

Perception PSYCH 306

Winter 2012

1 Instructor Information

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3 Course Description

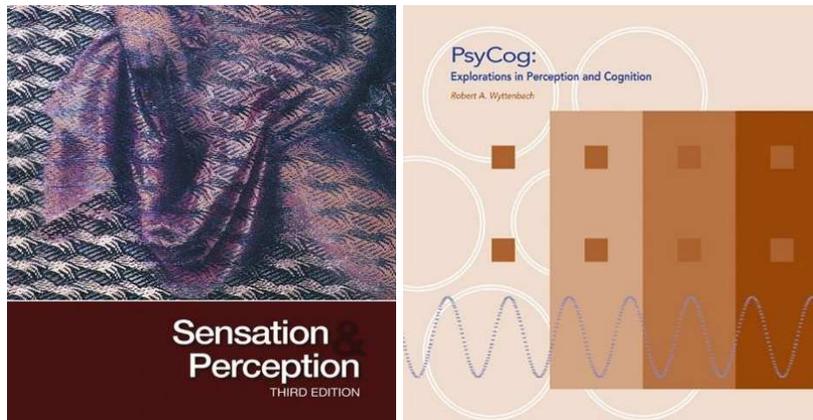
Sensation is described by the interaction of external sources of energy (light, sound, etc) with primary sensory receptors. Perception, the conscious internal experience of an observer, is the psychological consequence of these sensory events. In this course we will cover, from sense receptor to subjective 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 uses both a lecture format and smaller group discussions about exercises and readings. The usual format will be a once a week lecture on Thursday, with smaller group meetings on Tuesdays.

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 I mention it in lecture or discussion. I will use the lecture time to “tour” the chapter. I will comment on what I find interesting or important, and I will try to clarify concepts that I think some people have trouble understanding on the first encounter. The discussions and exercises are intended to promote your use of concepts in an effort to improve retention and your ability to use them in novel contexts. If it is mentioned in the lecture or discussion sections or the exercises or the readings, even if it is not in the textbook, it too is a fact that is fair game for tests.

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.



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, ISBN-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, because no one comes by unless it is to protest a point on a test or ask what will be on the final.

Is this a hard course? Yes, it seems that all the courses that I teach are rated that way. I expect that you will read this entire textbook during the term, that you will know the definition for every vocabulary word, and that you will be able to discuss key concepts and apply them in novel situations not explicitly covered in the text. 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.

I believe the subject matter is important, and I teach not with an idea of giving you something for a semester, but of giving you information that you can use in the future, after university. That usually means that I have to emphasize both mastery of details and

Jan 3	Introduction	Jan 5	Failures of perception. Mechanisms of Assessment. Differences between Sensation and Perception.	Chapter 1
Jan 10	Some basic terms and Can you believe your eyes?	Jan 12	Anatomy of Vision	Chapter 2
Jan 17	Illusions understood from anatomy.	Jan 19	Anatomy cont.	Chapter 3
Jan 24	Selective adaptation. HOMEWORK DUE Cells and Signals. Is knowing seeing?	Jan 26	Objects and Gestalts	Chapter 4
Jan 31	Contrast Effects, Gestalt and Object Perception	Feb 2	Color/Scene/Depth	Chapters 5 & 6
Feb 7	Color and Depth (HOMEWORK DUE)	Feb 9	Midterm	
Feb 14	Review Midterm Answers	Feb 16	Attention	Chapter 7
Feb 21	Reading Week	Feb 23	Reading Week	
Feb 28	Visual Search. Flanker tasks.(HOMEWORK DUE)	Mar 1	Motion	Chapter 8
Mar 6	Movement	Mar 8	Anatomy and Physiology of Hearing	Chapter 9
Mar 13	Pitch and Localization	Mar 15	Speech and Music	Chapters 10 & 11
Mar 20	Categorical Perception. Stroop.	Mar 22	Haptics	Chapter 13
Mar 27	Two point discrimination. Stereognosis.	Mar 29	Olfaction/Gustation	Chapters 14 & 15

Table 1: Tentative Course Schedule

practical experience, and that puts a demand on both of us. On the up side, I don't curve. I am happy to give everyone a 100 if they earn it. So your grades won't be limited by anyone else; you will get what *you* earn.

Organization of the course:. Each week on Thursday I will lecture. This lecture will be organized around the chapters in the book and will use illustrations from the text. My intent will be to emphasize the topics that I find come up most in professional applications, and to try to clarify content that I think is conceptually challenging. However, I do not have time in the space of an hour to cover an entire chapter. You are responsible for the content whether or not I discuss it. You should not assume that if I did not talk about it it will not be tested. If you read a chapter and understand it, then the Thursday lectures may be superfluous. If you have a question, bring it to this class.

Research into education shows that hands-on experience and active engagement with a topic aid present mastery, long term retention, and the ability to generalize. Therefore we will use half of our class time to work through exercises together in smaller groups on Tuesday's. The class will be 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 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 Office for Persons with Disabilities (OPD), 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 OPD 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. Colin Ellard) is available for consultation and to mediate a resolution between the student and instructor. Dr. Ellard's contact information is as follows:

Email: cellard@uwaterloo.ca
Ph 519-888-4567 ext 36852

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, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

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>

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://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Academic Integrity Office (UW): <http://uwaterloo.ca/academicintegrity/>

11 UW-ACE

This course will use UW-ACE extensively. It is my intention to have all assignments distributed on ACE and to have you make all submissions through ACE. I will be using an ACE grade book so that you can follow your scores on the assignments. Readings and optional materials will be available through ACE when they are not in the book.

12 Email Communications

Course announcements, due dates and the like, will all be on ACE. If necessary for me to contact you directly by email, I will do so using the link in UWACE. It is your responsibility to make sure that that address is up to date. If you chose to forward that address, it is your responsibility to make sure the forwarding works properly. I will only read email for this course if it comes through UWACE. If it doesn't come through UWACE I may not respond. The benefit of this system is that we both know when something is sent and we have a way to track it. We both have a record of our communication.

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 better yet, just stop by. If I don't want to be interrupted I will close my office door; if the door is open, you are welcome to pop your head in and see if I am free.

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 is worth 0.5 participation credits (grade percentage points) for each half-hour 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. 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. It is VERY IMPORTANT that you get an early start on your studies. For detailed instructions on when and how access your SONA account and for a list of important dates and deadlines please, as soon as possible, click on: <http://www.arts.uwaterloo.ca/~regadmin/regparticipant/sonainfo/#SonaSignUp> *** 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: <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.