Psychology 4BN3: Behavioral Neuroscience II

Visual Search & Attention

GENERAL COURSE INFO

Class meets at MDCL 1116 Tuesdays 9:30 to 11:20 AM, and Thursdays 9:30 to 10:20.

Course web-site: http://www.science.mcmaster.ca/psychology/psych4bn3/index.html
-Readings will be posted on the website by Thursday January 11.

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COURSE EVALUATION

Reaction papers (5 @ 7% = 35%)

Class participation (20%)

Lab Report (45%)

1. Gather data, 10%
2. Analyze data, 10%
3. Paper, 25%

Reaction papers. Each week, students may submit one short (max 3 pages) reaction paper, commenting on the readings for that week’s class. When specific questions are assigned in advance, the papers should answer those questions. Otherwise, the papers should comment on the strengths and weaknesses of the experiments/theories and/or connections across readings, and/or pose questions for further research based on the critiqued readings. Critiques should be as specific as possible - both in the discussion of
previous work and in the proposal of future experiments. When writing reaction papers, students should assume that the reader is familiar with the relevant readings (i.e., extended summaries of the articles are discouraged). If students submit more than 5 reaction papers, only the top 7 marks will count toward the final mark. Reaction papers are due at the beginning of each class. Late reaction papers will not be accepted.

**Class participation.** Because this is a seminar class, it is essential that all students actively participate in the discussions of weekly topics. Simply attending class is not enough to earn a good mark. Students are expected not only to complete all readings before class, but to have thought in-depth about the readings, and to come prepared with relevant questions/comments/ideas for discussion.

**In addition to** regular participation, each of you will be assigned to “lead” two of the discussions. During the beginning of each Tuesday, approximately 2 to 5 people will provide the class with a very brief description of the experiments (or main ideas) of the assigned readings. Basically, you should be able to explain any figures, graphs and tables in the paper. And, of course, you should also understand what the authors of the paper had intended to prove by their results. Some of these papers may be difficult or technical. I can meet with you before the Tuesday that you’ll be leading a discussion, but you should schedule this with me in advance; e.g., I certainly cannot guarantee to meet with you the night before!

**Lab report.** Details TBA Thursday January 18. The written report will be due Monday April 9. Please read: Horowitz, T.S. & Wolfe, J.M. (1998, August 6). Visual search has no memory. Nature, 394, 575-577. After you’ve read this paper, devise a new version of the experiment that Horowitz and Wolfe conducted. Email me your idea BEFORE Thursday, January 18. I will need to approve of all your experiment ideas prior to that class so I can make sure the lab report assignment is reasonable. The requirements for this assignment will be outlined in a handout for Jan 18.

Your subtle twist on the Horowitz & Wolfe task will not be very different from what they had done; it will involve only a subtle change to the procedure (stimuli, task, instructions, general procedure) that I can easily program on a computer. Given my approval, I will set up the experiment you devise and then you will conduct the experiment using yourself as a subject. During the weeks after you finish collecting your data, you will meet with Jesse and I to analyze your data. Finally, you will summarize your study in a written report. Report specifications & schedule of data collection/analyses TBA (on Jan 18).

January 11. Lab Report Orientation I.

REMEMBER TO EMAIL ME YOUR EXPERIMENT IDEA BEFORE JANUARY 18!

Week 2. January 16. Covert Attention & Visual Search [34 pages total]
Chapter 3 of Findlay & Gilchrist.


January 18. Assignment of Lab Report Topics & Scheduling


January 25. TBA (most likely to do with lab report)

Week 4. January 30. Intelligent Search [27 pages total]


February 1. TBA (most likely to do with lab report)
**Week 5. February 6. Perceived Image Similarity [48 pages total]**


**February 8. LECTURE on Signal Detection Theory I**

**Week 6. February 13. Color-Guided Search I**


**February 15. LECTURE Trichromacy**

**Week 7. February 20. READING WEEK.**

**Week 8. February 27. Color-Guided Search II**


**March 1. LECTURE on Signal Detection Theory I**

**Week 9. March 6. Signal Detection Theory I [18 pages total]**


**March 8. TBA(most likely to do with lab report)**


March 15. TBA (most likely to do with lab report)


March 22. TBA (most likely to do with lab report)

Week 12. March 27. Context & Attention [44 pages total]


March 29. TBA(most likely to do with lab report)


Let me know ahead if you must abstain from work because of Passover.

Week 14. April 9. REPORTS ARE DUE!
The rules.
Once the assignment deadlines have been scheduled (by the week of January 11), those dates will be fixed; e.g., late assignments will not be accepted. Students with valid reasons for missing an assignment deadline must consult the Dean of Studies office for their faculty (e.g. Science or Social Science). If (and only if) there is adequate written justification for approval by that office, grades will normally be proportionately reweighted, increasing the relative contribution of the other components. Grades will be assigned according to the following convention: 90-100% = A+, 85-89% = A, 80-84% = A-, 77-79% = B+, 73-76% = B, 70-72% = B-, 67-69% = C+, 63-66% = C, 60-62% = C-, 57-59% = D+, 53-56% = D, 50-52% = D-, 0-49% = F. Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty. Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf