

Psychology S1480D/ S2230
Experimental Psychology: Perception and Attention
Columbia University
Summer Session I, 2006

Course Description: This course combines lectures and practical lab experience aimed at explaining the basics of perception, attention, and the relation between the two. Perception refers to the mental processing of the information that we gain from our senses. Attention is a broad term that includes such things as the influence of our expectations and how we allocate our limited mental resources. However, these two aspects of mental processing are inter-dependent. For example, perception can influence attention, such as when we turn our heads towards a loud noise, and attention can affect perception, such as when we search for a familiar face among a crowd of people. The lectures and reading will cover a broad range of topics, while in the lab sections students will design, run, analyze and report several core experiments in the field.

Lecture: M,W - 9:00 - 12:10, 200B

Lab: T,Th - 9:00 - 12:10, 200B

Instructors: Dr. Brian C. Rakitin, Anja Soldan
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Texts: Coran, S, Ward, L M., & Enns, J. (2003). *Sensation and Perception (6th edition)*. Publisher: Jossey-Bass, an Imprint of Wiley

Evaluation: There will be two exams, each worth thirty percent of the grade. Exams will cover material from lectures, labs, and assigned readings, from either the first or second half of the course. Exams will consist primarily of multiple choice and short answer questions (sentence or short paragraph). Lab assignments will constitute the remaining forty percent of the grade. This will include written project reports, attendance, and evaluations of your contributions in the lab sessions.

Absence & Make-up Exams:

An unexcused absence from any of the exams will result in a grade of F on that exam. To be excused from an exam you must personally notify one of the instructors before the exam and must present some evidence certifying the legitimacy of your absence (e.g., doctor's note). Makeup exams will typically, but not necessarily involve longer, integrative essay questions. Late lab reports

will be assigned a penalty of 5 points (out of 100) for every day the report is handed in past the due date, unless you present a legitimate excuse to one of the instructors before the report is due.

Class Schedule and Required Readings

Week 1

- May 22 Lecture 1: Introduction, Definitions, & Discussion
Instructor: Brian Rakitin
Reading: Chapter 1 Coran, et al.,
- May 23 Lab 1: Elementary Statistics
Instructor: Anja Soldan
- May 24 Lecture 2: Psychophysics & Signal Detection
Instructor: Anja Soldan
Reading: Chapter 2 Coran, et al.
- May 25 Lab 2: Elementary Statistics (Cont.) & Scientific Writing
Instructor: Brian Rakitin

Week 2

- May 29 Memorial Day (class rescheduled to June 2)
- May 30 Lab 3: Magnitude Estimation 1
Instructor: Brian Rakitin
- May 31 Lecture 3: Basic Visual Perception
Instructor: Anja Soldan
Reading: Coren, et al., Chapters 3 & 4
- June 1 Lab 4: Magnitude Estimation 2 & Analysis
Instructor: Brian Rakitin
- June 2 Lecture 4: Other Perceptual Modalities
Instructor: Brian Rakitin
Reading: Coren, et al., Chapters 5, 6, 7

Week 3

- June 5 Lecture 5: Objects & Scenes
Instructor: Anja Soldan
Reading: Coren, et al., Chapter 10
Deadline: Magnitude Estimation Lab Report Due
- June 6 Lab 5: Experimental Design 1
Instructor: Brian Rakitin
- June 7 Lecture 6: Space & Time
Instructor: Brian Rakitin
Reading: Coren, et al., Chapters 9 & 11
- June 8 **Exam 1**
Instructor: Brian Rakitin

Week 4

- June 12 Lecture 7: Introduction to Attention
Instructor: Brian Rakitin
Reading: Coren, et al., Chapter 13
- June 13 Lab 6: Mental Rotation 1
Instructor: Anja Soldan
- June 14 Lecture 8: Attention - TBA
Instructor: Anja Soldan
Reading: TBA
- June 15 Lab 7: Mental Rotation 2 – Data Analysis
Instructor: Anja Soldan

Week 5

- June 19 Lecture 9: Attention - TBA
Instructor: Brian Rakitin
Reading: TBA
Deadline: Mental Rotation Lab Report Due
- June 20 Lab 8: Visual Search 1
Instructor: Anja Soldan
- June 21 Lecture 10: Neuroanatomy & Neuropsychology of Perception
Instructor: Anja Soldan
Reading: TBA
- June 22 Lab 9: Visual Search 2: Data Analysis
Instructor: Anja Soldan

Week 6

- June 26 Lecture 11: Neuropsychology of Attention & Consciousness
Instructor: Anja Soldan
Reading: Coren, et al., Chapter 13
Deadline: Visual Search Lab Report Due
- June 27 Lab 10: Experimental Design 2 & Hypothesis Testing
Instructor: Brian Rakitin
- June 28 Lecture 12: Development of Perception
Instructor: Brian Rakitin
Reading: Coren et al., Chapter 15
- June 29 **Exam 2**