

# SENSATION & PERCEPTION

## Course Outline

Spring Semester, 2008

### PSYC4120

MWF 10:10-11:00am, PSY 120

Lab: Th 11:00am-12:15pm, PSY 102

Off Hrs: W 11:00am-noon, or by apt.

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### Course Objectives:

By the end of this course students should:

- Have gained a general understanding and appreciation of their sensory/perceptual systems.
- Have an understanding of the general anatomy, processes, and functions of the different sensory/perceptual systems.
- Have gained first hand experience about many perceptual abilities/systems through the lab portion of the class.
- Be able to engage in meaningful discussions of current approaches to sensation and perception.
- Understand the role of theories and models in the study of sensation and perception.
- Understand how models are used to generate new psychological knowledge.
- Understand how experimental data relate to theories and models of sensory/perceptual processes.

**Text:** *Sensation & Perception* (7th edition) bundled with Lab Manual & CD-ROM, E. Bruce Goldstein

**Class Notes & Figures:** Download as a pdf file from course WebCT site. (Note: not all materials in the file may be used.) Additional materials may be posted occasionally on WebCT site for download.

**Lab Manual:** Download from course WebCT site.

**Lab TA:** Ben Guenther

**Supplemental Readings (SR's #1-3):** Three required readings for class (listed below) and readings related to lab assignments (see lab syllabus) are on electronic reserve through Main Library. Go to <http://gil.uga.edu/> Click on Course Reserves and search using instructor's name. You must use Acrobat Reader and the Password: *helmholtz*, to be able to open them.

**Grading Policy:** Your final grade will be determined from a combination of: (1) On-line Quizzes (20%), (2) Tests (25%), (3) Lab (25%), (4) a cumulative Final Exam (25%), and, (5) class attendance (5%). See course site for grading scenarios and this combination.

**Attendance Policy:** Your first four (4) unexcused absences (i.e., those without an authorized doctor's excuse, and not including the drop/add period through 1/10/08) carry no penalty. Your fifth unexcused absence results in 5% off your final grade. This policy includes both the lecture and lab.

### Testing Policy:

**General:** Quizzes, Tests, and the Final Exam will be based on information covered in lectures, labs, the text, and supplemental readings. There will be four (4) Tests composed of a combination of definitions and essay questions. The Final Exam will be a 50 question multiple-choice test taken on-line via WebCT in room 102. No make-up quizzes, tests, or exams are allowed without an authorized doctor's excuse. All academic work must meet the standards contained in "A Culture of Honesty." Students are responsible for informing themselves about those standards before performing any academic work.

**Quizzes:** Quizzes will be taken on-line via WebCT. (Review "Pointers for Taking WebCT Quizzes" on our course site.) You will be required to complete quizzes by deadlines posted on the course site and noted below. You can take quizzes from anywhere you can connect to the web, at a time and place of your choosing, with your book and notes available. Quizzes must be taken individually with no communication between students about a quiz until after the deadline has passed. Once a quiz is started it must be completed within 2 hours. When you submit a quiz for grading it will be the score used towards your overall quiz grade. If something bizarre happens (e.g., you accidentally hit the submit button after only answering two questions) contact me by phone or at [jmbrown@uga.edu](mailto:jmbrown@uga.edu) immediately so I might be able to reset quiz before the deadline passes. There will be no resets if you wait until after the deadline to notify me. Five quizzes will be posted at different times throughout the semester. Your quiz grade will be determined from your four (4) best scores.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

<u>Date</u>	<u>Topics</u>	<u>Readings</u>
<b>WEEK #1</b>		
1/7-1/9	Course Mechanics & Introduction	Ch. 1; Ch. 5 (pp.97-99); Ch. 10 (pp.216-219)
1/10	LAB: Introduction & APA Style Review	
1/11	Psychophysics & Signal Detection Theory	Ch. 1; Class Notes; Appendix
<b>WEEK#2</b>		
1/14 & 1/16	Psychophysics, cont.	
1/17	LAB: Classical Psychophysics	
1/18	Neurophysiology & Perception	Ch. 2
<b>WEEK #3</b>		
<b>1/21</b>	<b>NO CLASS: MLK Day Holiday</b>	
1/23	Neurophysiology, cont.	
1/24	LAB: Signal Detection Lab	
1/25	Eye, Retina, & Retinal Function	Ch. 3 (to p.50; pp.55-58); SR#1
<b>WEEK #4</b>		
1/28-30	Eye, Retina, & Retinal Function, cont.	
1/30	<i>Quiz #1 available from 2pm to 6pm 2/1/08</i>	
1/31	LAB: Discussion of Signal Detection Results	
<b>2/1</b>	<b>Test #1</b> [Psychophysics; Neurophysiology; Eye, Retina, & Retinal Function]	
<b>WEEK #5</b>		
2/4-8	Ganglion Cells, RFs, & Lateral Antagonism	SR#2 (pp. 73-77, 88-92)
2/7	LAB: Vision & Movement Video	
<b>WEEK #6</b>		
2/11-13	LGN & Striate Cortex	Ch. 3 (p. 58 to end); Ch 4 (pp.71-77)
2/14	LAB: McCollough Effect & other demonstrations	
2/15	Streams, Modules, Coding, & Attention	Ch. 4 (p.77 to end); Ch. 6 (pp. 121-131)
<b>WEEK #7</b>		
2/18	Streams, Modules, Coding, & Attention, cont.	
2/18	<i>Quiz #2 available from 2pm to 6pm 2/20/08</i>	
2/20 & 2/22	Color Vision	Ch. 7 (pp. 141-159)
2/21	LAB: Color Lab & 2-Way ANOVA Review	
<b>WEEK #8</b>		
2/25-27	Movement Perception	Ch. 9
2/25	<i>Semester Midpoint</i>	
2/28	LAB: Motion Aftereffect (MAE) Experiment	
<b>2/29</b>	<b>Test #2</b> [Visual Pathways (Retina – LGN - Visual Cortex); Streams, Modules, Coding, & Attention; Color Vision; Movement Perception]	
<b>WEEK #9</b>		
3/3-3/7	Lightness, Brightness & Contrast Perception	Class Notes, SR#2 (pp. 77-84), Ch. 7 (p.159- to end)

3/4 Semester Midpoint Withdrawal Deadline  
 3/6 LAB: Return & Discuss MAE Results  
 3/7 Quiz #3 available from 2pm to 6pm 3/9/08

WEEK #10  
**3/10-3/14 NO CLASS: SPRING BREAK**

WEEK #11  
 3/17-3/21 Spatial Frequency Representation SR#3, Ch. 3 (pp. 64-65),  
 Class Notes, Ch. 16 (pp. 352-356)  
 3/20 LAB: CSF Lab

WEEK #12  
 3/24-28 Perceiving Objects Ch. 5; Class Notes; Ch. 6 (pp.131-end)  
 3/27 LAB: Discuss MAE Readings

WEEK #13  
 3/31 Touch & Pain Ch. 14  
**4/2 Test #3** [Lightness, Brightness, & Contrast Perception,  
 Spatial Frequency Representation, Perceiving Objects, Touch & Pain]  
 4/3 LAB: Depth Perception Video & 3-D Lab  
 4/4 Touch Lab

WEEK #14  
 4/7-4/9 Depth Perception Ch. 8  
 4/9 Quiz #4 available from 2pm to 6pm 4/11/08  
 4/11 Audition Ch. 11, 12  
 4/10 LAB: Audition, cont.

WEEK #15  
 4/14 Audition, cont.  
 4/16-4/18 Speech Perception Ch. 13, Ch. 16 (pp. 364-365)  
 4/17 LAB: Smell & Taste Lecture Ch. 15

WEEK #16  
 4/21 Speech Perception, cont.  
 4/21 Quiz #5 available from 2pm to 6pm 4/23/08  
 4/23 Smell & Taste Lab & TA Evaluations  
 4/24 LAB: TBA  
**4/25 Test #4** [Depth Perception; Smell & Taste; Audition; Speech Perception]

WEEK #17  
 4/28 LAST CLASS: Course Evaluations  
**4/30 FINAL EXAM, Wednesday, 8:00-11:00am in PSY 102**

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### Supplemental Readings (SR's)

- #1 The Experiment of Hecht, Schlaer, and Pirenne. from *Visual Perception* (Chapter 2, pp.6-26), T.N. Cornsweet, 1970. [experiment1.pdf](#) , [experiment2.pdf](#)
- #2 Levine, M. W. (2000). Retinal ganglion cells and lateral antagonism, from *Fundamentals of Sensation and Perception* (3<sup>rd</sup> Ed.) (Chapter 5, pp. 73-93). [retinal ganglion1.pdf](#) , [retinal ganglion2.pdf](#)
- #3 Levine, M. W. (2000). Spatial Frequency Representation, from *Fundamentals of Sensation and Perception* (3<sup>rd</sup> Ed.) (Chapter 9, pp. 155-183), **NOTE: Skip part on masking pp. 170-172**. [spatialfreq1.pdf](#) , [spatialfreq2.pdf](#) , [spatialfreq3.pdf](#)

### Plus/Minus Grading Policy

Cutoff %	Letter	4-pt Scale
(90%)	A	= 4.0
(85%)	B+	= 3.3
(80%)	B	= 3.0
(75%)	C+	= 2.3
(70%)	C	= 2.0
(65%)	C-	= 1.7
(60%)	D	= 1.0
	F	= 0.0