

**Mind and Brain
Psychology 201CS, Fall 2012
(crn 17314)**

Please check frequently for updates on the web page. Last update: 10/2/12 10:28 PM

Time/Location: Monday - Wednesday, 10:00AM – 11:50AM; Condon 160.

Prerequisites: None

Instructor: Ulrich Mayr, office 341 Straub Hall, mayr@uoregon.edu, phone: 346 4959,
office hours: Monday 1-2 pm or by appointment

GTF: Rebecca Calcott, office xxx Straub Hall, rcalcott@uoregon.edu, phone: 346 xxxx,
office hours: Monday 1:30-2:30 pm or by appointment.

Course Overview

In this course, we look at the neural and psychological basis of motivation, perception, attention, learning, and memory. Together with Mind and Society (PSY202), which emphasizes development, personality, abnormal and social psychology, Mind and Brain is part of a two-term sequence in introductory psychology. The College Scholar version of this course goes beyond the regular version in two ways. First, we will rely not only on the textbook (see below), but also on original literature. Second, in large parts this course is structured along a number of larger issues or themes. For many of the themes there will be both student presentations and a short position paper to write.

Course Web Site:

Please enter course web page, which is automatically created through your enrollment in this course, in case of problems please contact the Information Technology Center in Knight Library (<http://libweb.uoregon.edu/kitc/>, phone: 346 2681).

Material:

Gazzaniga, Halpern, & Heatherton. 3rd Edition. The book will be available in UO bookstore starting about middle of the first week of class for about \$20. You should be also be able to get copies in 2nd hand bookstores in town (e.g., Smith's Family Bookstore). Make sure you get the 2nd edition! Although a strong attempt is made to coordinate lectures with readings, they will be frequently independent of each other. Some material will be covered by both, but some material will be covered only in the lecture and some will appear only in the book. The exams will cover material from both lectures and readings. Please be prepared to spend a substantial amount of time outside of class on studying and reading in order to do well in this course. I will provide on the course web site specific page numbers that need to be covered to do well in the exams.

Course requirements

Grades for this course will be based on four different requirements:

Multiple-Choice Quizzes (31% of total grade). These quizzes will test your knowledge of basic concepts you have learned in the preceding lessons. Each will have about 30-40 questions and will take about 30 minutes.

Position papers (31% of total grade). You will write four position papers that address specific questions. The papers will be short (2-3 pages) and are supposed to address a specific question in a well-argued, evidence-based manner. For this assignment you will also be asked to evaluate 5 papers of your peers (randomly determined and anonymously presented). The quality of these evaluations will make up 30% of your paper grade.

Short presentation (31% of total grade). In small groups (three students each) you will present one original paper/topic to the class and lead the discussion about this paper.

Participation in Research (7% of total grade): Part of this course is learning about research being conducted in the field of psychology. An excellent way to learn about psychology research is to experience it firsthand by participating in the dazzling array of high quality psychology research being conducted at the University of Oregon. Psychology and Linguistics researchers run many experiments on varied topics (e.g., psychological coping, attention, social interaction). To participate in experiments, you can sign up on an electronic bulletin board at: <http://uopsych.sona-systems.com>. During your first visit to the site, you will request a username and password. Once logged in, you will find a list of studies that are available to you as well as the time and location of each study (some can be completed online). After participating in a study, you will be electronically credited for the time allotted for that study. Studies range in length from ½ hour to 2 hours or longer. One hour of participation = 1 credit, and to complete the research requirement, you will need to complete 4.5 credits worth of studies. For further information, see the slides from the PowerPoint presentation about being a research participant on the course Blackboard site, or email the Human Subjects Coordinator, hscoord@uoregon.edu with questions. More details about participating in research studies will be provided in class.

IMPORTANT NOTES REGARDING PARTICIPATION IN RESEARCH: For ethical reasons, the university and I neither can force you to participate in research studies, nor would we wish for you to be uncomfortable participating in studies. For this reason, there is an alternative assignment that you can choose to do instead that involves signing up in advance for 2-hour timeslots to come to the Psychology Department to read psychology research articles and write an essay about them. There is also a ½ hour tutorial you can complete, so that doing two of the article reading session plus the tutorial will equal the same 4.5 hours of time as participating in studies. For more details about completing this alternative, please contact the teaching assistants.

If you fail to show up to TWO studies without good reason, you will not be allowed to participate in research as a way to complete your research requirement. You will instead be required to complete your research requirement by doing the alternative assignment.

All students must complete the research requirement to get a grade in the course. If you do not complete the requirement, you will receive an incomplete in the course until you do. If you do not complete the requirement within a year, the incomplete will be changed to a failing grade in the course, as required by the university registrar.

At least two of the 4.5 hours of the research requirement must be completed by midnight on Friday, Oct. 28. The other 2.5 hours must be completed by midnight, Friday Dec. 2. **PLAN AHEAD:** To complete the research requirement, you must schedule your hours in advance. A failure to schedule timeslots for completing the research requirement in time for both the Oct. 28 and Dec. 2 deadlines will result in a permanent loss of the points in the course. Thus keep in mind: Whether or not you get a complete or incomplete for the research requirement and how many grade points you get for it are two different things. You can make up an incomplete if you absolutely have to within a year (even though it's a real pain!), but you cannot make up lost grade points after the fact.

Class Schedule as of 10/2/12 10:28 PM. This schedule will be updated very often. Please make sure you always consult the most recent version! In particular, Paper assignments, presentations, and precise page numbers for readings will be added and refined in as we go along. Topics/readings are printed in the same color as the quiz they are relevant for.

| <u>date</u> | <u>topic</u> | <u>lecture content</u> | <u>reading</u> | <u>paper</u> | <u>presentation</u> |
|--------------|----------------------------------|---|---|---|--|
| Sep-24 M | Does experience make us smarter? | Is the mind a blank slate or "preorganized" (empiricism vs. mentalism)? | chap 1 | | |
| Sept-26 W | | Basic learning principles | chap 6 pp 235-261 | | |
| Oct-1 M | | Genes and intelligence | chap 3 pp 77-91, 120-126, chap 8 pp. 356-375 | | |
| Oct-3 W | | Designing an experiment to test the effects of experience | chap 2 pp.33-51, 66-73 | | How heritable is intelligence? Emily, Kate, Josh? |
| Oct-8 M | | Spill-over session | | | Can IQ be trained? Michaela, Annapurna, Caitlin |
| Oct-10 W | What is a concussion? | Quiz 1 Brain basics 1 | chap 3 | | |
| Oct-11 T | | | | Paper 1 is due 11:59 pm | |
| Oct 14 | | | | Paper 1 peer evaluations are due 11:59 pm | |
| Oct-15 M | | Brain basics 2 | chap 3 | | Effects of concussions |
| Oct-17 W | Why is dieting useless? | Motivation | chap 5 | | Psychology of eating MacKenzie, Meghan, Janelle |
| Oct 21 S | | | | | |
| Oct-22 M | Can we trust our senses? | From neuronal circuits to sensations | chap 5 | Paper 2 is due 11:59 pm | |
| Oct-24 W | | Signals in the noise | chap 5 | Paper 2 peer evaluations are due 11:59 pm | Real-world perceptual decisions |
| Oct-29 M | | Perceiving complex objects | chap 9 | | Do we have a specialized brain module for faces? |
| Oct-31 W | | Is our conscious awareness an illusion? Friday this week: Deadline for first 2 credit hours research participation (12 | chap 7 | | The psychology of magic Paul, Robin, K-anna |

| | | | | | |
|-------------|----------------------------------|--|--------|---|---------------------------------------|
| | | midnight) | | | |
| Nov-5 M | How do we acquire new knowledge? | Quiz 2 Attention and working memory | chap 7 | | Driving and talking on the cell-phone |
| Nov-7 W | | How we learn 1 | chap 7 | | Learning through testing |
| Nov-11 S | | | | Paper 3 is due 11:59 pm | |
| Nov-12 M | | How we learn 2 | chap 7 | | Learning in college |
| Nov 14 W | | no lecture (I am out of town) | chap 7 | Paper 3 peer evaluations are due 11:59 pm | |
| Nov-19 M | Can we trust our memory? | How we forget | chap 7 | | Can we rewrite our autobiography? |
| Nov-21 W | | Unconsciousness | chap 7 | | Unconscious racism? |
| Nov-25 | | | | Paper 3 is due 11:59 pm | |
| Nov-26 M | | Spillover or Decision making | chap 8 | | |
| Nov-28 W | | Quiz Week 3 | | Paper 4 peer evaluations are due 11:59 pm | |
| Dec-7 | | Deadline for final 2.5 credit hours research participation (12 midnight) | | | |

Paper 1: Please choose among one of the following two paper topics. The paper should be 2-3 double-spaced pages (Front: Times 12). Please consider the grading rubric on the next page.

1. Assume you are a research scientist in a company that develops pedagogical software. The company has devised a new product that is supposed to vastly improve math learning in K1-6 students. Your job is to come up with a scientifically sound plan to evaluate the effectiveness of this software. Given that your audience consists mainly of non-scientists you really need to spell the reasoning behind your plan. Use the correct terminology, but also ensure that a non-expert reader would understand what you are talking about.

2. You are the scientific advisor to a relatively conservative school board whose members have heard about research showing that "IQ is genetic". From this they concluded that special remedial measures for underachieving kids (e.g., "head start") won't do any good and should be eliminated in order to save costs. Please argue your position on this topic, clarifying what the genetic research shows, how it can and should be interpreted, and what it really means for remedial attempts. Your audience consists of non-scientists. Thus the arguments need to be scientifically based, yet lucid and novel terms need to be explained!

Grading Schema: Total points=20. A=15-20, B=10-14, C=5-9.

| Dimension | Sophisticated | Competent | Needs Work |
|--|---|--|--|
| Introduction | Position and exceptions, if any, are clearly stated. Organization of the argument is completely and clearly outlined. 4-5 pts | Position is clearly stated. Organization of argument is clear in parts or only partially described. 2-3 pts | Position is vague. Organization of argument is missing, vague, or not consistently maintained. 0-1 pts |
| Use of evidence and/or theoretical arguments | Research selected is highly relevant to the argument, is presented accurately and completely – the method, results, and implications are all presented accurately; Theory is relevant, accurately described and all relevant components are included; relationship between research and theory is clearly articulated and accurate. 8– 10 pts | Research is relevant to the argument and is mostly accurate and complete – there are some unclear components or some minor errors in the method, results or implications. Theory is relevant and accurately described, some components may not be present or are unclear. Connection to theory is mostly clear and complete, or has some minor errors. 5 – 7 pts | Research selected is not relevant to the argument or is vague and incomplete – components are missing or inaccurate or unclear. Theory is not relevant or only relevant for some aspects; theory is not clearly articulated and/or has incorrect or incomplete components. Relationship between theory and research is unclear or inaccurate, major errors in the logic are present. 0 – 4 pts |
| Writing | Paper is coherently organized and the logic is easy to follow. There are no spelling or grammatical errors and terminology is clearly defined. Writing is clear and concise and persuasive. 4-5 pts | Paper is generally well organized and most of the argument is easy to follow. There are only a few minor spelling or grammatical errors, or terms are not clearly defined. Writing is mostly clear but may lack conciseness. 2-3 pts | Paper is poorly organized and difficult to read – does not flow logically from one part to another. There are several spelling and/or grammatical errors; technical terms may not be defined or are poorly defined. Writing lacks clarity and conciseness. 0-1 pts |