Psych 411 Syllabus: Neuroeconomics

Lecture TR 9:30 - 10:45
Rm. 519 Psychology

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We are faced every day with economic decisions that involve some degree of uncertainty. Should I risk buying this stock today when there is some likelihood that it will plummet in price tomorrow? Where in the brain are measures of risk and likelihood computed? This is a fundamental question posed in Neuroeconomics. Neuroeconomics is a new field whose goal is to bridge brain neuroscience with behavioral economics and decision-making. Neuroeconomics is, by its very definition, multidisciplinary, standing at the intersection of economics, neuroscience, mathematics, computer science and social and cognitive psychology. Neuroeconomics promises not only to inform and constrain behavioral models by observed physiological processes, but also offers new perspectives on modeling neural circuitry of value-based decision-making.

COURSE REQUIREMENTS AND GRADE PERCENTAGES

1. Each week prepare 2 discussion questions based on the assigned readings. Place in learn@UW dropbox the Monday prior to each Tuesday meeting. (30%)

2. Actively participate. (30%)

3. Write a 6-8 page paper proposing a research project in Neuroeconomics. Provide an introduction motivating the topic along with the relevant literature. Discuss the methods for how you would go about studying the research question, and briefly discuss the expected outcome. This will be due at the end of the semester. (40%)

REQUIRED TEXTS: Neuroeconomics: Decision Making and the Brain
Glimcher, Camerer, Fehr and Poldrack (GCFP)

CLASS SCHEDULE (flexible)

Week 1: September 6
Introduction to Neuroeconomics
Weeks 2 & 3: September 13

Introduction to Neuroscience (Anatomy and Physiology)


Week 4: September 27

Behavioral Economics
GCFP: chapters 4, 11

Week 5: October 4

Value-based Decision-making

GCFP: chapters 28, 30

Week 6: October 11

Value-based Decision-making
GCFP: chapters 26, 29
Class Cancelled: October 11

Week 7: October 18

Uncertainty – Risk and ambiguity
GCFP: chapters 10, 23
Week 8: October 25
Temporal Discounting

Week 9: November 1
Learning and Reward

GCFP: chapters 21, 22

Week 10: November 8
Social Decision-making

GCFP: chapters 15, 19

Week 11: November 15
Theory of Mind

GCFP: chapters 17, 20

Week 12: November 22
Game Theory
GCFP: chapter 5

Week 13: November 29
Behavioral Game Theory
GCFP: chapters 6, 13

Week 14: December 6
Neurofinance


Week 15: December 13
Behavioral Genetics


Where to take complaints about a Teaching Assistant or Course Instructor:

Occasionally, a student may have a complaint about a TA or course instructor. If that happens, you should feel free to discuss the matter directly with the TA or instructor. If the complaint is about the TA and you do not feel comfortable discussing it with him or her, you should discuss it with the course instructor. If you do not want to approach the instructor, make an appointment to speak to the Department Chair, Professor Patricia Devine, by emailing: chair@psych.wisc.edu. If your complaint has to do with sexual harassment, you may also take your complaint to Vicky Lenzlinger, Undergraduate Program Coordinator, phone 262-0512 or email her at vlenzlinger@psych.wisc.edu. Her office is located on the second floor of the Psychology building, room 222. If you believe the TA or course instructor has discriminated against you because of your religion, race, gender, sexual orientation, or ethnic background, you also may take your complaint to the Office of Equity and Diversity, room 179-A Bascom Hall, or go to: http://www.oed.wisc.edu/