

# Economics 7960 Psychology and Economics

Instructor: Subhasish Dugar  
Phone: 801 587 1294  
Email: subhasish.dugar@economics.utah.edu

Lecture Location: Building 73, Room # 108  
Lecture Days/Time: H 10:45 AM – 1:45 PM

Office: Building 73 Room 246  
Office Hours: By appointment

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**Course Outline:** The neoclassical framework in economics provides a coherent and internally consistent body of theory that offers rigorous, parsimonious, and falsifiable models of human behavior. Augmented with auxiliary assumptions, it is flexible enough to analyze a wide range of phenomena and its qualitative predictions often accord with one's gut feeling about many phenomena. In actual practice, the neoclassical framework includes, but is not restricted exclusively to, consistent preferences, subjective expected utility, Bayes' rule to update probabilities, self-regarding preferences, emotionless deliberation, exponential discounting, unlimited cognitive abilities, unlimited attention, unlimited willpower, and frame and context independence of preferences. Neoclassical economics is also typically underpinned by optimization based solution methods and an equilibrium approach.

Neoclassical economics is a logically consistent and parsimonious framework that is based on a relatively small set of core assumptions, and it offers clear, testable, predictions. However, extensive empirical evidence that has accumulated over the last few decades reveals human behavior that is difficult to reconcile within the typical neoclassical models.

There has been a parallel growth in rigorous theoretical models that explain better the emerging stylized facts on human behavior. These models have borrowed insights from psychology, sociology, anthropology, neuroscience, and evolutionary biology. Yet, these models maintain a distinct economic identity in terms of their approach, rigor, and parsimony. Collectively, these models form the subject matter of *behavioral economics*, which is possibly the fastest growing and most promising area in economics.

Any falsifiable theory that replaces/modifies any of the core features of neoclassical economics, by alternatives that have a better empirical foundation in human behavior is a potential member of the class of behavioral economic theories, if it can pass stringent empirical tests.

Consider the following quote from Gintis (2009, p. xvi) that nicely captures the problem that we face in the current teaching of economics and, indeed, in the approach to economics: "Economic theory has been particularly compromised by its neglect of the facts concerning human behavior... I happened to be reading a popular introductory graduate text on quantum mechanics, as well as a leading graduate text in microeconomics. The physics text began with the anomaly of blackbody radiation,...The text continued, page after page, with new anomalies...and new, partially successful models explaining the anomalies. In about 1925, this culminated with Heisenberg's wave mechanics and Schrödinger's equation, which fully unified the field. By contrast, the microeconomics text, despite its beauty, did not contain a single fact in the whole thousand-page volume. Rather the authors built economic theory in axiomatic fashion, making assumptions on the basis of their intuitive plausibility, their incorporation of the "stylized facts" of everyday life, or their appeal to the principles of rational thought...We will see that empirical evidence challenges some of the core assumptions in classical game theory and neoclassical economics."

In behavioral economics, and in this course, we are interested in models that explain well the evidence from the lab and the field. In particular, we subscribe to the view that economic models must pass

stringent empirical tests. The job of economic theory is to offer an ever improving sequence of models that can explain everything that the refuted models could explain and in addition some new phenomena that the older models could not. I do not subscribe to the view that economic models should not be subject to stringent tests, or that they exist solely to form some intuition about a phenomenon, or tell a fable or a story, or worse, that they are to be pursued for reasons of aesthetic beauty alone.

The subject matter of behavioral economics is vast in scope. Indeed, it is even more ambitious in scope as compared to the study of neoclassical economics. One can conceivably teach an entire year long course on the subject. So you would appreciate that a fifteen-day lecture will just very barely, scratch the tip of the iceberg. My hope is that I can get you sufficiently excited about the subject so that you can continue to follow developments in this exciting area, which I firmly believe to be the future of economics.

**This course is:**

*not* about the philosophy or methodology of economics  
*not* about non-psychological models of bounded rationality  
*not* about experimental economics as such  
*totally not* an alternative to mainstream economics.

**Textbook:** Dharami, Sanjit, *The Foundations of Behavioral Economic Analysis*, The Oxford University Press; 1<sup>st</sup> edition, 2017.

Strictly speaking, I will not follow the textbook page by page. Instead, I will teach from my personal notes. However, this book will serve as an excellent companion; moreover, someone wishing to pursue the subject for serious research *must* buy this book. I will refer to this book as “SD”.

**Course objective:** There are many. But, the primary motive is to generate research ideas. If you wish to talk about research, appointment-based office hours are often fine for this. You should now (if you are not a first year PhD) be beginning the shift away from learning the results of other peoples’ research into conducting your own research. A major reason for teaching this material is to positively influence your research. So, I encourage you to think about research on your own, with each other, and with faculty, including me. It is easy to shortchange this goal under the pressure of taking courses and other duties you have, so it requires some focus on your part to attend to it. I encourage you to talk to me about ideas for research applying the material from this (or any) course. I enjoy talking to students about their ideas for research. Also, if you are in the second year of the Economics PhD program, you should be attending departmental seminars regularly (there are too few to begin with). This is central for you to start your transformation into a research-focused life. Don’t limit your interests or attendances to seminar to a field you are already “married to”; as a young researcher you should be open and curious about any topic, regardless of the field, that “sounds interesting” to you.

**Behavioral Decision Theory and Behavioral Game Theory:** Just so we know this important difference, Behavioral economics can be broadly divided into behavioral decision theory and behavioral game theory. Each subfield differs from its mainstream counterpart by paying particular attention to the psychological realism of behavioral assumptions and their consistency with empirical evidence. The goal is to identify empirically important deviations from traditional assumptions, to use the alternative assumptions the evidence suggests to build tractable formal models, and to use the models to better understand standard microeconomic questions. (Much of the empirical evidence used is experimental, but this is not a course in experimental economics: Experimental methods are considered only as needed to interpret evidence; and connections with field evidence will be made whenever they are helpful.)

Behavioral decision theory includes present-bias and time-inconsistency in intertemporal choice (Chapters 9, 10 and 11 in SD); reference-dependence and loss aversion in choice under certainty or uncertainty (Chapters 1, 2, and 3 in SD); social preferences such as altruism, envy, spite, fairness, or reciprocity; identity, behavioral contract theory, and incentives (Chapters 5, 6, 7, and 8 in SD); and heuristics and biases in probabilistic judgment, various psychological biases (Chapters 19 and 20 in SD).

Behavioral game theory includes “behavioral decisions in games” (Chapters 12 and 13 in SD), but the theory has so far followed the “divide and conquer” strategy of focusing on topics unique to games. It covers learning; models of bargaining; and models of strategic thinking in initial responses to games.

**Tentative Schedule of Topics:** We have 15 lecture days each of which is three-hour long. I plan to take a fifteen-minute break from 11:45 AM to 12 Noon. The general structure of each class will be something like this: I open the class with a specific topic and the available empirical evidence and use up first hour of the class time. Then we all go for a fifteen-minute break (strictly fifteen-minutes). We reassemble and start discussing some of the most important theoretical and empirical contributions as regards the topic of the day (the “most important” papers for a given topic will be assigned to you at least one week in advance). I will try to limit our discussion to three papers per class. However, this rule may change depending upon the breadth of the topic in hand. Everybody must participate in the discussion as this is a public good game and it’s a well-documented fact that humans tend to free ride a lot. I might randomly select one of you to lead the discussion on a given day. Please remember that you will also be evaluated (and eventually assigned a final grade) on the basis of your participation in the class discussions.

The following schedule is tentative.

**Lecture 1: January 11 (Introduction, Part 2, Chapters 5, 6, 7, and 8 in SD)**

Perspectives on methodology and basic terminologies

Other-regarding preferences (five games, distributional preferences, inequality aversion, maximin preferences)

**Lecture 2: January 18 (Part 2, Chapters 5, 6, 7 and 8 in SD)**

Other-regarding preferences (intentions, hybrid models)

**Lecture 3: January 25 (Part 2, Chapters 5, 6, 7 and 8 in SD)**

Other-regarding preferences (behavioral contract theory, moral hazard, adverse selection, guilt aversion)

**Lecture 4: February 1 (Part 2, Chapters 5, 6, 7 and 8 in SD)**

Other-regarding preferences (self-image, examples from dictator games, identity, status)

**Lecture 5: February 8 (Part 2, Chapters 5, 6, 7 and 8 in SD)**

Incentives (intrinsic and extrinsic motivations, applications)

**Lecture 6: February 15 (Part 1, Chapters 1, 2 and 3 in SD)**

Classical Decision Theory (expected utility theory (EUT))

Violations of EUT

**Lecture 7: February 22 (Part 1, Chapters 1, 2 and 3 in SD)**

Prospect Theory (endowment effect, loss aversion, reference point)

**Lecture 8: March 1 (Part 1, Chapters 1, 2 and 3 in SD)**

Applications of expectation based reference point (taxi drivers, contracts as reference points)

**Lecture 9: March 8 (Part 3, Chapters 9, 10 and 11 in SD)**

Time Preferences (EDU, hyperbolic model, procrastination)

Applications of procrastination and material incentives

**Lecture 10: March 15 (Part 1, Chapters 1, 2 and 3 in SD)**

Time Preferences (EDU, hyperbolic model, procrastination)

Applications of procrastination and material incentives

**Lecture 11: March 22 (Part 4, Chapters 12 and 13 in SD)**

Coordination games (stag-hunt, minimum effort games, BOS, market entry games, Braess paradox, disapproval)

**Lecture 12: March 29 (Part 4, Chapters 1, 2 and 3 in SD)**

Bargaining games (Nash bargaining, information asymmetry, multi period ultimatum games)

**Lecture 13: April 5 (Part 1, Chapters 12 and 13 in SD)**

Public good games (punishment, endogenous groups, other variations)

**Lecture 14: April 12 (Part 1, Chapters 12 and 13 in SD)**

Models incorporating lack of Perfect Rationality (beauty contest games, QRE, Level- $k$  model, applications)

**Lecture 15: April 19 (Part 1, Chapters 1, 2 and 3 in SD)**

Deception (size, biases, other variations)

**Grade Determination and Examination Details:**

The following outlines the evaluation schemes that will be used in the course. The weight assigned to each scheme *may* change at the discretion of the professor within the first two weeks of the class.

Each student must write eight referee reports. A referee report is a critical analysis of a paper. Each report must be based on an exogenously assigned paper (by me) covering a different topic. Each report carries a weight of 5%. If you miss a report, you lose all the points. Do not disclose a particular point about the paper that you think others might miss. Because if that point is really an important point about the paper and reveals a serious crack in that paper, then your referee report should get higher points. So, be self-interested!

The prepared referee report should:

- ✿ mention the main questions of the assigned paper,
- ✿ list the main findings of the paper,
- ✿ be constructively critical of the methodology and the experimental design of the paper,
- ✿ be careful of the data analysis and interpretation of the data,
- ✿ and suggest ways to improve the design and data analysis of the paper, and comment on the merit of the question and conclude with what particular economically relevant insight that paper has generated.

All students must write a research proposal, which is due on the last day of the class (April 19). This is equivalent to a final exam. Try doing something so that that piece can be turned into a potential

dissertation topic. Meet with the professor to hatch and sharpen an idea. The proposal carries a weight of 40% of the final grade. Your job is to “sell” your idea to the professor (that is, your potential reader) via a research proposal.

A good proposal:

- ✿ is between 5 and 10 pages,
- ✿ is broken into 3 to 6 coherent sections, such as (for example) “Introduction”, “Related Literature”, “Proposed Experiment”, “Hypotheses”, and “(Expected) Conclusion”,
- ✿ has a title page with the author’s name, title, and an abstract of <100 words that summarizes the proposal,
- ✿ properly surveys related literature to show that (a) your idea hasn’t been done, and (b) your idea has spotted an interesting hole in the literature,
- ✿ provides *in very clear detail* what exactly you propose to work on,
- ✿ has a list of hypotheses about what you expect to find,
- ✿ and provides *in very clear detail* what resources you will need (money, subjects, computer lab, etc.).
- ✿ *Examples of potentially relevant topics:*

Addiction, anonymity, attention, auctions, auditing, bargaining, beauty, biases, bounded rationality, bracketing, bubbles, business, children, communication, confidence, confirmatory bias, contract theory, cooperation, coordination, corruption, crime, deception (in or outside the lab), decision making, deductive reasoning, development, discrimination, double auctions, emotions (including anger, anxiety, disappointment, elation, envy, fear, guilt, meta-guilt, irritation, joy, regret, shame, surprise) entrepreneurial discovery, evolution, equity premium puzzle, ethnicity, evolution, experimental business research, fairness, feelings, field experiments, finance, fines, framing, gender, government failure, group decisions, happiness, health, hedonics, herding, heuristics, history of behavioral/experimental economics, hyperbolic discounting, identity, imitation, implementation, incentives, inference, informational cascades, internet, intertemporal choice, judgment, law, learning, liberty, loss aversion, lying, macro, marketing, markets, matching, mechanism design, memory, mental accounting, money illusion, mood, multicriteria games, neuroeconomics, networks, optimism, organizations, paternalism, peer group effects, pessimism, policy, political science, political stock markets, preference reversals, procedural rationality, procrastination, promises, prospect theory, psychological games, public choice, public goods, punishment, quantal response, reciprocity, reference dependence, reputation, revealed preference, revenge, rewards, sabotage, savings, script analysis, signaling, shirking, social distance, social norms, social preferences, social respect, somatic markers, speculation, statistics, status, teams, temptation, threats, time consistency, time preference, unawareness, visceral factors, voting, wages, welfare...

Your class participation will carry a weight of 20% of the final grade.

Students who are unable to write a report will receive zero points. There will be no late submissions. If you miss a report due to being sick, then you must obtain my permission. You must supply documented evidence (medical prescription) of your illness.

All reports and the proposal are marked on a numerical basis, then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, these letter grade equivalences will apply:

A ≥ 93%

93% > A ≥ 90%

90% > B+ ≥ 87%

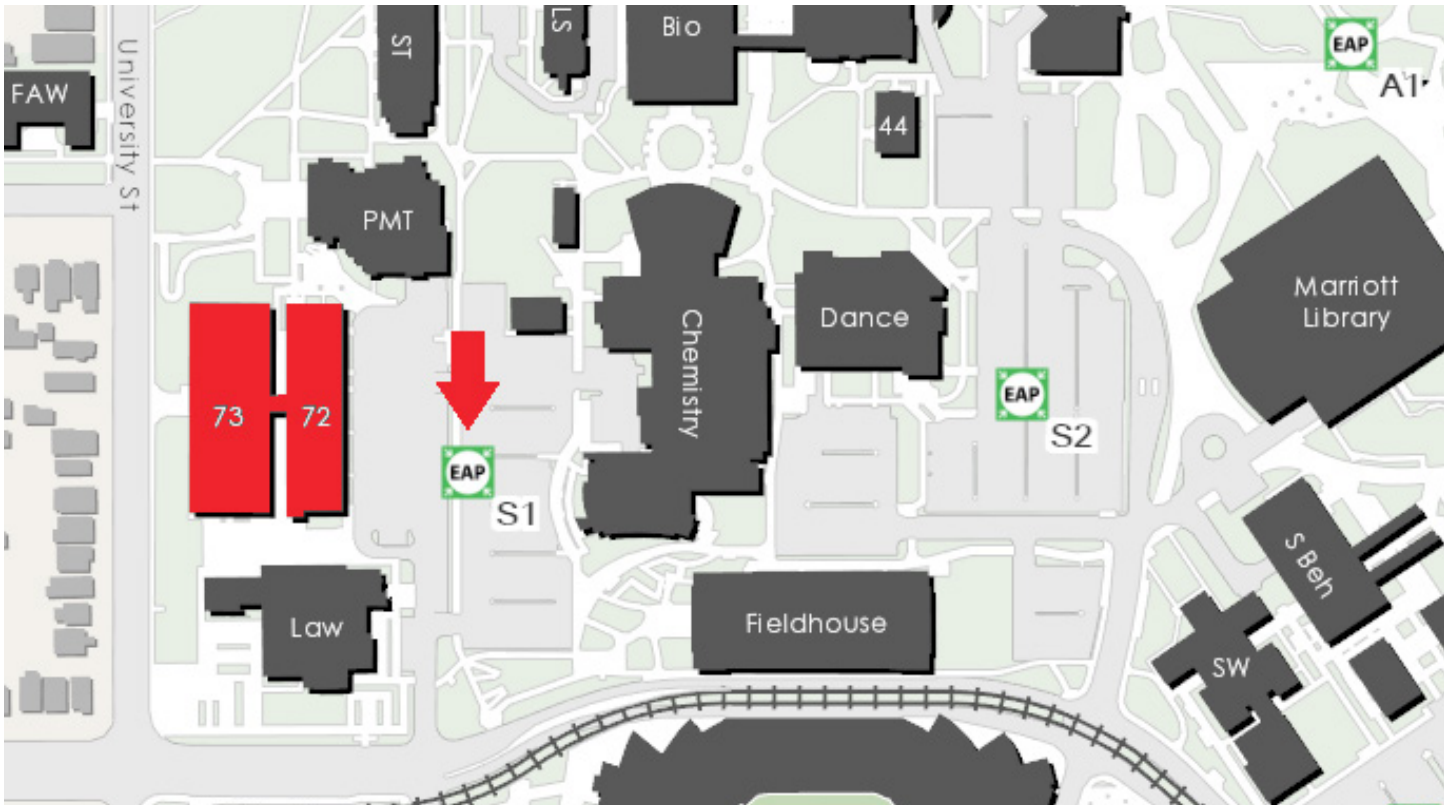
87% > B ≥ 83%  
83% > B- ≥ 80%  
80% > C+ ≥ 77%  
77% > C ≥ 73%  
73% > C- ≥ 70%  
70% > D+ ≥ 65%  
65% > D ≥ 60%  
60% > D- ≥ 50%  
50% > E

If you have questions regarding grading of an exam question, you must ask within **two weeks** from the day the graded exam is handed back in the class. No exceptions to this rule will be entertained.

**Notes:**

- Cheating on exams and other forms of academic dishonesty may lead to expulsion from the class, failure of the class, or more severe penalties such as dismissal from the University. In accordance with University regulations (University Policy 6-400, Section V, B, 4, at, if you are caught cheating in this class, I must send a letter to your dean about that, and the letter will be put in your permanent University file. I punish cheating quite severely.
- **Americans with Disabilities Act (ADA) Statement**  
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services. ([www.hr.utah.edu/oeo/ada/guide/faculty/](http://www.hr.utah.edu/oeo/ada/guide/faculty/))
- **Wellness Statement**  
Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness - [www.wellness.utah.edu](http://www.wellness.utah.edu); 801-581-7776.

# CSBS EMERGENCY ACTION PLAN



## BUILDING EVACUATION

EAP (Emergency Assembly Point) – When you receive a notification to evacuate the building either by campus text alert system or by building fire alarm, please follow your instructor in an orderly fashion to the EAP marked on the map below. Once everyone is at the EAP, you will receive further instructions from Emergency Management personnel. You can also look up the EAP for any building you may be in on campus at <http://emergencymanagement.utah.edu/eap>.



## CAMPUS RESOURCES

**U Heads Up App:** There's an app for that. Download the app on your smartphone at [alert.utah.edu/headsup](http://alert.utah.edu/headsup) to access the following resources:

- **Emergency Response Guide:** Provides instructions on how to handle any type of emergency, such as earthquake, utility failure, fire, active shooter, etc. Flip charts with this information are also available around campus.
- **See Something, Say Something:** Report unsafe or hazardous conditions on campus. If you see a life threatening or emergency situation, please call 911!

**Safety Escorts:** For students who are on campus at night or past business hours and would like an escort to your car, please call **801-585-2677**. You can call 24/7 and a security officer will be sent to walk with you or give you a ride to your desired on-campus location.