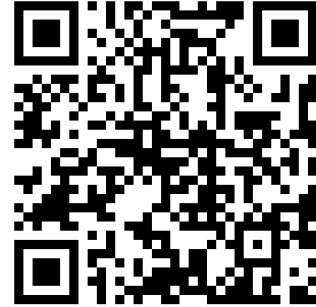


Psy 214: Psychology of Perception

Vanderbilt University, Fall 2013
Tuesday / Thursday 11:00 AM - 12:15 PM
113 Wilson Hall
<http://alexmaier.com/psy214>

Instructor: Alex Maier
Office: 008 Wilson Hall
Email: alex.maier@vanderbilt.edu
Office hours: Tuesdays 9-10 AM
or by appointment, booked online at:
<http://doodle.com/alexmaier>



Course description:

Since the earliest writings by philosophers, it has been clear that our perception of ourselves, and the world around us is limited by what we can learn through our senses. This course provides an introduction to the science of sensation and perception, with the overall goal to better understand our everyday experiences. The inquiry focuses particularly on how both subjective (psychophysical) and objective (electrophysiological, neuroanatomical) approaches can be brought to bear on the same issues about sensory processing. About half of the course will focus on vision, reflecting the fact that it is the most widely studied sensory modality. However, we will also work on hearing, touch, olfaction and taste, including their multi-modal interactions. The course will touch on philosophy, art, neuroscience and various clinical implications, and comprise some elementary mathematical ideas and physical concepts. Throughout the course there will be demonstrations and interactive tasks related to a variety of sensory and perceptual effects, including illusions that shed light on normal visual functions.

Learning goals:

The aim of this course is provide a foundation of the philosophical problems underlying the study of perception and subjective experience, as well as the methods that are used to measure and quantify sensations and perceptions, such as psychophysical thresholds, signal detection theory and information theory. We will cover the physics, anatomy and physiology of sensory organs, with particular emphasis on the human visual system. We will furthermore learn about the various dimensions of visual perception, including color, depth and motion. We will get familiar with face, form perception and pattern recognition, including the basic principles perceptual organization and Gestalt psychology. Lastly, we will pursue a simplified, analogous path with hearing and auditory perception and briefly consider the remaining senses including smell, taste, and touch.

Why you will find this course interesting:

When you tell someone that you are taking a psychology course, her or his typical response will often be “Can you analyze me?” People are often surprised to hear that psychology is a broad science with several fields that need to be combined in order to understand human behavior. This course will introduce you to the fascinating science of sensation and perception, a dominating branch of modern neuroscience with intriguing implications ranging from stage magic to mp3 files. While seemingly effortless and automatic, perception is an active process by which we extract information from our surroundings. Even

the most powerful computers still do not get close to our performance in recognizing visual scenes or facial expressions. In this course, we will determine how our subjective impressions of the world are the result of an exquisitely sensitive sensory apparatus working in concert with the massive computational power provided by the nervous system, shaped to excellence over millions of years of natural selection.

Course format:

The course will follow a lecture format, with student interactions both expected and encouraged. We will include class discussion whenever appropriate. In preparation for that discussion, students should complete each week's reading assignment *before* the class meeting. Lecture slides will be available shortly before each class. An approximate timetable of topics is listed at the end of this syllabus. **The lectures will present materials that are not covered in the textbook or even the slides, so attendance in class is strongly advised.**

What to expect:

Each week there will be two classroom lectures with interactive elements, demos and discussion. In addition, you will have readings assigned to you. While these two course elements will overlap, ***some of the material presented in class will be entirely different than the readings, and some of the reading material will not be covered in class.*** The lectures and readings will be enhanced with supplemental experiments and demonstrations that you can perform at home. These explorative activities will be at your discretion. You will get the most out of this course by performing these research activities as we go along.

Course Readings:

Sensation and Perception, J. Wolfe et.al., Sinauer Associates Publishers

The book is available through regular sources or directly from the publisher (see below):

If students order the loose leaf or casebound versions of Sensation and Perception 3e from our website

(www.sinauer.com) we will give them a 15% discount from our suggested list price and waive the cost of standard ground shipping to US Addresses. Students also save by choosing one of our Value Options:

Loose-leaf textbook

ISBN: 978-0-87893-876-6 \$77.97 US dollars Suggested List, \$62.38 net

CourseSmart eBook

ISBN 978-0-87893-951-0, 180-day subscription \$53.98 US dollars Suggested List, \$53.98 net

* Discount is applied to our list price. Orders usually ship in 1-4 business days.

Additional interesting material can be found in the text book web-site:

www.sinauer.com/wolfe2e

Course Assignments:

There will be five examinations, all of which include a mixture of multiple choice and objective questions. The **exam questions will be heavily influenced by the book readings but also cover material presented in lecture form only.** Therefore, it is highly recommended that you prepare by reading the suggested book chapters as well as your lecture notes. **All exams are weighted equally.** While the four exams that are posed throughout the semester will focus on the preceding five to six lectures, the final exam will be cumulative and cover material from the entire semester. You will be required to take **at least four exams.** If you take all five exams, you can drop the exam with the lowest grade. *If you miss an exam, you will have to attend the other four examinations, or you will receive an "F".*

THERE WILL BE NO PROCTURED EXAMS. THERE WILL BE NO MAKE UP EXAMS. It is your obligation to work out your schedule at the beginning of the semester. If you cannot foresee leave of absence, please seek out a course that is more compatible with your other

commitments. Note that there are no exceptions for periods of sickness, family loss or any other form of grievances. By signing up to this course, you automatically enter to this contractually binding agreement; there will be no exceptions.

Course grades:

All exams will be taken in class without any aiding materials (such as notes, textbooks etc.) allowed. As stated above, **MAKE-UP EXAMS ARE NOT GRANTED UNDER ANY CIRCUMSTANCES**. If you miss an exam, you will lose your chance of dropping your worst grade, and you will have to attend all remaining exams in order to avoid an F. If you cannot attend more than one exam for severe health reasons, you will need to request special permission from the Dean before contacting the instructor to find a solution.

Your final grade will be assigned, based on total points accumulated on the four exams (each worth 100) with the highest scores, with a weight of 25% for each exam. The total points possible in the semester equals 100.

Final score = (best score + 2nd best score + 3rd best score + 4th best score) * 25%

Each student's final grade ("uncurved") will be based on total points, according to the distribution shown below:

- A: 96-100**
- A-: 94-90**
- B+: 89-85**
- B: 84-80**
- B-: 79-75**
- C+: 74-70**
- C: 69-65**
- C-: 64-60**
- D+: 59-55**
- D: 54-50**
- D-: 49-45**
- F: 44-00**

Class participation will be factored in at the end of the year for all students whose grades fall at the border between grade categories or whose participation has been exceptional with respect to quality and, secondarily, quantity.

ENROLLMENT IN THIS COURSE REPRESENTS YOUR ACKNOWLEDGMENT AND ACCEPTANCE OF THESE NON-NEGOTIABLE GRADING POLICIES.

Grievance Procedures: Student questions related to grading, other matters of an academic nature, or other concerns should be presented to the instructor *in written form* within one week of the incident or concern

Contact: My office is at Wilson 008, and I am regularly available **Tuesdays from 9 AM to 10 AM**, as well as by appointment. In either case, it is strongly advised to schedule your meeting at: <http://doodle.com/alexmaier>

TA contact information: jiangyaoguang@gmail.com; WH009 (cell phone: 615-438-9555)

Honor Code: *Vanderbilt Honor Code governs all work in this course.*

Possible violations of the honors code include but are not limited to lying, **copying answers from other students** and **using aiding sources other than memory during an exam**. Any violations will be treated extremely seriously and **you will bear the full consequences of your actions**. For a copy of the full text of the Code, please go to:

http://www.vanderbilt.edu/student_handbook/chapter-2-the-honor-system

Allegations of academic dishonesty are to be reported directly to the Honor Council at: <https://hcouncil.vanderbilt.edu/viosubmit/>

Note that failure to report a known or suspected violation of the Honor Code is a violation in itself. *If you have any uncertainty about the application of the pledge to a particular course, please seek counsel* – not another student – for clarification. Uncertainty about the application of the Honor Code does not excuse a violation.

Technology Policy: As a courtesy to the other course members and each day's presenters, internet and cell phone use will be limited to lecture breaks. Laptops and other electronic devices can be used under a fair use policy that allows for *note taking only*, as long as the other students do not feel distracted.

Disability Support Services: Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. To coordinate accommodations, students must contact Disability Support Services and submit an accommodations request each semester. Information is available on the web at http://www.vanderbilt.edu/ead/ds_students.html

Inclement Weather: If the university is closed due to inclement weather on a day this course is scheduled we will shift these day's speakers to another session. You can check the status of university closure or delays on the local radio and TV stations.

Course Evaluation: As a member of the academic community, you as a student have a number of important responsibilities. One of these responsibilities is to submit your course evaluations (both approving and disapproving) each term through the evaluation system in order to help faculty and administrators improve teaching and learning at Vanderbilt. Please make sure you can access the submission system and let me know in advance if you run into any difficulties.

Course Schedule: Below is a schedule of course topics and assignment due dates. Note that schedule may be subject to change to accommodate new questions and areas of inquiry that arise in class.

DATE	TOPIC
AUG 22	INTRODUCTION, Q&A, SYLLABUS
AUG 26	OVERVIEW AND DEMONSTRATIONS
AUG 29	PSYCHOPHYSICS: HISTORY
SEP 03	PSYCHOPHYSICS: THRESHOLDS
SEP 05	1st EXAM
SEP 10	PSYCHOPHYSICS: MAGNITUDES
SEP 12	SIGNAL DETECTION THEORY I
SEP 17	SIGNAL DETECTION THEORY II
SEP 19	VISION: BASIC PROBLEMS
SEP 24	VISION: THE EYE AND EVOLUTION
SEP 26	2ND EXAM
OCT 01	VISION: GESTALT PSYCHOLOGY
OCT 03	VISION: SPATIAL FREQUENCY
OCT 08	VISION: COLOR I
OCT 10	MINI FALL BREAK; NO CLASS
OCT 15	VISION: COLOR II
OCT 17	VISION: DEPTH
OCT 22	VISION: MOTION I
OCT 24	3rd EXAM
OCT 29	VISION: FACES
OCT 31	VISION: ATTENTION
NOV 05	HEARING: THE EAR
NOV 08	HEARING: CORTEX
NOV 12	HALLOWEEN BREAK; NO CLASS
NOV 14	4th EXAM
NOV 18	TOUCH
NOV 21	SMELL
NOV 26	THANKSGIVING; NO CLASS
NOV 28	THANKSGIVING; NO CLASS
DEC 03	TASTE
DEC 05	WRAP UP
DEC 10	5th EXAM (PROJECTED DATE ! FINAL DATE IS SET BY THE DEAN!)



VANDERBILT UNIVERSITY



Semester: **FALL** Year: **2013**

PSY 214 Syllabus Agreement

I, _____ (print your name) have read and understand the Syllabus for PSY 214. I understand that this syllabus contains the requirements that I must complete, during this semester to obtain a progressing grade.

As an academic student pursuing my degree in _____, I understand I am to be held accountable for the guidelines, policies, and rules of this syllabus. These requirements are my responsibility to uphold and complete without instructor prompting, coaching, or reminding. However, I do understand that I have the right to clarify any requirement(s), or assignment(s) by contacting my instructor in a timely manner.

By signing below, I acknowledge all of the above on this day's date (month-day-year).

Student signature: _____ Date _____

Witnessed by: _____ Date _____

APPENDIX 1:

TESTING POLICY

The following policy applies to all testing environments.

1. Students will leave all personal possessions (books, papers, bags, purses, and electronic equipment, including cell phones, IPODs, etc.) in the front of the room. Cell phones are to be turned off.
2. Bring only a pencil or pen and a scantron (if applicable) to your seat.
3. No hats or caps of any kind are to be worn.
4. No food or drink is allowed in the testing environment.
5. If a student must leave the testing environment for any reason, they will be accompanied by a faculty member.
6. Students violating this policy will receive an F on the exam.
7. It is not the responsibility of the instructor to remind students of this policy; it is the responsibility of the student to adhere to this policy.
8. Once a student has submitted their tests (scantron if applicable), they are to quietly leave the testing room and not return until all testing is completed.
9. Only the answer recorded on the exam (scantron if applicable) will be accepted.