

Experimental Psychology and Laboratory

Part 2: Cognitive Neuroscience

Psychology 260 (January – April, 2016)
The University of British Columbia

COURSE SYLLABUS

Instructor:

Dr. Kalina Christoff
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Office Hours: Tuesdays 2:00 pm to 3:30 pm

Teaching Assistants:

Nicole Jenni
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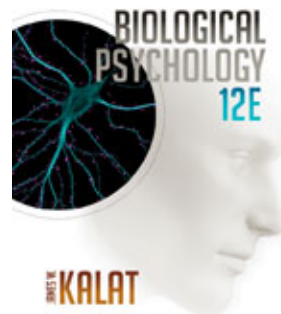
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General Procedure:

Classes will be held on Tuesdays and Thursdays from 9:30 to 10:50 am in Buchanan B315. Labs will be held in Buchanan B307 for Section L01 and Buchanan B219 for Section L02. Section L01 is scheduled for Tuesdays from 2:30 to 4:30 pm. Section L02 is also Tuesdays from 4:30 to 6:30 pm. The first lab will be held on Tuesday, January 12th.

Required Text:



Biological Psychology, J.W. Kalat
Wadsworth Publishing Co, 12th Edition

Learning objectives

By the end of this course, you should be able to:

1. Understand and know the basic findings and scientific principles from the field cognitive neuroscience
2. Understand the basic principles within the different domains of cognitive neuroscience, such as perception, memory, language, and higher level thought
3. Critically read and effectively communicate research findings from original cognitive neuroscientific papers
4. Apply theoretical knowledge about brain functions and brain disorders to practical situations
5. Design, carry out, analyze and write up the results from basic cognitive experiments

Course Structure:

The course will be organized in four groups of topics, with the following headings:

- Sensory systems
- Motor systems
- Memory and executive functions
- Language and attention

Please note that the topics and reading assignments listed above are not in the exact order in which they will be covered in class.

Exam Schedule:**Date**

February 23rd
April exam period

Material

Material covered up to reading week (Midterm)
Material covered after Feb 23rd (Final)

Assigned Readings (all pages are inclusive)**For Midterm Exam**

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| 1. Methods for studying the brain | Chapter 3: p.89-95 |
| 2. Sensory systems | Chapter 5: p.162-170; p.177-183
Chapter 6: p.192-195; p.202-206 (start with the section "Pain") |
| 3. Motor systems | Chapter 7: p.235-248; p.252-256 |
| 4. Conscious and unconscious processes | Chapter 13, p.448-456 (Module 13.3) |

For Final Exam

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|------------------------|--|
| 5. Memory | Chapter 12, p.395-408 (start with section "Types of Memory" p.413, section "Learning and the Hebbian Synapse") |
| 6. Cognitive functions | Chapter 13, p.424-432; p.440-443 (start with "Brain Damage and Language") |
| 7. Schizophrenia | Chapter 14, p.487-496 (Module 14.3) |

Examination Format:

Exams will consist mostly of multiple-choice questions. Approximately 50% of the examination material will be based on lectures that are not covered by the assigned readings and considerable textbook material will not necessarily be covered by lectures. The exams will also include questions from the in-class student presentations. In addition, presentations based on lab discussions of experimental ideas will be made and evaluated.

Paper and presentations

As part of the lab assignments, each student will write 2 papers and will make 1 in-lab PowerPoint presentation. In addition to the lab, each student will make 1 in-class PowerPoint presentation (Buchanan B315). This will be a 10-minute PowerPoint presentation of a scientific paper, relevant to the course material. One of the TAs will be responsible for assigning a paper to each student and a date for the presentation. This TA will provide students with a list of the possible papers for presentation, but students are also free to choose their own papers for presentation (e.g., on a topic that is of particular interest to them). Please consult with the instructor if you are choosing a paper that is NOT on the list of paper for presentation, to make sure the topic and paper are appropriate.

Grade Evaluation:

Midterm: 25%

Final: 25%

Papers and presentations: 44% total

1 in-class PowerPoint presentation, 8%

1 in-lab PowerPoint lab presentation on experiment, 8%

2 papers on lab experiments, each 8% (total of 16%)

3 in-lab proposal PowerPoint presentations, each 4% (total of 12%)

Group participation: 6%

Course Policies:

Examinations will be given on published dates only. Students who miss examinations will not have the opportunity to re-write. Students who miss an examination and have documentation of a valid medical excuse will have their grade on the final examination adjusted accordingly.

Students must retain a copy of all submitted laboratory reports (in case of loss). All laboratory reports must be typewritten. The policy on late laboratory reports will be announced in the laboratory. Your comments and questions are very welcome in class as well as in my office. Classroom participation is encouraged.

UBC Connect

This course will require you to use the course's [UBC Connect](http://www.conect.ubc.ca) site. To access it, go to www.conect.ubc.ca and log in using your CWL. Important updates, information, assignments, surveys, discussion boards, and other materials and announcements will be posted and completed through UBC Connect. You are responsible for checking the site frequently.

Lecture slides and notes

PowerPoint slides and/or lectures notes will be made available online *after* class on the course's [UBC Connect](#) site.

Course Restrictions:

Enrollment in this course is required of and restricted to Psychology B.Sc. students.

Psychology B.Sc. students will not receive credit for BIOL 300, STAT200, PSYC 217, PSYC 218 or PSYC 304.

The use of electronics during lectures

Using a laptop to take notes during a lecture may seem efficient, but it has been shown by research to side-track attention in detrimental ways -- both yours and the attention of other students around you (Fried, 2008; Sana, Weston, & Cepeda, 2013). This may be especially true in a dimly lit classroom, where the relatively brightly lit screens of laptops and other electronics stand out and draw attention to them involuntarily. Because of this, our policy on the use of electronics will be as follows: **The back 2 rows of the classroom will be reserved for laptop users. Please do not use a laptop if you are sitting anywhere else in the classroom.**

Psychology Department's Position on Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. In the first place, the Department has implemented software that, can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. In addition, the Department subscribes to TurnItIn--a service designed to detect and deter plagiarism. All materials (term papers, lab reports, etc.) that students submit for grading will be scanned and compared to over 4.5 billion pages of content located on the Internet or in TurnItIn's own proprietary databases. The results of these comparisons are compiled into customized "Originality Reports" containing several, sensitive measures of plagiarism; instructors receive copies of these reports for every student in their class.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>) and read the University's Policy 69 (available at <http://www.universitycounsel.ubc.ca/policies/policy69.html>).