in class) (20%)	<u>180 points</u>
Midterm # 2 (April 11 in class) (20%)	<u>180 points</u>
Final Exam (May 11, 3-6 PM) (30%)	<u>270 points</u>

Maximum points for exams 630 points

Note: In the spirit of continuous learning throughout the course, if you get a higher score on the final than your average on the two midterm exams, the final exam will be worth 40% instead of 30% and the midterms will each be worth 15% instead of 20%.

Note: The class will be curved on the basis of how well the entire class does on assignments, participation, and exams. In a typical class year 40% of students will receive some kind of A, 35% will receive some kind of B, and 25% will receive C or below. These can be adjusted based on how the Professor perceives overall performance. Status updates on letter grades will be given after each exam.

Exam Details and Policies:

In-class midterm exams will be held on Thursday, February 23 and Tuesday, April 11 during the scheduled lecture period. The exam will cover material presented in class (for the periods specified in the syllabus below) as well as material from the assigned readings. All exams are closed book and closed note exams. Questions will be similar to those given on the problem sets, and can be either quantitative, qualitative, or graphical in nature. There will be no true / false or multiple choice questions. Professor Handel will provide more exact detail on each exam one to two weeks before the exam is actually conducted.

The final exam will be administered during the scheduled final exam period, on May 11 at 3 PM. This exam will emphasize material from throughout the class. As with each midterm, more details on the exact nature of questions to expect will be given in advance of the final exam.

Key exam policies:

1. Exams are closed book and closed note. For the midterms, you are allowed to have a 3 X 5 index card with notes. For the final, you are allowed to have a single page of notes (yes, you can use both sides).

2. Calculators are allowed. However, no large electronics are allowed (i.e. laptops, tablets) so you can't have your calculator on such a device. You can use basic function calculators, graphing calculators, or you can use your phone's calculator. If you use your phone for a calculator (i) it must be in airplane mode and (ii) you have to sit in the front rows of the exam room. At no time can you use your phone to access anything but the calculator. If we see you accessing anything besides the calculator on your phone, your phone will be taken away until the end of the exam.
3. No make-up exams are scheduled. If you miss an exam you must contact Professor Handel immediately via email and explain why you missed the exam. Without an exceptional cause for missing the exam you will receive a zero. It is unfair to other students in the class who take the exam to miss an exam and expect to be able to retake it, unless the reason is truly exceptional.
4. Finally, in the event someone pulls a fire alarm during the exam (which apparently happens sometimes, despite the fact that it's a criminal offense to do it falsely!) we'll take the exam outside and continue taking it outside.
5. We work very hard to grade your exams correctly the first time and regrade requests are discouraged. If there is an obvious grading error that you can document after reviewing the solutions, please let the Grader know and we are happy to change the grade. If you request a regrade without an obvious error relative to the solution key (i.e you think you should get partial credit for something we didn't give partial credit for), we will regrade the entire exam thoroughly and you can get a lower score as well as a higher score. This is in place to be fair to all students, so those who continuously ask for regrades don't gain an advantage.

Non-Exam Assignment Details and Policies:

Participation:

A key goal for the class is to encourage lively discussion during lecture. The Professor will ask questions during the class, for open response, and students are encouraged to raise their hands and ask questions when they have them. Students who are active participants will get a higher share of the 90 points allocated to participation.

In addition, there will be in class group assignments where your participation will be recorded. The purpose of these exercises will be for you to engage with the course material in a different way, and for you to get to know others in the class. These exercises will typically take 10-15 minutes and occur in the middle of the lecture period. They will not be announced ahead of time and will occur every 3-4 classes on average. Students who are present and participating in these activities will receive a greater share of the 90 participation points.

Problem Sets: Three problem sets will be given during the semester to help you understand the economic tools and techniques used to study health care. The problem sets will contain mostly quantitative and graphical exercises. The problem sets will build on the material discussed in class and in the readings. You can talk about the problem sets and your answers with others in the class, but must turn in your own answers (which can't be copied directly from someone else). More details will be given with each problem set as it is assigned. Relevant dates for problem sets are included in the course outline at the end of this syllabus.

The problem sets are essential tools for learning the course material and being well-prepared for exams. Each problem set is worth 60 points (about 7%) for the course grade: most of the value in doing them thoroughly is developing your understanding of the material so you can succeed on the exams.

Problem sets can be submitted in class the day they are due, or submitted to Professor Handel's mailbox in the economics department on the 5th floor of Evans Hall. If submitting after hours, they can be submitted under Professor Handel's office door (521 Evans). They can also be submitted electronically via BCourses (if the file is corrupted, it counts as not being turned in). Problem sets must be turned in by midnight on the due date. They will lose 25% of possible total points each day they are late.

Academic Honesty Policy:

In fairness to students who put in honest effort, cheaters will be harshly treated. Any form of cheating whatsoever will result in a zero on the assignment or exam, and possible additional action. Cheating includes, but is not limited to bringing / using unsanctioned notes or written materials in an exam, copying off another's exam, allowing someone to copy off your exam on purpose, and having someone take an exam for you.

Since I will seek to encourage some collaboration on all problem sets, as long as each student writes up his / her assignment in his / her own words discussion with other students is ok, and encouraged. Of course, any source (book, blog, article) should be properly cited in all assignments where this is a relevant concern. Plagiarism without a clear citation will not be tolerated, and a zero will be given for the assignment with possibly further consequences. Let's make this the first semester where the Professor doesn't have to give someone a zero on an assignment or exam for cheating.

To summarize: don't cheat.

Finally, you should include the Berkeley student honor code on all exams and assignments:

"As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others."

Course Outline and Reading Assignments

Week 1:

1/17 – Course Overview

1/19 – Demand for Health and Health Care

Battacharya, Chapters 1-2

Week 2:

1/24 – Demand for Health and Health Care: The Grossman Model

Battacharya, Chapter 3

1/26 – NO CLASS

Week 3:

1/31 – Demand for Insurance: Expected Utility

Battacharya, Chapter 7

2/2 – Adverse Selection: Akerlof Model

Battacharya, Chapter 8

Note: First problem set given out.

Week 4:

2/7 – Adverse Selection: Graphical Analysis

Einav, L. and A. Finkelstein, “Selection in Insurance Markets: Theory and Empirics in Pictures”
Journal of Economic Perspectives, 2011, 25(1): 115-138.

Battacharya, Chapter 9 Section 11 only

2/9 – Adverse Selection in Practice

Battacharya, Chapter 10

Read pages 433-444 and conclusion:

Cutler, D. and Reber, S. "Paying for Health Insurance: The Trade-Off between Competition and Adverse Selection," *Quarterly Journal of Economics*, 1998, 433-466.

Week 5:

2/14 – Demand for Insurance: Information, Complexity, and Decision-Making

Berkeley Faculty / Staff Benefits Guide

Berkeley Insurance Portal (look around!):

<http://ucnet.universityofcalifornia.edu/compensation-and-benefits/health-plans/medical/index.html>

Two articles on insurance choice and consumer information:

http://www.huffingtonpost.com/entry/health-insurance-vocabulary_563b8e20e4b0307f2cac5fe0

<http://www.newyorker.com/magazine/2014/12/08/obamacares-inertia-problem>

2/16 – Moral Hazard: Demand for Health Care Revisited

Battacharya, Chapter 11

Gladwell, M. "The Moral Hazard Myth," *The New Yorker*, August 29, 2005.

http://www.newyorker.com/archive/2005/08/29/050829fa_fact

Recent news article on research:

<http://www.vox.com/2015/10/14/9528441/high-deductible-insurance-kolstad>

Note: First problem set due.

Week 6:

2/21 – In Class Review of Problem Set # 1

2/23 – Midterm Exam # 1 on all course material through 2/14

Week 7:

2/28 – The American Model

Battacharya, Chapter 18

3/2 – The Affordable Care Act: Part I

Chapters 1-6:

Gruber, J. Health Care Reform: What It Is, Why It's Necessary, How It Works. 2012.

Kaiser Family Foundation: Summary of the Affordable Care Act

Cutler, D. “The Simple Economics of Health Reform,” *The Economists’ Voice*, December 2010.

Optional: Gruber, J. “Covering the Uninsured in the United States,” *Journal of Economic Perspectives*, 46(3): 571-606.

Week 8:

3/7 – The Affordable Care Act: Part II

Chapters 7-12:

Gruber, J. Health Care Reform: What It Is, Why It's Necessary, How It Works. 2012.

Instructor Notes on Economics of ACA Regulations

30 Economists: We Need the Individual Mandate

<http://www.healthinsurance.org/blog/2013/07/18/30-economists-we-need-the-individual-mandate/>

Health Affairs Health Policy Brief: Risk Adjustment in Health Insurance. August, 2012.

“Young, Fit, and Uninterested,” *The Economist*, January 2014.

<http://www.economist.com/news/united-states/21594300-was-supposed-be-month-uninsured-got-health-insurance-not-enough?zid=318&ah=ac379c09c1c3fb67e0e8fd1964d5247f>

3/9 – The Current Politics and Policies of Health Reform

Instructor Notes on Economics of ACA Regulations, continued

Readings and core material TBD as health reform evolves in 2017.

Note: Second problem set given out.

Week 9:

3/14 – Delivery of Health Care: The Labor Market for Physicians

Battacharya Chapter 5

3/16 – Delivery of Health Care: The Hospital Industry

Battacharya, Chapter 6

Week 10:

3/21 – Why are Costs so High? Technology Growth and Innovation

Battacharya Chapter 13

Read introduction: Cutler, D. and M. McClellan. “Is Technological Change Worth It?” *Health Affairs* Sept/Oct. 2001.

Read introduction: Chandra, A. and Skinner, J. “Technology Growth and Expenditure Growth in Health Care,” NBER Working paper no. 16953, April 2011.

Gawande, A. “The Cost Conundrum” *The New Yorker*, June 2009.

http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande

Note: Problem Set # 2 due

3/23 – Rationing Health Care: Health Technology Assessment

Battacharya, Chapter 14

Week 11:

4/4 – Why are Costs so High? Organizational Management and Efficiency

Gawande, A. “Big Med” *New Yorker*, August 2012.

http://www.newyorker.com/reporting/2012/08/13/120813fa_fact_gawande

Cutler, D. “Where are the Health Care Entrepreneurs? The Failure of Organizational Innovation in Health Care,” NBER working paper no. 16030, May, 2010.

Gawande, A. “The Checklist” *New Yorker*, May 2010.

http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande

4/6 – In Class Review of Problem Set # 2 / Review for Midterm # 2

Week 12:

4/11 – Midterm Exam # 2 on course material from 2/16 through 3/16

4/13 – Pharmaceutical Markets and Innovation

Battacharya, Chapter 12

Note: Third problem set given out.

Week 13:

4/18 – Pharmaceutical Markets and Innovation

Instructor Notes on Pharmaceutical Innovation and Firm Innovation

Lakdawalla, D. et al. “U.S. Pharmaceutical Policy in a Global Marketplace,” *Health Affairs*, 2009.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3804349/?report=reader>

4/20 – International Health Care Systems and Alternative Designs

Battacharya, Chapters 15

Week 14:

4/25 – International Health Care Systems and Alternative Designs

Battacharya, Chapter 16-17

Note: Third problem set due.

4/27 – Course Wrap Up: Health Economics Past, Present and Future

Reading Week Period, 5/1 – 5/10

Review of Problem Set # 3, Date and Time TBD

Review for Final Exam, Date and Time TBD

Final Exam (Comprehensive, Covers all Course Material):

Friday, May 11th – 3-6 PM