

W1490
Spring 2004
Syllabus

Experimental Psychology: Thinking and Decision Making
W1490 – Spring 2004

Course Information:

Lecture Location: 614 Schermerhorn
Lecture Time: T 6:10 – 8:00
Lab Location: 200C Schermerhorn
Lab Time (Sec. 1): W: 6:10 – 8:00
Course web-site available on courseworks

Instructor Information:

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Teaching Assistant:

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Course Description:

This course has two main goals related to the two aspects of its title – Experimental Psychology: Thinking and Decision Making. First, this is a course that will introduce you to the **experimental** aspects of psychology. To this end, it is designed to provide instruction in research design, basic data-analysis methods, scientific communication (written and oral), and research ethics. Second, this is a course focused on the topic area of **thinking and decision making**. We will investigate selected topics in thinking and decision-making, focusing on the process of conducting, analyzing and reporting this research. This course is a good complement to the lecture course Psyc W 2235 which provides a more comprehensive survey of topics in thinking and decision making.

Prerequisites:

An introductory course in psychology such as W1001 or W1010 is a prerequisite for this course. If you have not taken one of these courses, you will need the permission of the instructor to register. Statistics is not a required prerequisite for this course, though it is recommended.

Readings:

Required

One of the primary objectives for this course is to develop your understanding of the research methods used in psychology in general (and for research in thinking and decision making in particular). Towards this end, we will be using a standard psychology research methods textbook. It is available at Labyrinth book store located on 112th street between Broadway and Amsterdam. The text is:

Shaughnessy J.J., Zechmeister E.B. & Zechmeister, J.S. (2003). *Research Methods in Psychology* (6th ed.). Boston, MA: McGraw-Hill.

Recommended

Some of you will already have a background in the psychology of thinking and decision making. Others of you will not. If you are interested in obtaining a text that will introduce you to topics in this area, a good, easy-to-read, basic introduction to topics in thinking and decision making is Scott Plous' book. It is available at Labyrinth bookstore. Many of you will find it to be a useful reference source. Required readings from this text will be available on-line through the course web-site.

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S. Plous, *The psychology of judgment and decision making*. (1993). McGraw-Hill Publishing Co.

Course Organization:

Lecture

The lecture portion of the course will focus on material covered in the readings. Class discussion will be encouraged. By the end of the term you will:

- Develop an understanding of selected topics in thinking and decision making
- Develop an understanding of a variety of research methods (their assets and limitations)
- Be able to apply what you've learned to critically evaluate research studies in psychology and other fields.

Laboratory

In the laboratory portion of the course you will engage in three short research projects, giving you hands-on experience in conducting research. You will also receive instruction in basic data analysis using SPSS. By the end of the term you will successfully:

- Collect and analyze data for three research projects
- Present your findings from each project in a well-written lab report
- Work with other students to develop a research proposal which will be presented in class.

Course requirements

Exams: There will be two exams for this course. The exams will cover material presented in the readings and the lectures. Exam format will be discussed in class. It will include short written responses and longer essay responses.

Oral Presentation: During the semester, students will work together in small groups to come up with ideas for original research. Each group will put together an oral presentation presenting their research proposal, which will be given to the class. Details of this project will be discussed later in the term.

Lab Reports: As part of the laboratory portion of the course, you will learn how to write a lab report using the standard format for psychology papers. You will write three lab reports, one for each of the studies conducted in the lab section of the course. Details of the labs will be provided throughout the semester.

Lab Participation: The success of this course will, in part, depend on the active participation of the students. To encourage active participation, you will be given a laboratory participation grade. Any student who attends all of the required lab sessions and actively participates in the lab activities will receive full credit for participation.

Grading:

Lecture grade (50% of final grade)

Exam 1 – 40%

Exam 2 – 40%

Oral Presentation – 20%

Lab grade (50% of final grade):

Lab report 1 – 30%

Lab report 2 – 30%

Lab report 3 – 30%

Lab Participation (Attendance required) – 10%

Due dates:

Lab report 1 – due Friday, February 20

Lab report 2 – due Friday, March 26

Lab report 3 – due Friday, April 16

Oral presentation of group research proposals will be scheduled for class periods in April.

Students with Disabilities:

Students with disabilities who will be taking this course and may need disability related classroom accommodations are encouraged to make an appointment to see me as soon as possible. Also, stop by the Office of Disability Services in Lerner Hall, Suite 802 to register for support services, if you have not done so already.

A course in development:

As an instructor it is important for me to meet the needs of the students in the course. I would like to encourage you to give me feedback throughout the semester. Let me know what is working and what is not working (hopefully with constructive suggestions about how things can be improved). I would appreciate e-mails, personal meetings, or notes in my mailbox.

Schedule of classes:

This schedule is not set in stone. I may make changes. At the end of the term, I have left space for topics of particular interest to students in the class. If a topic dear to your heart has been omitted, please let me know.

Note:

SZZ = the research methods text

All other required readings will be available on-line on the course web-site

January 20 - Scientific Method:

January 27 – Hypothesis Testing

SZZ - Chapter 1 & 2

Baron, J. (2000). *Thinking and Decision Making*, Third Edition, Cambridge, UK: Cambridge University Press. (Part of Chapter 7 – Hypothesis Testing, pp. 149-166).

Wason, P. C. (1968). Reasoning about a rule. *Quarterly Journal of Experimental Psychology*, 20, 273-281.

Dawson, E., Gilovich, T., Regan, D.T. (2002). Motivated reasoning and performance on the Wason selection task. *Personality and Social Psychology Bulletin*, 28(10), 1379-1387.

Related Optional Readings:

Wason, P. C. (1960). On the failure to eliminate hypotheses in a conceptual task. *Quarterly Journal of Experimental Psychology*, 12, 129-140.

Nickerson, R.S. (1998). Confirmation bias: A ubiquitous phenomena in many guises. *Review of General Psychology*, 2(2), 175-220.

February 3 & 10 - Probability Judgments – heuristics and biases

SZZ – Chapter 4

SZZ – Chapter 14 (for use as reference when writing your lab report – this will not be covered on the exam)

On judgement heuristics and biases:

S. Plous, *The psychology of judgment and decision making*. (1993). McGraw-Hill Publishing Co. (Chapters 10, 11, 12 and 14)

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185, 1124-1131.

Gilovich, T., Vallone, R., and Tversky, A. (1985). The hot hand in basketball: On the misperception of random sequences. *Cognitive Psychology*, 17, 295-314.

On Bayes' Theorem:

Baron, J. (2000). *Thinking and Decision Making*, Third Edition, Cambridge, UK: Cambridge University Press. section on Bayes' theorem pp. 109 - 120).

Eddy, D. M. (1982). Probabilistic reasoning in clinical medicine: Problems and opportunities. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 249-267). New York: Cambridge University Press.

February 17 – Guest Lecture by Eric Schoenberg

SZZ – Chapter 5

Readings: TBA

February 24 – Heuristics are a good thing?!

SZZ – Chapter 6

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Gigerenzer, G, Todd, P. M. and the ABC Research Group (1999). *Simple Heuristics that Make us Smarter*. Oxford University Press. (Chapters 1 and 4).

March 2 – Midterm Exam

March 9 & 23 – Decision Making - Utility Theory and Prospect Theory

SZZ – Ch 7 & 8

S. Plous, *The psychology of judgment and decision making*. (1993). McGraw-Hill Publishing Co. (Chapters 7-9)

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453-458.

Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, 4, 199-214.

Related Optional Reading:

Kahneman D & Tversky, A. (1979). Prospect theory: An analysis of decisions under risk. *Econometrica*, 47, 263-291.

March 30 & April 6 – Emotions in Decision-Making

SZZ – Ch. 9

Isen, A. M. (1997). Positive affect and decision making. In W. M. Goldstein & R.M. Hogarth (Eds.) *Research on judgment and decision making: Currents, connections and controversies* (pp. 509-537). New York: Cambridge University Press.

Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgement and choice. *Cognition and Emotion*, 14(4), 473-493.

Rottenstreich, F., & K. Hsee, C. (2001). Money, kisses and electric shocks: On the affective psychology of risk. *Psychological Science*, 12(3), 185-190.

Optional Related Reading:

Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological Bulletin*, 127(2), 267-286.

April 13 - Research methods and technology: New possibilities for research

SZZ – Chapter 3

Additional Readings: TBA

April 20 & 27 – Topic(s) of interest to the class (TBD)

Final Exam – to be held at the time scheduled by Columbia University (TBA)