



BIO 215

Sensation & Perception

Semester: Fall, 2014
Days: Wed 4:00 pm – 6:45 Pm
Room: A2210

Number of credits: 3

Prerequisite:
PS 121

Instructor: Dr. Alan Ho
Email: aho@ambrose.edu
Phone: 403-410-2000 ext. 5911
Office: L2088
Office hours: By appointment

Course Description:

The psychological and physiological bases of sensory and perceptual processes, including vision, audition, taste, smell, touch and basic psychophysics.

Further Course Information:

Sensation and perception are two complimentary but different processes in which our nervous system generates a subjective representation of the physical world using information received from our sensory organs. Sensation refers to the process of sensing our environment through vision, audition, touch, smell, and taste. The raw sensory information is sent to our brains for perceptual interpretation where chains of physiological and psychological processes occur. Sensation and perception enable us to make sense of everything around us and help us to react in relation to our environment. This course will examine the major issues and complexities in perception such as solving stimuli ambiguities and the meaning of various illusory perceptions. How knowledge or cognitive “top-down” processes can influence and bias our perceptual interpretation will also be discussed.

Important Dates:

First day of classes: September 3, 2014
Registration revision period: September 14, 2014
Last day to request revised examination: October 27, 2014
Last day to withdraw from course: November 12, 2014
Last day to apply for time extension for coursework: November 24, 2014
Last day of classes: December 9, 2014

Expected Learning Outcomes:

It is the aim of the course that students acquire the following knowledge and skills:

1. Basic concepts, laws and principles in perception.
2. Various psychophysical and physiological approaches that provide information and insight on how sensory stimulation is linked to perception.
3. Processes and mechanisms of how external physical stimulus signals are changed into physiological or neural signals.
4. Anatomical organization of the visual, auditory, and somatosensory systems.
5. Perceptual processing in the visual, auditory, and somatosensory systems.
6. The process of doing and presenting a research-based project in experimental psychology.

Final Exam: December 16, 2014

Time: 1:00 PM – 2:30 PM

Room: A2133

Outline:

Sep 3	Chapter 1 –Introduction
Sep 10	Chapter 2 – The first steps in vision: from light to neural signals
Sep 17	Chapter 3 – Spatial vision: from spots to stripes
Sep 24	<i>Spiritual Emphasis Day (No Daytime Classes)</i>
Oct 1	<i>Unit Exam I (Chapters 1, 2, 3)</i>
Oct 8	Chapter 4 – Perceiving and recognizing objects
Oct 15	Chapter 5 – The perception of color
Oct 22	Chapter 6 – Space perception and binocular vision
Oct 29	Chapter 8 – Motion perception
Nov 5	<i>Unit Exam II (Chapters 4, 5, 6, 8)</i>
Nov 12	Chapter 13 – Touch
Nov 19	Chapter 9 – Hearing: physiology and psychoacoustics
Nov 26	Chapter 10 – Hearing in the environment*
Dec 3	<i>Project Presentation</i>
Final Exam Week	<i>Unit Exam III (Chapters 9, 10, 13)</i>

Requirements:

1) Unit Exams (75%).

The three unit exams each worth **25%** (3 x 25% = **75%**) of the course mark. Each exam will cover material for the identified chapters only. The exams consist of multiple-choice questions, matching, short answer and/or essay questions based on the textbook chapters as well as class notes. You are strongly encouraged to make use of the online study material on the textbook website: <http://sites.sinauer.com/wolfe3e/home/startF.htm>

2) Term Project (25%).

You will carry out an experimental research study on one particular visual perceptual phenomenon of your choice (consult and work with your instructor) and present it in class using a scientific poster format near the end of the term. Students will work in a team of **no more than three** members. All members of a team will receive the same grade for the completed assignment, with no exception. This research requires you to design a psychophysical experiment where subjective perceptions on computer generated visual stimuli are assessed from human observers. You will only recruit adult volunteers (**age 18 or above**) as participant and gain their consent for your study to ensure that participants can understand how they are involved in your study and that they have the right to withdraw from the experiment at any time when feel discomfort. You **must** also ensure the anonymity of your participants in your study. Please ensure you thank your participant with a card or letter at the completion of your project. **Your experiment must be reviewed and approved by your professor before it can be carried out.**

You are expected to use and make reference to your text and *at least* six (6) other scholarly resources (i.e. journal articles) that are directly related to your project. You will present the results of your research to the class in the form of a **scientific poster**. Marks will be given for content, logic, clarity of thought, appropriate study design, data analysis, and correct interpretation of the theory involved. A **six page written report** (APA style) and a **one page class handout** containing an abstract, brief introduction, methods, results and discussion sections are **due on Nov 26th before class meeting**. Late submission will result in deduction of 10% of mark of the project per day, weekends included. This report carries **20%** of mark for the course. The class presentation takes up the remaining **5%** mark. *A student will receive an F grade for the course if the student did not participate in a term project nor show up for class presentation.*

Submission of Assignments:

Your assignments must be submitted electronically (i.e., via Moodle and/or email) to your instructor.

All submitted assignments will be checked against plagiarism using the Turnitin software. Please read the important information concerning plagiarism and Academic Integrity under the Policies section at the end of this syllabus.

Attendance:

In the Behavioural Science Department we believe that learning is an active and interactive process, a joint venture between student and teacher and between student and student (i.e., learning is not just “downloading” information from teacher to student). Therefore, it is expected that professors will come to each class well-read and prepared to engage students on the topic at hand, giving students the utmost attention and respect. In turn, it is expected that students will take an active role in the learning process. This includes: (a) regular class attendance, (b) reading course material in advance of class, (c) showing up to class on time, and (d) attentively and proactively being “present” at class (i.e., *not on the internet, not texting, not conversing with the person beside you*). Committing to this type of “active learning” significantly increases the learning experience for both teacher and student, and reflects the Christian ethos of excellence and respect that lies at the heart of the Ambrose educational experience.

Please note that attendance at class is expected from each student. For each ***unexcused absence***, a student will lose ***2% of course mark*** without exception.

Exams must be taken at the times specified. The written report is due on the date specified. No extension will be granted. In the case of illness or other extenuating circumstances, exception will be made only with proof of an official medical document.

Evaluation:

Please refer to details as stated in the “Requirements” section above.

Grade Summary:

The available letters for course grades are as follows:

<u>Percentage:</u>	<u>Letter Grade:</u>	<u>Grade Point Weight:</u>	<u>Description</u>
96-100	A+	4.0	Excellent
91-95	A	4.0	
86-90	A-	3.7	
82-85	B+	3.3	Good
75-81	B	3.0	
72-74	B-	2.7	
68-71	C+	2.3	Satisfactory
63-67	C	2.0	
60-62	C-	1.7	
56-59	D+	1.3	Minimal Pass
50-55	D	1.0	
0-49	F	N/A	

Because of the nature of the Alpha 4.00 system, there can be no uniform College-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor’s assessment of the level of each class, compared to similar classes taught previously. Please note that final grades will be available on student registration system. Printed grade sheets are no longer mailed out.

Textbooks:

Required Texts: Wolfe, J. M., Kluender, K. R., and Levi, D. M. (2012) *Sensation and Perception* (3rd ed). Sunderland, MA: Sinauer Associates, Inc. (text bundled with PsyCog: Explorations in Perception and Cognition, CD by Wytttenbach)

Textbook website: <http://sites.sinauer.com/wolfe3e/home/startF.htm>

On Reserve: Goodwin C. J. (2010). *Research in Psychology: Methods and Design*. (6th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Ambrose library electronic database: <https://ambrose.edu/resources/behavioural-sciences-resources>

Policies:

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (Cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, it is highly recommended that they forward all messages from the Ambrose account to the other account.

During the **Registration Revision Period** students may to enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty. These courses will not appear on the student's transcript. Courses should be added or dropped on the student portal by the deadline date, please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a Request to withdraw from a Course by the **Withdrawal Deadline**, please consult the List of Important Dates. Withdrawal from courses after the Registration Revision period will not be eligible for tuition refund. A grade of "W" will appear on the student's transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Students, who find a conflict in their exam schedule must submit a **Revised Examination** Request form to the Registrar's Office by the deadline date, please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to engage in electronically-enabled activities unrelated to the class during a class session. ***Please turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Please do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean.*** If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information, that is information about an individual that may be used to identify that individual, may be collected as a requirement as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a "**Course Extension**" from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date, please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control".

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Office of the Registrar in writing within 30 days of

receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal to review final grades. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University College as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. ***Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to give credit to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.***

Students are strongly advised to retain this syllabus for their records.

Notable Websites:

- APA Writing Style Guide:
<http://owl.english.purdue.edu/owl/resource/560/01/>
<http://www.vanguard.edu/psychology/faculty/douglas-degelman/apa-style/>
- American Psychological Association <http://www.apa.org>
- Canadian Psychological Association <http://www.cpa.ca>
- Visual Perception <http://www.yorku.ca/eye/> ;
- Visual Illusions <http://www.eyetricks.com/illusions.htm> ;
- <http://www.michaelbach.de/ot/>
- Auditory List <http://www.auditory.org/>
- 3-D Brain Anatomy (PBS) <http://www.pbs.org/wnet/brain/3d/index.html>
- The Harvard Mahoney Neuroscience Institute Letter
http://www.med.harvard.edu/publications/On_The_Brain/
- Journal of Vision <http://www.journalofvision.org/>
- **Ambrose library electronic database:** <https://ambrose.edu/resources/behavioural-sciences-resources>