

Health Economics  
ECON 4460

Prof. Juan Pablo Atal  
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Spring 2022  
Tu,Th12:00-  
1:30pm

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Economics 4460 is an advanced undergraduate course on the economics of health care provision and payment. In this course we will use the tools of microeconomics to analyze the functioning of different pieces of the health care system. We will draw from the sub-disciplines of information economics, industrial organization, labor economics, public economics, and behavioral economics. The primary goal is to use these tools to develop a critical analysis of the functioning of the health care system as well as of the policies aimed at improving it. We will discuss how economists think about the relationship between health and the economy, and the lessons derived for policies surrounding the covid-19 pandemic. We will also learn about U.S specific institutional details and policies, and we will compare them to other important international experiences.

**Prerequisites:** Prerequisites: ECON 2100 (formerly 101), MATH 1400 (formerly 104) and either MATH 1410 (formerly 114) or MATH 1510 (formerly 115). Wharton students can satisfy the ECON 2100 prerequisite with BEPP 2500 (formerly 250) HONORS. The regular BEPP 2500 course does not count as a substitute for ECON 2100.)

**Grading:**

The grade of the course will be based on:

- **Three midterms (3, 60% total; closed book).** Midterms will be held during lecture time on the following dates: MT1: February 14; MT2: March 28; MT3: April 25

The midterm's score will be computed as follows. Your worst midterm will count 10% of your grade. Your two best midterms will count 25% each.

- **Quizzes (weekly, with exceptions, 20%).** Administered through canvas. Quizzes will be graded on a three-point (no check, 0 point/check/check +) scale
  - No check = 0 points. Quiz was not turned in
  - Check = 1 point. Quiz was turned in but the answer is mostly incorrect.

- Check = 2 points. Quiz was turned in and is mostly correct.

*Important: A check + in your quiz does not mean that your answer is fully correct. Answers to the quizzes will be posted on canvas promptly, and it is your responsibility to read them. Answers to quizzes are considered lecture material.*

- **Homework (3, 20%), due on February 7, March 21, and April 20.** Notes:
  1. Work on the homework in groups of 3 or 4
  2. Homework 3 consists of a small research project
- Additional credit may be given based on class attendance and participation. (including relevant contributions to Ed Discussion).

***No extra credit assignments will be given.***

**Office Hours:**

- Prof. Atal: Tuesdays 3:30-4:30pm and Fridays 3.30-4.30pm (location TBA)
- Kathleen: Mondays 8:30-9:30am and Thursdays 9-10am (location TBA)

**Course Material:** Canvas is the official channel I will use to make announcements, post slides, homework, readings, etc. You must check Canvas regularly. Documents (including problem sets, practice exams, exams and their solutions), regardless of whether they are physically distributed during this course or are posted on Canvas site, are only for students enrolled in this course. Any re-posting online (or on any course material sharing website) is prohibited.

**Ed Discussion:** I will set up an Ed Discussion site for this class. You should be able to access it from Canvas.

Extra credit will be given to students with high and relevant Ed Discussion participation (e.g. answering your classmates' questions correctly). However, participation in Ed Discussion is not a substitute for participation in class. The best way to participate in this class is to be active during lectures.

You may expect getting an answer from either the instructor or the TA within 48 hours maximum.

**Required Textbook:** Health Economics, by Jay Bhattacharya, Timothy Hyde, and Peter Tu (BHT), Palgrave Macmillan, 2013

**Other online resources** Health Care Triage (Youtube Channel):

<https://www.youtube.com/user/thehealthcatriage>; Health Care Dive:

<http://www.healthcarediver.com/>; Kaiser health news: <http://khn.org/about-us/>

### Course Policies

The Department of Economics maintains a common set of policies that apply to all classes. By taking this class you agree to abide by these policies. Please read these policies carefully, which can be found here:

<https://economics.sas.upenn.edu/?q=undergraduate-program/course-information/guidelines/policies>

Attendance Policy: It is mandatory to attend the midterms. Please make sure that you schedule your travels, including job interviews, to avoid the exam dates. I will follow the Department's policies regarding exam attendance. The policy is copied below:

"In cases where attendance at a midterm or a final exam is mandatory, there are only a few valid excuses for missing an exam. They are:

- Three exams scheduled within one calendar day (for final exams ONLY!) This policy of 3 exams does not count for midterm exams given during class time.
- An exam is given outside of the regular class schedule and the timing conflicts with another class in which the student is enrolled.
- Observance of a university-recognized religious holiday.
- UPENN Business that takes you away from campus. Absence from campus on UPENN business includes, for example, athletic events in which you are actively participating. In such cases, you need to make arrangements with your professor ahead of the exam date to take the exam at another time (preferably earlier than the schedule date).
- An illness/health emergency.
- A death in your family.
- Documented disabilities that allow you to take the exam under other circumstances.

Examples of reasons that are not valid for missing an exam are:

- job internships;
- beginning fall or spring break early or returning after a scheduled exam;
- end of semester early flights; take home exams.

- any other reason you would prefer not to take the exam when scheduled.

*Students are responsible for making sure, at the beginning of the term, that they can attend the exams. Registering for a course means that you certify that you will be present for the exam (unless one of the explicitly stated exceptions above arises.)*

If you are unexpectedly ill at the time of the exam and unable to reach the instructor ahead of time, then you can give notification of your illness as soon as you are able. Do not take an exam if you are ill and then expect to have an opportunity to retake the exam because you were ill the first time and did poorly.

Students who arrive late to an exam will generally be required to hand in their exam at the same time as other students.”

**Make-up midterm exams:** There will be no make-up written exams. However, if you have one of the valid excuses listed in the Department’s policy for missing a midterm exam - and appropriately reported in the CAR system – the following exams will be re-weighted accordingly to maintain the 100% total, as follows: If you miss the first midterm, midterm 2 and 3 will be worth 30% each of the grade. If you miss the second midterm, midterm 1 and 3 will be worth 30% each. A make-up exam for students who miss the third midterm exam will be offered strictly following the Department’s rules.

**Email policy:** I encourage to send your questions via Ed Discussion so that others can benefit. You may expect me to respond to emails between 9 and 5 Monday through Friday, and within 48 hours of receiving it. I am happy to use email to respond to simple queries. Please see me in office hours for more involved discussions.

**Re-grading:** All re-grade requests for exams must be submitted in writing, with a full explanation of why you think the work was incorrectly graded. The deadline to submit the request will be announced when exams are returned. We will not accept for re-grading any work written in pencil or that appears to have been altered. Except in cases where the grader has added numbers incorrectly, we will only re-grade entire exams. As a consequence, once you submit your work for re-grading, the grade can go either up or down.

**Students with disabilities:** In compliance with Penn policy and equal access laws, I am available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first two weeks of the semester, except under unusual circumstances, to arrange reasonable accommodations. Students must register with Student Disabilities Services

(SDS) for disability verification and for determination of reasonable academic accommodations.

**Academic integrity:** It is your responsibility to be familiar with the University's Code of Academic Integrity. Instances of academic dishonesty will be referred to the Office of Student Conduct for adjudication.

## Course Outline

**I. Demand for Health and Health Care:** Model health and health care decisions. Empirical evidence on how economic factors affect these decisions.

**II. Demand for Insurance:** Expected-utility theory, risk aversion.

**III. Adverse Selection:** How information asymmetries affect the functioning of health insurance markets. Empirical evidence. Choice complexity and departures from full optimization.

**IV. Moral Hazard:** The downside of insurance. Limiting Moral Hazard.

**V. Delivery of Health Care:** Physicians and the Hospital Industry: The role of physicians, The hospital industry.

**VI. Technology Assessment:** The role of technology and innovation on growing costs. Cost-effectiveness and cost-benefit analysis.

**VII. Pharmaceutical Markets and Innovation:** The workings of the pharmaceutical industry, innovation and the role regulation.

**VIII. Economic Epidemiology (time permitting)** Externalities and epidemiology.

**IX. The American Model and the Affordable Care Act:** Overview of the US health care system. The main goals of the Affordable Care Act, early assessment of its functioning, current debate.

**X. International Health Care Systems and Alternative Designs:** Contrast the U.S. model with typical health system designs of other countries. The Bismarck model. The Beveridge Model.