THE UNIVERSITY OF WESTERN ONTARIO
LONDON CANADA
Department of Psychology
2009-2010

Psychology 2115B, Section#001
Introduction to Sensation and Perception

1.0 CALENDAR DESCRIPTION

An introduction to the study of the human senses and higher order perceptual processes. Data gathered from psychophysical research and studies of the nervous system in both humans and other animals will be discussed. The course will review the mechanisms and principles of operation of vision, hearing, touch, taste and smell.
Antirequisites: Psychology 2015A/B
Prerequisite: At least 60% in a 1000 level Psychology course
4 lecture hours, 0.5 course

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

2.0 COURSE INFORMATION

Instructor:	Dr. Stephen G. Lomber
Office:	SSC 9252
Phone Number:	663-5777 x24110
E-mail:	steve.lomber@uwo.ca
Office Hours:	after class or by appointment
Course Coordinator:	Dr. Stephen G. Lomber
Teaching Assistant(s):	Caylen Cloutier
Office:	SSC 8240
E-mail:	cclouti@uwo.ca
Office Hours:	after class or by appointment
Time and Location(s) of Lecture(s):	Tuesday and Thursday 8:30-10:15 PM Social Science Centre, SSC 2028

3.0 TEXTBOOKS

Required: *Sensation and Perception*
(Eighth Edition), 2010
By E. Bruce Goldstein
Wadsworth Cengage Learning

Optional: *Sensory Exotica*
By Howard C. Hughes
MIT Press, 1999

4.0 COURSE OBJECTIVES

The world is an external environment, yet our experience of the world occurs within our brains. How do our senses transform the external world into information that our brains/minds can understand and reliably interpret? For instance, how does the light emitted off an object allow us to perceive and identify that object? How do sound, smell, taste, and touch allow us to create a rich and detailed mental representation of the external world? To answer these questions we will examine perceptual processes at a number of different levels.

At the neurological level we will investigate how individual cells respond to external stimuli, how the anatomy and physiology of the perceptual systems allow for efficient processing of incoming information, and how different brain areas are specialized for the analysis of specific types of sensory information.

At a behavioral level we will investigate illusions and subjective experiences. A careful examination of these experiences reveals the processes underlying perception and the type of information used by the brain. By investigating these types of errors we hope to learn more about the way the brain actively recreates the world.

Goals:

- Learn the structure and function of our sensory systems.
- Learn how our brain compresses and analyzes incoming information
- Learn how to design and develop good experiments to investigate sensation
- Learn the beauty and sophistication of our neurological systems

5.0 EVALUATION

Exams (100%): There will be three exams during the course. Each exam will be worth ⅓ of your final grade and will cover the material from the third of the course preceding the exam. There will be no cumulative final exam. Material covered on the exams will be taken from the assigned readings and class lectures, as well as any additional material that may be provided. Exams may include multiple choice, matching, or true/false questions.

Missed Exams: Missed exams may be made up only if you: 1) have a valid excuse, and 2) notified Dr. Lomber **BEFORE** the exam. Excuses must be accompanied by valid documentation (documentation that you sought medical assistance, a newspaper clipping of the obituary of your dead relative, photographs of you with the space aliens that conveniently abducted you the evening before the exam).

The Psychology Department follows the University of Western Ontario grading guidelines, which are as follows (see http://www.uwo.ca/univsec/handbook/general/grades_undergrad.pdf):

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work that is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

6.0 TEST AND EXAMINATION SCHEDULE

Exam 1 – February 2, 8:30AM, Social Science Centre (SSC), Room 2028
Exam 2 – March 11, 8:30AM, Social Science Centre (SSC), Room 2028
Exam 3 – During final exam period (TBA)

7.0 LECTURE SCHEDULE

LECTURE AND READING SCHEDULE

Date	Lecture	Lecture Topic	Reading
January 5	1	Course Introduction and Fundamentals of Perception	Chapter 1
January 7	2	Neurons and Membranes	Chapter 2
January 12	3	The Action Potential	Chapter 2
January 14	4	Synaptic Transmission and Integration	Chapter 2
January 19	5	Introduction to Vision	Chapter 3
January 21	6	Eye and Retina	Chapter 3
January 26	7	Visual Pathways and Primary Visual Cortex	Chapter 4
January 28	8	Visual Cortex and Beyond	Chapter 4
February 2		**Exam 1 (Lectures 1-8, Chapters 1-4)**	
February 4	9	Object Perception	Chapter 5
February 9	10	Visual Attention and The Binding Problem	Chapter 6
February 11	11	Perception and Action	Chapter 7
February 16		*Reading Week - No Class*	
February 18		*Reading Week - No Class*	
February 23	12	Motion Perception	Chapter 8
February 25	13	Color Perception	Chapter 9
March 2	14	Depth Perception	Chapter 10
March 4	15	Perceptual Development	Chapter 16
March 9		Catch-up Day (if needed)	
March 11		**Exam 2 (Lectures 9-15, Chapters 5-10, & 16)**	
March 16	16	Hearing	Chapter 11
March 18	17	Hearing and Balance	Chapter 11
March 23	18	Sound Localization	Chapter 12
March 25	19	Speech Perception and Language	Chapter 13
March 30	20	Touch	Chapter 14
April 1	21	Touch and Pain	Chapter 14
April 6	22	Smell and Taste	Chapter 15
April 8	23	Multisensory Integration and Crossmodal Plasticity	
TBA		**Exam 3 (Lectures 16-23, Chapters 11-15)**	

8.0 STATEMENT ON ACADEMIC OFFENCES

Students are responsible for understanding the nature and avoiding the occurrence of plagiarism and other scholastic offenses. Plagiarism and cheating are considered very serious offenses because they undermine the integrity of research and education. Actions constituting a scholastic offense are described at the following link: http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf

As of Sept. 1, 2009, the Department of Psychology will take the following steps to detect scholastic offenses. All multiple-choice tests and exams will be checked for similarities in the pattern of responses using reliable software, and records will be made of student seating locations in all tests and exams.

Possible penalties for a scholastic offense include failure of the assignment, failure of the course, suspension from the University, and expulsion from the University.

9.0 OTHER INFORMATION

WebCT:
A copy of the syllabus and other important information will be posted on WebCT. At least 48 hours prior to each lecture, an outline of the lecture will be posted and available for downloading and printing. These outlines will accumulate until the next exam, when they will be removed.

Attendance and Readings:
Your performance in this course will be greatly influenced by your attendance. Some material discussed in lecture is not covered in the textbook.

Cell Phones, etc.:
Cell phones, pagers, iPods, and other electronic devices, except laptops, have no place in class. Please do not bring them to class or turn them off. Any ringing cell phones will be answered by Dr. Lomber.

Office of the Registrar web site: http://www4.registrar.uwo.ca

Student Development Services web site: http://www.sdc.uwo.ca

Please see the Psychology Undergraduate web site for information on the following:

http://psychology.uwo.ca/newundergradstudentresp.htm

- Policy on Cheating and Academic Misconduct
- Procedures for Appealing Academic Evaluations
- Policy on Attendance
- Policy Regarding Makeup Exams and Extensions of Deadlines
- Policy for Assignments
- Short Absences
- Extended Absences
- Documentation
- Academic Concerns
- 2009 Calendar References

No electronic devices, including cell phones, will be allowed during exams.