

Economics 1036
“Spring” Semester 2022

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Preliminary Short Syllabus

This is being posted on January 14 to give a timely broad sense for the nature of the course. We will post additional material outlining more specific topics and tentative timetables, as well as readings and sample problem sets and notes, that will give a richer sense of the topics covered and approach taken prior to the semester.

Psychology and Economics of Beliefs:

**Wednesdays 9:45am-11:45pm
Room M15 Littauer Center**

Professor: Matthew Rabin
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Teaching Fellow: Jim Reisinger
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Considering taking the course?

Registration is by consent of the instructor. (There is no lottery!) Students interested in taking the course should email Professor Rabin a resume/cv if you have one, an (unofficial) transcript of your courses and grades at Harvard (if you are visiting student, you can include a transcript from elsewhere), and the information sheet posted on his “classes” web page and on the canvas page, and. Please **after reading through this document thoroughly** email these **in pdf form** to matthewrabin@fas.harvard.edu (and cc Jim Reisinger at reisinger@g.harvard.edu), and provide any additional information that you might want us to take into account in the text of your email, as well (again, **after reading this**) any additional questions you may have. While it is often good to submit some of these questions by email, if you prefer to instead or additionally discuss these, before classes begin Professor Rabin will have 15-minute meetings you can sign up for at <https://my.timetrade.com/book/9VFX2>.

(After the term begins, Professor Rabin will have abundant 30-minute slots you can sign up for as individuals or groups at <https://my.timetrade.com/book/WF1VH>). Please go to <https://scholar.harvard.edu/rabin/officehours> for more general explanation for signing up.

WHAT IS THIS COURSE?

This seminar focuses on how individuals and groups come to form beliefs about important things in their lives. We will review formal theories and statistical evidence about how individuals develop their beliefs from personal observations and experience, and how people learn from each other. We will also study difficulties in defining beliefs and in measuring beliefs, and the existence (or not) of data in different domains for what people actually believe. The two organizing themes will be (1) to compare the assumption of full rationality that is traditional in economic theory to evidence identified by psychologists about the types of errors people make, and, irrespective of whether we believe some conclusions are rational or influenced by an identifiable error, (2) to try to get an empirical sense of what people believe on topics that are important to them and important to society as a whole.

Students will be required to do some readings and to carefully look over some lecture notes that present some of the psychological evidence on how people form beliefs, as well ways we mathematically model errors in belief formation. Assignments will include three mathematical problem sets requiring you to solve for both what the rational conclusions are for processing information and what conclusions our models of errors predict people will reach.

The course will also involve reading research (and popular sources) on people's particular beliefs in different domains. and some oral and written analysis of such research. Most oddly, some of the course will involve you—to the degree you are comfortable and consistent with desire for privacy—analyzing and understanding how you go about forming beliefs relevant to your own economic, medical, and social choices. We will discuss some of the mechanisms being studied for improving beliefs. Required readings will include academic research in psychology, economic theory, and empirical economics, as well as some studies of what current beliefs are and some historical beliefs were.

CAN YOU TAKE THE COURSE, AND IS IT FOR YOU?

The course is available solely to undergraduates at Harvard. It is not open to registration for masters or PhD students. Because it is a seminar course that emphasizes comfortable participation and mutual contributions to discussion in a small group of folk sharing appropriate background and keeping up with the relevant material throughout the term, it is (1) not open to auditors, and (2) and may only take the course for a letter grade, not pass-fail.

Because of the heavy emphasis on rigorous formal theories and measurements along the lines of mainstream economics, the seminar requires background in microeconomics, mathematics, and statistics/econometrics. Students should be prepared in these subjects at roughly the exposure to material expected of an economics or applied math major in the middle of junior year. Although qualified students at earlier stages or with different backgrounds are encouraged to consider the course, it is simply not suitable for somebody who has not been exposed to (and is not interested in) math, statistics, and beyond-rudimentary microeconomics. Completion of courses at the level of Math 21A and Stats 110 are strongly advised, and Math 1A, Economics 1010A or (preferably) 1011A, and some probability or statistics course are required. No single formal prerequisite is either sufficient (especially if you severely struggled with the relevant course) or necessary to enroll, but we should determine ahead of time if you are prepared.

REQUIREMENTS AND GRADING

In a separate document, we will provide an extended list of readings on topics that we will cover this semester, to give a better sense for the nature of the material, and add to that as we go along.

The requirements are:

- Full (and punctual) attendance.
- Three mathematical problem sets during the first 9 weeks of the semester
- Participation in each meeting of the class. The quality of your participation (and not simply the quantity) will be part of your grade.
- Short assignments and surveys, several of which need to be turned in (with strict deadlines to allow us to integrate them in preparation for class discussions. A few of these will be evaluated based on quality, most will simply be turned in to help prepare for the discussion that week. Analysis of your own belief-formation in some domain.
- Two oral presentations (and some accompanying bibliographies and slides), in which you'll be asked to read in more depth and lead the class discussion on one of the topics. One of these would be on psychological evidence on biases in reasoning, and the other summarizing and critiquing some research. A separate document giving examples of potential topics will also be supplied.
- At least one one-on-one meeting with Professor Rabin during the first half of the semester, and at least two one-on-one or small-group meetings for the semester as a whole.
- There will **not** be an exam in the course.

These are all serious requirements, and are worded as such for a reason. That said, physical and mental health are more important. As things develop we will figure out how to handle the appropriate need for individual and group safety with the nature of this course that is so dependent on real-time interaction. Due to the nature of the course, full attendance is required. You will of course be excused for unexpected emergencies or debilitating or contagious illnesses. Requests to be excused for other reasons (including job interviews for which a company cannot provide a compelling reason—except to have candidates prove they will be more devoted to the company than to learning, well-being, or civil participation—at exact times that conflict with your coursework) must be discussed ahead of time with Professor Rabin, at the beginning of the semester or immediately when you learn about them.

The problem sets are meant as a key teaching tool and way of evaluating comprehension of the course material. They will include problems ranging in difficulty from moderately easy to quite hard. The problems that are meant to be hard aren't (duh) meant to be simple, and don't panic if you struggle with them. But the problem sets will be graded for correctness, so please do seek help from Jim or me in answering any problems you are struggling with long enough before due dates so that meeting will be convenient for us too, and so that you will have time to integrate this help into your analysis.

You are invited (and even encouraged) to work together on the problem sets, but you are not allowed to read others' answers from past or present problem sets, and should hand in solutions separately that reflect your own understanding. You should acknowledge collaborators and describe the extent of collaboration at the top of the relevant assignments. Directly copying someone else's work is not appropriate, and should be considered a violation of official and unofficial codes of ethics.

Course Grade:

Of the requirements listed, the ones that will be evaluated for assigning grades are:

- 3 problem sets, in total: 55% (25% for best score, 15% for the other two)
- Class participation in discussions: 20%
- Small-scale written assignments (some evaluated, most based on completion): 20%
- Two critical reviews of lines of research, leading class discussion based on each: 30%

Note that the above percentages sum to 125%. We will reduce the contribution of two of these categories by 10 percentage points each and one by 5 percentage points, by whichever combination yields you the highest point total.