

Perception PSYCH 306

Winter 2013

1 Instructor Information

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2 TA Information

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3 Course Description

Sensation is described by the interaction of external sources of energy (light, sound, etc) with primary sensory receptors. Perception, the conscious internal experience of an observer, is the psychological consequence of these sensory events. In this course we will cover, from sense receptor to subjective report, the science behind perception. The majority of the topics will center of visual stimuli, but will be intended to demonstrate general principles.

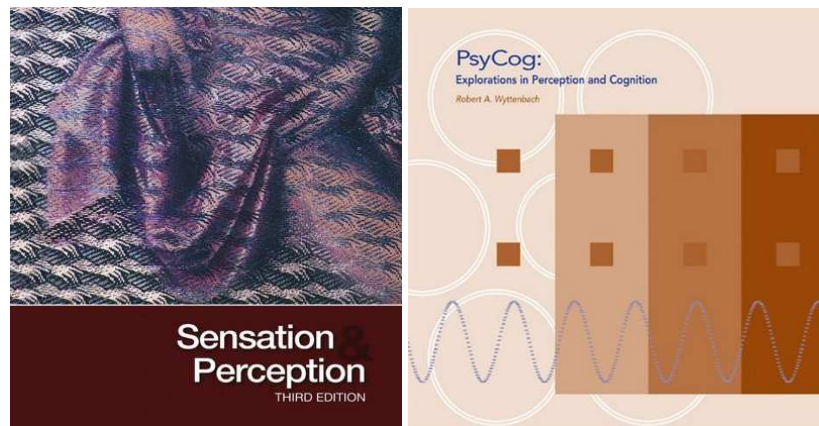
While the anatomy and physiology of sensory systems can be described, perception is personal and internal and must be experienced. Therefore, the course is organized around the textbook and smaller group discussions with exercises and supplemental readings. The usual format will be a once a week meeting as a large group and a once a week smaller group meeting. The large group meeting will give me an opportunity to expand on concepts or graphics from the textbook that I think may not be clear on a first reading. This is not a lecture in the traditional sense. I am not teaching you what is in the readings, but I am clarifying what you have read. This will be the time for you to raise questions about content. If you have not read the assignment *prior* to class, the “lecture” will be much less valuable for you. And since you will need to read the textbook anyway, you don’t save time by doing it later, but you do lose out on my attempts to clarify challenging concepts.

4 Required Textbooks

There are two required “texts” for this course. First, is the textbook. It comes hard cover, soft cover, and ebook. I do not care which version you get, but you will need the third, not the second, edition. Anything that is in the assigned readings is fair game for a test question whether or not it is presented in class.

The second required “text” is a disc that includes exercises and experiments that we will use to complement the text. If you don’t have the disc you cannot do the experiments, some of which will require you to turn in material for assignments and that will be graded. I have attached images to help you make sure you get the right materials. I think the bundle from the bookstore is a fairly good deal, if you find a cheaper outlet please share it with your classmates.

The discussions and exercises are intended to promote your use of concepts. Much recent work shows that we learn better by blending reading with doing and experiencing. Taking an active role in the smaller group discussions should enhance both retention and your ability to use these concepts in novel contexts; this is the goal of University after all. We don’t want to just pass classes, we want to learn things we can use in real life.



Sensation & Perception, Third Edition, Jeremy M. Wolfe (and others), ISBN-10: 087893572X, ISBN-13: 978-0878935727, Publication Date: October 21, 2011, Edition: 3

PsyCog: Explorations in Perception and Cognition (not compatible with Mac OS X 10.7), Robert A. Wytenbach, SBN-10: 0878939504. ISBN-13: 978-0878939503, Publication Date: March 1, 2006, Edition: Cdr

5 Course Requirements, Expectations, and Grading

5.1 Requirements

The goal of this course is to give you a familiarity with the facts and principles of the science of sensation and perception. We will lecture, talk, read, and experiment. There will be a midterm and final of the traditional format. In addition, there will be weekly assignments. The more you keep working at a steady pace the more you will learn, the less cramming you will have to do, and the more prepared you will be to use these ideas in your professional lives.

5.2 Grades

Your grade will be a composite of,

- Midterm 20% — While 20% is a significant fraction of your final grade, it is not huge. Consider this midterm as a way to test your study habits and to familiarize yourself with the type of questions that will be on the final. It will come early in the term so that you can make use of the information.
- homework assignments/Tuesday quizzes - 30% this will be divided up evenly among the assignments we get done (8 - 10)
- final examination (standard: T/F, Multiple Choice, Short answer) - 50%
- extra-credit -up to 4%. Which you can gain with REG/Sona research experiences for CNS and Cognition division studies, the ones most likely to deal with sensory and perceptual phenomena.

5.3 General

My advice is that for every course you take you go meet the instructor. Go to their office hours at least once and introduce yourself and see if you have some shared interests. This is the best way to network and find that faculty person who can advise you on graduate schools, help you locate an RA, or write a letter of reference. It won’t happen by accident. You are paying a lot for this education, and we are sitting in our offices during office hours usually doing nothing (unless it is the week before a test). We are there to do more than just go over assignments and argue about grades.

Is this a hard course? I am not sure. Last year, the median final grade was over 80, but I had a total of 150 names enrolled and only 80 left at the end, so I think a lot of people edited themselves out of the picture. What the grade from last time shows is that getting a high grade is very doable, but it did require a lot of time. My rule of thumb is that the *average* student will spend three hours outside of class working on the material for each hour in class (that means half of you will need to spend more) . In this case you should budget an average of 12 hours a week for this course. You can talk to those who took the course last year to see if they agree. Also, I plotted the correlation between the grades on the midterm with the Final grade and the correlation was very tight. Only one person significantly improved their final grade. What this means is that the Midterm should give you a good idea of what you will get if you follow the same study habits during the whole course that you did at the start, both for better and worse.

Jan 8	Introduction	Jan 10	Failures of perception. Mechanisms of Assessment. Differences between Sensation and Perception.	Chapter 1
Jan 15	Some basic terms and Can you believe your eyes?	Jan 17	Anatomy of Vision	Chapter 2
Jan 22	Illusions understood from anatomy.	Jan 24	Anatomy cont.	Chapter 3
Jan 29	Selective adaptation. HOMEWORK DUE Cells and Signals. Is knowing seeing?	Jan 31	Objects and Gestalts	Chapter 4
Feb 5	Contrast Effects, Gestalt and Object Perception	Feb 7	Color/Scene/Depth	Chapters 5 & 6
Feb 12	Color and Depth (HOMEWORK DUE)	Feb 14	Midterm	
Feb 19	Reading Week	Feb 21	Reading Week	
Feb 26	Review Midterm Answers	Feb 28	Attention	Chapter 7
Mar 5	Visual Search. Flanker tasks.(HOMEWORK DUE)	Mar 7	Motion	Chapter 8
Mar 12	Movement	Mar 14	Anatomy and Physiology of Hearing	Chapter 9
Mar 19	Pitch and Localization	Mar 21	Speech and Music	Chapters 10 & 11
Mar 26	Categorical Perception. Stroop.	Mar 28	Haptics	Chapter 13
Apr 2	Two point discrimination. Stereognosis.	Apr 4	Olfaction/Gustation	Chapters 14 & 15

Table 1: Tentative Course Schedule

Basic Organization of the course:. Each week on the Thursday I will lecture (although I may experiment one week by posting a video lecture on line to get feedback on whether the flexibility of choosing your own time to view it outweighs the “coldness” of watching it recorded). The lecture, and I use the term reservedly, is organized around the chapters in the book. It is my intent to use this time to clarify concepts, and the lecture will be organized around the illustrations from the text. Usually, I will not touch on every topic in a chapter. You are still responsible for all the material. For some of you the Thursday sessions may be superfluous. If you read a chapter and understand it, then the Thursday lectures will not offer new concepts, just new phrasings. If you have a question about the readings, ask.

We will use half of our class time to work through exercises together in smaller groups. These sessions occur on Tuesday’s. The class is divided into thirds and each of you assigned to a different room. The TAs and I will rotate among the rooms, so each of you should get a chance to work with each of us. For this to work well you must be evenly distributed and I ask you to go to your assigned room. On each Tuesday there will also be a small assessment to try and promote you staying on track and not falling behind on your reading. You will only get credit for this if it is collected in the room to which you are assigned.

The midterm comes early and is worth a relatively small amount so that you can learn what kind of questions will be asked and how much you need to prepare. This will allow you to adapt your approach before too much of the term has passed. The midterm should be good gauge of the breadth and difficulty of the final examination.

6 Outline of Topics to be Covered

The dates should be viewed as tentative.

7 The Official Version of the Course Outline

The outline posted on *Learn* will be deemed the official version. Outlines on *Learn* may change as instructors develop a course, but they become final as of the first class meeting for the term.

8 Students with Disabilities

The AccessAbility Services (AS) Office, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you

require academic accommodations to lessen the impact of your disability, please register with the AS Office at the beginning of each academic term.

9 Concerns About the Course or Instructor

9.1 Informal Stage

We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Dr. Myra Fernades) is available for consultation and to mediate a resolution between the student and instructor. Dr. Fernades contact information is as follows:

Email: mafernan@uwaterloo.ca
Ph 519-888-4567 ext 37776

9.2 Formal Stage

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 and 71 below for further details.

10 Academic Integrity, Academic Offenses, Grievance, and Appeals

Academic Integrity: in order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 - Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline, <https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71>

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>. In addition, consult: <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm> for the Faculty of Arts grievance processes.

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals, <http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

Academic Integrity website (Arts): <http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

Academic Integrity Office (UW): http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

11 Learn

This course will use Learn extensively. Assignments will need to be submitted on line, frequently. Communications and announcements about the course will be posted on our page in Learn.

12 Email Communications

In general, email is only a good communication medium for simple issues. If the issue is not minor, come see me. If my office hours are not convenient than email me to arrange an appointment or stop by. If the door is open, you are welcome to pop your head in and see if I am free. Also, remember that emails regarding the course are professional communications.

Appendix

A Research Experience Marks

A.1 Information and Guidelines

Experiential learning is considered an integral part of the undergraduate program in Psychology. Research participation is one example of this, article review is another. A number of undergraduate courses have been expanded to include opportunities for Psychology students to earn grades while gaining research experience. Since experiential learning is highly valued in the Department of Psychology, students may earn a "bonus" grade of up to 4% in this course through research experience. Course work will make up 100% of the final mark and a "bonus" of up to 4% may be earned and will be added to the final grade if/as needed to bring your final grade up to 100%. The two options for earning research experience grades (participation in research and article review) are described below. Students may complete any combination of these options to earn research experience grades.

A.1.1 Option 1: Participation in Psychology Research

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in lab and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychology studies have undergone prior ethics review and clearance through the Office of Research Ethics.

Educational focus of participation in research To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

- Purpose or objectives of the study
- Dependent and independent variables
- Expected results
- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions about the study
- Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in LAB studies is worth 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies is worth .25 credits for each 15-minutes of participation. Researchers will record students participation and will advise the course instructor of the total credits earned by each student at the end of the term. How to participate? Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account. You must get started early in the term.

INSTRUCTIONS/DATES/DEADLINES: How to log in to Sona and sign up for studies

*** Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website.*** More information about the REG program is available at: REG Participants' Homepage <http://www.arts.uwaterloo.ca/~regadmin/regparticipant/>

A.1.2 Option 2: Article Review as an alternative to participation in research

Students are not required to participate in research, and not all students wish to do so. As an alternative, students may opt to gain research experience by writing short reviews (1 to 2 pages) of research articles relevant to the course. The course instructor will specify a suitable source of articles for this course (i.e., scientific journals, newspapers, magazines, other printed media). You must contact your TA to get approval for the article you have chosen before writing the review. Each review article counts as one percentage point. To receive credit, you must follow specific guidelines. The article review must: Be submitted before the last lecture. Late submissions will NOT be accepted under ANY circumstances. Be typed Fully identify the title, author(s), source and date of the article. A copy of the article must be attached. Identify the psychological concepts in the article and indicate the pages in the textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible. Clearly evaluate the application or treatment of those concepts in the article. Keep a copy of your review in the unlikely event we misplace the original.