

## **Perception (PSY 438/538)**

Spring 2016 -- T/Th 2:00–3:20pm -- MCK 229 -- CRN 35964 -- 4 credits

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### **Textbook**

Sensation and Perception, 9<sup>th</sup> Edition by E.B. Goldstein (2014).

Note: There is a website which accompanies the text book:

[http://www.cengage.com/cgi-wadsworth/course\\_products\\_wp.pl?fid=M20b&product\\_isbn\\_issn=9781133958499&token](http://www.cengage.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&product_isbn_issn=9781133958499&token)

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### **Course Description**

In this course, we will examine the perceptual abilities of the human brain, including vision, hearing, and touch. We will consider the methods used by scientists to examine perceptual abilities, the capabilities and limitations of perception, and current knowledge of the underlying neural bases of perception. Perception involves the transformation of incoming signals into information or "representations" of the world. We will consider how unconscious processes, attention, and our knowledge about the world give rise to perception. The course will strongly emphasize behavioral and brain-based methodologies. By the end of this course, you will have a new appreciation for how you experience the world on a daily basis.

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### **Course Objectives**

In this course, you will learn about different forms of perception, you will learn about various behavioral and neuroscience methodologies, you will develop an understanding of how perceptual systems are organized in the brain and how neural computations give rise to perceptual experience.

## Expectations

It is expected that you will regularly come to class and that you will come to class prepared. This means that you should *keep up with the assigned readings* and show up to class ready to think about and discuss what you have read.

The course is structured in a way that is intended to help you learn the materials, but you will need to put effort into the class in order to learn and succeed. If you encounter difficulties along the way, PLEASE contact the instructor or teaching assistant as soon as possible. It is much easier to help you succeed when you make us aware of any problems in a timely manner.

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## Workload

This is a 4-credit course. According to University principles governing credit and contact hours, each credit equals 30 hours of work for the term. Four credits are therefore equivalent to 120 total hours for the term, or 12 hours per week for 10 weeks. You will spend approximately 3 hours in class each week. That means that you should be spending roughly *9 hours per week reading, studying, and completing assignments outside of class*. Your performance in this class will be much higher if you plan accordingly.

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## Course Components and Requirements

Attendance. Regular attendance is an essential component of this course. Lectures will be related to assigned readings, but exams and quizzes will be directly based on lecture materials. Moreover, the discussions, questions, and anecdotes that are part of the classroom experience will greatly enrich and facilitate your learning. The inclusion of frequent pop quizzes (see below) is explicitly intended to encourage regular attendance. Simply put, you will perform better in this class if you attend lectures. If you face any obstacles to regular attendance, this must be discussed with the instructor as soon as possible.

Readings. You will regularly be assigned chapters to read from the textbook and, in some cases, journal articles. These readings should be done *before class*. That is, if the schedule lists a particular reading for a particular class date, you should do that reading before the class on that date. Completing readings before lectures will make it much easier for you to follow the lectures and will substantially improve your memory for the material.

Paper.

**PSY 438:** You will be required to write a paper (length = 1200 – 1400 words, excluding title and references) that describes and reviews an empirical journal article. The instructor will provide a set of 4-6 papers from which you will select one paper of interest. Your paper should include the following components

- a. What is the question of interest and why does it matter?
- b. How did the authors go about testing the question?
- c. What did they find?
- d. What is the significance of these findings? How does it change what we know? What are some of the big questions that remain to be answered?

The paper should be written as if you are writing for a scientific magazine or a 'scientific audience' that has a general background in psychology, but does not have expertise in the area related to the paper you have chosen. Your paper should not include statistics or p values but instead should describe results in words. You must avoid directly quoting the article—you must put things in your own words. You may find it useful to reference other empirical articles, but this should be done sparingly and only if it is directly relevant to the article you are reviewing. In other words, if a prior finding helps contextualize the article you are reviewing, then a reference may be appropriate. But do not let your paper 'wander' to other articles. Minor formatting decisions (single-spaced vs. double-spaced, font size, margins, title page vs. no title page) are at your discretion. But be mindful of the word limits! Your grade will be based on the following:

- i. Your demonstrated understanding/comprehension of the article
- ii. Your recognition and articulation of the significance of the findings
- iii. The organization and clarity of your writing
- iv. Does the paper adhere to the word limit and address the required components?

**PSY 538:** Same as for 438, except that the paper should be 1600 – 2000 words in length and should include the following additional components:

- e. How does the current article relate to prior (or subsequent) findings? To address this, you are expected to reference several (3-5) other empirical papers that describe closely related findings. This may involve highlighting other papers with conceptually similar results or highlighting papers that challenge the current findings. While there is flexibility in how you address this, it is critical that you describe these other findings in a thoughtful way.
- f. If you were to follow-up on the article you reviewed, what would you test? What is a specific question that remains to be answered? How might you go about answering this? Your question can be inspired by the authors' discussion of their findings, but you need to give some original thought to how you might go about testing this. You will be evaluated based on the thoughtfulness of your questions. For example, asking whether a result would replicate is not a thoughtful question.

Quizzes. A total of **8 ‘pop quizzes’** will be administered over the course of the term. These are surprise quizzes that will occur at the beginning of class. Each quiz will only take a few minutes and will consist of 5 multiple choice questions. These questions will be related to the readings assigned for that day AND/OR the material covered in the immediately preceding lecture. Yes, it’s a lot of quizzes, but the quizzes are intended to motivate you to (a) show up to class, and (b) keep up with the readings and lecture materials! Of the 8 quizzes, your three lowest scores will be dropped. Because three of the quiz scores will be dropped, there is no make-up policy for quizzes. If you miss class or show up late, your score for that quiz will be a 0. If you anticipate attendance problems in this course, you must discuss this with the instructor as soon as possible.

Exams. There will be two midterms in this course as well as a final exam. The midterms will consist of multiple choice questions and will be completed in class. The final exam will include multiple choice and short answer questions and will be scheduled during finals week. The final will be biased toward material covered after the second midterm, but will cover some of the major themes from earlier in the course. Exam make-ups are only allowed in extreme circumstances (typically medical emergencies).

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## Grading

Your grade in this course will be determined as follows:

Midterm 1: 20%	Midterm 2: 20%
Quizzes: 20%	Final Exam: 25%
Paper: 15%	<b>TOTAL: 100%</b>

The grading scale will be: 90-100=A, 80-89=B, 70-79=C, 60-69=D, 59 or lower=F. However, I reserve the right to adjust the grades *up* depending on the distribution of scores (i.e., to curve). Grades will never be adjusted downward. Those taking the class Pass/Fail must obtain a “C” to pass. Whether grades are rounded up (e.g., whether an 89.5% counts as 90%) will depend on the distribution of scores. If you want to guarantee a score in the A range, you should plan to achieve a score of 90.00% or higher! Likewise for a B or C grade.

Please be warned in advance that if you fall just below of the final grade cutoffs, I *will not bump you up*. This policy is in place in order to maintain fairness for all students. Appealing to me for a ‘favor’ is not going to change this policy. The best way to avoid just missing out on a desired grade is to put in the necessary work so that your grade is comfortably above the cutoff.

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### **Academic integrity**

I assume that all students have read the Honor Code and are bound by it. Violations of the Honor Code are taken extremely seriously and will result in referral to the Dean of Students for further action. Specific violations include (but are not limited to):

- Using or providing prohibited assistance during exams
- Plagiarism. This includes improper use of words and ideas.

All exams and quizzes in this course are **closed-book**. You are not permitted to use any materials during the exams. Books, notes, computers, cell phones, headphones, etc., should be closed and put away. I will assume that all students enrolled in the course know and understand what constitutes academic misconduct and agree to be bound by these rules.

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### **Courtesy**

Out of courtesy for other students and out of respect for the class, I request the following: (1) Please turn off your cell phone during class. This also includes disabling phone alerts (beeps, buzzes, etc.). (2) Note taking by computer is ok, but please make an effort to minimize disruption/noise, which includes refraining from computer use during class that is unrelated to note taking. (3) Please do not chat with others during class. (4) Please be on time. I will start class at the listed time (I do not add 5 minutes to the start time) and I will end class on time.

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## Course Schedule

*\*Topics may be rescheduled, but exam and homework due dates will only change in the event of extreme circumstances (e.g., weather-related emergencies).*

Week	Date	Topic	Reading	Assignments
1	T 3/29	Introduction	Syllabus	
	Th 3/31	Methods	Ch 1 + Appendix	
2	T 4/5	Physiology	Ch 2	
	Th 4/7	Low-level vision	Ch 3	
3	T 4/12	High-level vision	Ch 4	
	Th 4/14	<b>MIDTERM 1</b>	-----	
4	T 4/19	Objects and Scenes	Ch 5	
	Th 4/21	Color	Ch 9	
5	T 4/26	Shape, Depth, Size: 1	Ch 10	
	Th 4/28	Shape, Depth, Size: 2	Ch 10	
6	T 5/3	Motion	Ch 8	
	Th 5/5	<b>MIDTERM 2</b>	-----	
7	T 5/10	Visual Attention	Ch 6	
	Th 5/12	Perception and Action	Ch 7	
8	T 5/17	Hearing	Ch 11	
	Th 5/19	Auditory Localization	Ch 12	
9	T 5/24	Speech	Ch 13	<b>PAPER DUE</b>
	Th 5/26	Somatosensory System	Ch 14	
10	T 5/31	Chemosensation	Ch 15	
	Th 6/2	REVIEW FOR FINAL	-----	
11		<b>FINAL EXAM</b>	-----	