**Course Outline**

New York City College of Technology

Social Science Department

## Prepared by: Gulgun Bayaz Ozturk

## Class Hours: 3, Credits: 3

New Course Proposal: Econ 2800 Behavioral Economics

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**CATALOG DESCRIPTION**: The goal of this interdisciplinary course is to understand the factors that underlie the judgment/decision making processes of economic agents. Behavioral economics challenges the rationality assumption of standard economic theory and provides a comprehensive framework to understand human choice by incorporating insights from the discipline of psychology.

**Proposed rationale for course**:

Postwar neoclassical economics focused on observable choices and distanced itself from the influence of psychology, and psychological foundations of human choice behavior. However, behavioral economists showed that human choice is not always rational, and prone to systematic errors, and with the help of psychology we can better describe human choice. Keeping up with the recent advances in economic theory, the goal of this course is to understand the psychological underpinnings of human choice rather than accepting the dogmatic rationality assumption of neoclassical economics. Besides adding to the variety of economics courses offered at NYCCT, offering this course will ensure that college curriculum is in line with the recent developments in economic theory.

COURSE PREREQUISITE:

CUNY proficiency in reading and writing, either Econ 1101 or Econ 1401, Mat 1275, PSY 1101

RECOMMENDED TEXTBOOK and MATERIALS\*

**Required**:

Angner, Erik. A Course in Behavioral Economics. Palgrave Macmillan, 2012.

**Recommended:**

Thaler, Richard H., and Sunstein, Cass. *Nudge*. Penguin Books, 2009.

Kahneman, Daniel. *Thinking Fast and Slow*, Farrar, Straus and Grioux, 2011.

Additional assigned readings from journals, newspaper and magazine articles.

**Other sources:**

<http://nudges.org/>

<http://www.inudgeyou.com/decisions-into-the-future-nudging-time-consistent-choices/>

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SAMPLE SEQUENCE OF TOPICS AND TIME ALLOCATIONS (number of hours)

**Week 1:** What is behavioral economics?

* The “Rational Man” assumption in standard economic theory and Bounded Rationality in Choice. (*homo economicus vs. Humans*)
* Standard economic theory as a normative theory rather than a descriptive theory.
* Introduce behavioral economics as a descriptive theory, and that it attempts to describe human choice behavior without ruling out irrational choice behavior.

Assigned readings:

1) Angner, Introduction, pgs. 3-8. 2) Kahneman, *Introduction,* pgs. 3-15;

Additional reading:

Angner, Erik and Loewenstein, George (2012). “Behavioral Economics” in Uskali Maki, ed., Handbook of the Philosophy of Science: Philosophy of Economics, Amsterdam: Elsevier, pp. 641-90.

**Week 2:** The theory of rational choice under Certainty.

* Introducing the theory of rational choice with a focus on consumer’s choice problem.
* Defining rational preferences, listing and explaining the axioms that preferences of a consumer must follow.
* Introducing indifference curves, budget set, utility, and choice under certainty.

Assigned readings:

Angner, Ch 2: Rational Choice under Certainty, pgs. 11-28.

Additional reading:

Allingham, Michael (2002). “Choice Theory: A very short introduction”, Oxford: Oxford University Press.

**Week 3:** Decision-Making under Certainty and Prospect Theory.

* Explore whether we can predict human choice behavior in real-world settings using the theory of rational choice.
* Class discussion on the failure to take into account opportunity costs, sunk costs when making decisions.
* Introducing Prospect Theory and value functions after a discussion on loss aversion, reference dependence, and the endowment effect.

Assigned readings: 1) Angner, Ch 3: Decision-Making under Certainty, pgs. 29-55. 2) Kahneman, Ch 26: Prospect Theory, pgs. 278-288. 3) Kahneman, Ch 27: Endowment effect, pgs. 289-299.

Additional readings:

1) Frank, Robert (2005). “The opportunity cost of economics education” New York Times, September 1, p. C2. 5. 2) Arkes, Hal R. and Catherine Blumer (1985). “The psychology of sunk cost”, Organizational Behavior and Human Decision Processes, 35(1), 124-140. 3) Kahneman, Daniel, Jack L. Knetsch and Richard Thaler (1991), “Anomalies: The endowment effect, loss aversion, and status quo bias”, The Journal of Economic Perspectives, 5(1), 193-206.

**Week 4:** Class discussion on the influence of heuristics and biases on the decision making process, and an application on labor supply of NYC cab drivers.

* Will be taught by a guest lecturer.
* Running class experiments to observe the influence of heuristics (for example; anchoring, the law of small numbers and sampling effects, availability heuristic, regression to the mean, less is more) on decision making of students.
* Talking about the labor supply decisions of NYC cab drivers.

Suggested readings: 1) Kahneman, Part 2: Heuristics and Biases pgs. 110-195. 2) Thaler and Sunstein, Ch 1: Biases and Blunders pgs. 17-40. 3) Camerer, Colin, Linda Babcock, George Loewenstein and, Richard Thaler (1997). “Labor Supply of New York City cabdrivers: One day at a time” The Quarterly Journal of Economics, 112(2), 407 41.

**Week 5: Midterm Exam**

**Week 6:** Probabilistic Judgment and the Fundamentals of Probability Theory.

* Providing examples of probability judgment.
* Presenting the fundamentals of probability theory; conditional and unconditional probability
* Introducing Bayes’s rule i.e. computing unconditional probability from conditional probability.

Assigned readings: 1) Angner, Ch 4: Probability Judgment, pgs. 61-78.

**Week 7:** Does the probability theory predict how people actually make probabilistic judgments?

* Will be taught by a guest lecturer.
* Providing examples of probability judgment.
* Class discussion on heuristics and the biases that they lead to. Running class experiments to observe the influence of heuristics (for example: base-rate neglect, confirmation bias, availability).
* Providing the proposal of behavioral economists to improve the standard economic theory so that it can adequately describe judgment under uncertainty.

Assigned reading: 1) Angner, Ch 5: Judgment under Risk and Uncertainty, pgs. 81-96.

Additional readings:

1) Kahneman, Ch 7: A Machine for Jumping to Conclusions, pgs. 79-88. 2) Kahneman, Ch 8: How Judgments Happen, pgs. 89-96. 3) Kahneman, Ch 10: The Law of Small Numbers, pgs. 109-118. 4) Nickerson, Raymond (1998). “Confirmation Bias: A ubiquitous phenomenon in many guises” Review of General Psychology, 2(2), 175-220. 5) Bar-Hillel, Maya (1980), “The base-rate fallacy in probability judgments,” Acta Psychologica, 44(3), 211-233.

**Week 8:** Rational Choice under Risk and Uncertainty.

* Defining risk and uncertainty.
* Laying the foundations of expected utility theory by providing examples on choice under uncertainty. Introducing the expected utility theory which makes use of utility and probability concepts covered in previous lectures.
* Finding the expected value and expected utility of a gamble.

Assigned readings: 1) Angner, Ch 6: Rational Choice under Risk and Uncertainty, pgs. 103-122.

**Week 9:** Can expected utility theory predict human choice? Decision-Making under Risk and Uncertainty.

* Will be taught by a guest lecturer.
* Providing examples and class discussion on systematic deviations from the predictions of standard theory. Talking about framing effects, and bundling and mental accounting in decision making under risk.
* Prospect theory revisited under conditions of uncertainty by introducing more assumptions about the value function.

Assigned reading: 1) Angner, Ch 7: Decision-Making under Risk and Uncertainty, pgs. 124-142.

Additional reading: 1) Kahneman, Ch 32: Keeping Score, pgs. 342-352. 2) See the following paper for framing effects and probability weighting: Kahneman, Daniel and Amos Tversky (1979), “Prospect Theory: An analysis of decision under risk,” Econometrica, 47(2), 263-291.

**Week 10: Midterm Exam**

**Week 11**: Intertemporal Choice and the Discounted Utility Model.

* Focusing on decisions that involve time as a factor.
* Class discussion on decisions that involve immediate benefits and deferred costs or immediate costs and deferred benefits.
* Working on simple time-discounting problems.
* Introducing the model of exponential discounting and its implication of time consistency.

Assigned readings: 1) Angner, Ch 8: Discounted Utility Model, pgs. 147-156.

**Week 12** Time-inconsistency and Self-Control Problems and Its Applications on Health and Wealth

* Providing examples to impulsivity and impatience.
* An application on health: Obesity, cancer screening.
* An application on wealth: Saving for Retirement

Assigned reading: 1) Thaler and Sunstein, Ch 6: Save More Tomorrow pgs. 105-120. 2) Loewenstein, George, Daniel Read, and Roy F. Baumeister, eds (2003). Time and Decision: Economic and Psychological Perspectives on Intertemporal Choice, New York, NY: Russell Sage Foundation. Dodd, 3) Mark (2008). “Obesity and Time-inconsistent Preferences,” Obesity Research and Clinical Practice 2, 83-89.

**Week 13:** Time-inconsistency and Hyperbolic Discounting

* Introducing the proposal of behavioral economics to capture time-inconsistent behavior by using hyperbolic discounting.
* Introducing beta-delta model.
* A discussion on hyperbolic discounting and its limitations.

Assigned readings: 1) Angner, Ch 9: Intertemporal Choice, pgs. 158-170. 2) Loewenstein, George, Daniel Read, and Roy F. Baumeister, eds (2003). Time and Decision: Economic and Psychological Perspectives on Intertemporal Choice, New York, NY: Russell Sage Foundation.

**Week 14:** Behavioral welfare economics and Libertarian Paternalism in economics

* Policy recommendations by behavioral economists to make the world we live in a better place.
* Discussing the welfare-enhancing proposals of behavioral economists such as default options and Save More Tomorrow Program.
* Class discussion of two welfare-enhancing policy proposals by Thaler and Sunstein on school choice and organ donations.
* Showing the “Choice Architecture” presentation by Richard Thaler at Google where he discusses the tools of behavioral economics to improve decision making in health, wealth and happiness.

<https://www.youtube.com/watch?v=Dz9K25ECIpU&list=PLh5BMOdETjOr-19xRD59WRoh1Vwf6zRUW>

Assigned readings: 1) Angner, Ch 12: General Discussion, pgs. 207-211. 2) Thaler and Sunstein, Ch 6: Save More Tomorrow pgs. 105-120. 3) Thaler and Sunstein, Ch 7: Naïve Investing, pgs. 120-134. 4) Thaler and Sunstein, Ch 11: How to Increase Organ Donations, pgs. 177-185 2) Thaler and Sunstein, Ch 13: Improving the School Choices

**Week 15**: Final Exam

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**COURSE INTENDED LEARNING OUTCOMES/ASSESSMENT METHODS:** To develop an understanding of the fundamental concepts of behavioral economics and how it improves the standard theory to describe human choice accurately. Specifically, course objectives include the following:

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| LEARNING OUTCOMES1 | ASSESSMENT METHODS |
| 1. Students in the course should be able to demonstrate an understanding of the standard economic theory particularly the theory of rational choice under certainty and uncertainty. | 1. The midterm and final exams, which will include essay questions, will test students’ understanding of the standard economic theory. |
| 1. Students should be able to critically evaluate the rational choice theory using real-world examples, and provide examples on how heuristics can lead to systematic errors and biases in decision making. | 2. Class discussions of assigned articles and other supplementary readings, and experiments conducted in class. |
| 1. Demonstrate an understanding of how behavioral economics incorporates psychological factors into standard theories to adequately describe human choice, and to improve the predictive power of economic theories. | 3. Both exams and class discussions will help students to grasp rational choice theory and prospect theory. Extensive use and variety of real-world examples will help students to understand the additions of prospect theory to the standard economic theory. |
| 1. Develop an understanding of how behavioral economics can be used to improve individual decision making in different spheres of life, and how it can be used in economic policy making. | 4. Class discussions, in-class experiments, and assignments that point out deviations from rationality in decision making, and how decisions can be improved. Class discussions on welfare-enhancing policy proposals by behavioral economists, and video presentations by leading figures in the field which will help students understand how behavioral economics can be used to design sound economic policies. |

GENERAL EDUCATION LEARNING OUTCOMES/ASSESSMENT METHODS

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| LEARNING OUTCOMES | ASSESSMENT METHODS |
| 1. KNOWLEDGE: Understanding this relatively new sub-discipline of economics, and how predictive power of its theories can be used in economic policy making. | 1. Class discussions, assignments and exams that test understanding of key concepts and that require students to express their understanding in writing. |
| 1. SKILLS: By taking advantage of comparative framework used in the classroom, develop an ability to critically evaluate different theories of decision making. Identify the role of heuristics and deviations from rationality when making decisions in every sphere of life. Develop and strengthen the ability to discuss concepts and thoughts in writing. | 2.Completion of essay questions on assignments and exams; class discussions of questions tied to topics covered in class and to supplemental short readings, and articles on timely relevant issues where students analyze, evaluate and consider policy options. |
| 1. INTEGRATION: Students should be able to apply the concepts and theories presented in the course to various decision problems they might encounter outside the classroom. | 3. Class discussions and experiments held in the classroom will help students to identify any deviations from rationality. |
| 1. VALUES, ETHICS, AND RELATIONSHIPS: Work creatively with others in group problem solving. | 4. In-class group assignments that encourage student discussion and sharing of ideas and perspectives. |

From: Important General Education Learning Goals (6/1/11) DRAFT

Scope of assignments and other course requirements\*

Students will be asked to work on and turn several mandatory homework assignments consisting of questions which are designed to help them better understand the concepts covered in the classroom.

There will be two in-term exams, plus a Final Exam. Student participation in class discussions is very important and it will count towards 15% of the final grade. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

METHOD OF GRADING – elements and weight of factors determining the students’ grade\*

Midterm exam I 10%

Midterm exam II 15%

Homework assignments 30%

Final exam 30%

In-class assignments and discussion; class participation; attendance 15%

\*Scope of Assignments and Method of Grading to be determined at discretion of the instructor.

ACADEMIC INTEGRITY POLICY STATEMENT

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

COLLEGE POLICY ON ABSENCE/LATENESS

A student may be absent without penalty for 10% of the number of scheduled class meetings during the semester as follows:

**Class Meets Allowable Absence\*\***

1 time/week 2 classes

2 times/week 3 classes

3 times/week 4 classes

\*\*Each department and program may specify in writing a different attendance policy for courses with laboratory, clinical or field work. If the department does not have a written attendance policy concerning courses with laboratory, clinical or field work, the College policy shall govern.

**Bibliography:**

Allingham, Michael (2002). “Choice Theory: A very short introduction”, Oxford: Oxford University Press.

Angner, Erik. A Course in Behavioral Economics. Palgrave Macmillan, 2012.

Angner, Erik and Loewenstein, George (2012). “Behavioral Economics” in Uskali Maki, ed., Handbook of the Philosophy of Science: Philosophy of Economics, Amsterdam: Elsevier, pp. 641-90.

Arkes, Hal R. and Catherine Blumer (1985). “The psychology of sunk cost,” Organizational Behavior and Human Decision Processes 35(1), 124-140.

Bar-Hillel, Maya (1980), “The base-rate fallacy in probability judgments,” Acta Psychologica, 44(3), 211-233.

Brooks, David (2008). “The Behavioral Revolution” New York Times, October 28, p. A31.

Camerer, Colin, Linda Babcock, George Loewenstein and, Richard Thaler (1997). “Labor Supply of New York City cabdrivers: One day at a time,” The Quarterly Journal of Economics, 112(2), 407-41.

Frank, Robert (2005). “The opportunity cost of economics education” New York Times, September 1, p. C2.

Kahneman, Daniel. Thinking Fast and Slow, Farrar, Straus and Grioux, 2011.

Kahneman, Daniel and Tversky, Amos (1979) “Prospect Theory: An analysis of decision under risk” Econometrica, 47(2), 263-91.

Kahneman, Daniel, Jack L. Knetsch and Richard Thaler (1991), “Anomalies: The endowment effect, loss aversion, and status quo bias”, The Journal of Economic Perspectives, 5(1), 193-206.

Krugman, Paul (2009). “How do economists get it so wrong?” New York Times Magazine, September 6, pp. 3-43.

Loewenstein, George, Daniel Read, and Roy F. Baumeister, eds (2003). Time and Decision: Economic and Psychological Perspectives on Intertemporal Choice, New York, NY: Russell Sage Foundation.

Nickerson, Raymond (1998). “Confirmation Bias: A ubiquitous phenomenon in many guises” Review of General Psychology, 2(2), 175-220.

Redelmeier, Donald, and Kahneman, Daniel (1996). “Patients’ memories of painful medical treatments: Real time and retrospective evaluations of two minimally invasive procedures” Pain, 66(1), 3-8.

Schwartz, Barry (2004). The Paradox of Choice: Why more is less? New York, NY: Ecco.

Thaler, Richard H. (1980) “Toward a positive theory of consumer choice” Journal of Economic Behavior and Consumer Choice, 1(1), 39-60.

Thaler, Richard H., and Sunstein, Cass. Nudge. Penguin Books, 2009.

Wilkinson, Nick and Matthias Klaes. An Introduction to Behavioral Economics, Palgrave Macmillan, 2012.