

PNB 3EE3

Perception Laboratory

Winter 2014

Instructor:

Matt Pachai (pachaim@mcmaster.ca)

Teaching Assistants:

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Course Website:

Avenue to learn

Course Objectives:

1. Learn techniques in perception research
2. Design and discuss perception experiments
3. Develop programming skills (MATLAB and PsychToolbox)
4. Develop presentation skills
5. Practice publication-quality graphing

Course Readings:

Rosenbaum, D.A. (2007). MATLAB for Behavioural Scientists. USA: Psychology Press.
(optional but strongly recommended)

Course Times:

Lecture: Monday 11:30 – 14:30 (PC/311)

Tutorial: Friday 10:30 – 11:30 (PC/154)

Grade Breakdown:

Assessment Type	Number in Term	Percent of Grade
Programming Assignments	3	24%
Graphing Assignments	2	16%
Group Project	1	50%
Participation	ongoing	10%

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Content Schedule:

Week	Date	Chapter	Assignment deadline	Group project deadline
1	Jan 6			
2	Jan 13	1-3		Finalize groups
3	Jan 20	4	Programming 1	
4	Jan 27	5	Graphing 1	
5	Feb 3	6	Programming 2	
6	Feb 10	7-8	Graphing 2	Proposal deadline
7	Feb 17			
8	Feb 24		Programming 3	
9	Mar 3			Program / ethics deadline
10	Mar 10			Pilot data deadline
11	Mar 17			Data collection blitz
12	Mar 24			
13	Mar 31			
14	Apr 7			Paper due + final presentations

Programming Assignments:

Three programming assignments will be posted on Avenue throughout the term. These assignments will be posted on Monday after lecture and be due the following week in tutorial, giving approximately two weeks for completion. You may consult with other students and work together on solving problems. However, the final code submitted *must* be your own. Make sure that your code is accurately and extensively commented. You will be graded on: the efficiency of the code, the elegance of the solution, and the completeness of your commenting. Exact breakdown will be discussed when the assignment is posted. Submissions will be made physically and digitally. Physical submissions should contain: a cover page, an executive summary, a copy of the relevant code, and a printout of the output from your program. Electronic submissions will be made using the Avenue drop-box and consist of the raw MATLAB code (a .m file).

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Graphing Assignments:

We will collect perception data twice during the term (Jan 20 and Feb 3,) using ourselves as participants. We will supply raw data, and you will be responsible for creating a graphical representation of the results. Throughout the term, we will provide instruction on the use of open-source graphing software called PLOT, which we recommend you use. However, provided you meet all the standards of publication-quality graphing (which we will also discuss), you can use any other program you desire. These assignments will be distributed on Friday in tutorial and be due one week later. The assignment will be submitted physically, and should include: a cover page, an executive summary, the graph(s), and an extended figure captions for each graph. The extended figure caption should include a description of the data and the main conclusions that can be drawn. No statistics are necessary.

Executive Summaries

Science is a collaborative enterprise, and the collective expertise provided by one's peers (personally and electronically) is one of the most valuable resources available to a scientist at any level. PNB 3EE3 is designed with this in mind, and we encourage you to collaborate on every aspect of this course (respecting the limitations of academic integrity). However, another important tenet in academia is full disclosure, and this is especially important in an undergraduate environment. With each assignment in this course, you are asked to include an executive summary in which you describe your process. This includes, but is not limited to: help you received from your peers, physical or digital resources you drew upon, obstacles you overcame, and a personal evaluation of your performance. Further details will be distributed with each assignment.

Group Project:

Over the course of the term, each group will develop a research question, develop a method for answering the question, implement this method in MATLAB, create consent and debriefing forms (<http://reo.mcmaster.ca/>), collect data on fellow students, analyze the data, present the findings orally, and write a scientific report. Every member in the group will be primarily responsible for one section of the project (introduction, methods/ethics, results/binder, discussion, programming). The final grade will combine section-specific grades and an overall grade for the entire project. The final submission will have a group executive summary. As well, each group member will submit a personal executive summary. See table above for deadlines.

Participation:

This is a collaborative and interactive course limited to a small group of honours PNB students. For this reason, we expect every student to participate meaningfully in every class. Your final participation grade will be determined by the instructor and TAs at the end of the term, and will be based on your attendance, the quality and frequency of your contributions, and the extent to which you participate in the learning process by working with your peers on the assignments.

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Grading Policy:

The instructor reserves the right to adjust final marks up *or down* based on special circumstances and/or the individual's total performance in the course. Course requirements may be subject to change. In this case, a revised course outline will be posted on the webpage and the details will be announced in class.

Academic Integrity Policy:

We encourage you to collaborate in this course, but every student's final submissions must be his or her own. Attention is drawn to the senate academic integrity policy as found in the senate policy statements distributed at registration and available in the senate office. Any student who infringes one of these resolutions will be treated according to the published policy. If you are unclear about the limits of academic integrity in this course, you should speak with the instructor or TAs.

Missed Work Policy:

If you are absent from the university for a temporary medical issue (i.e., the flu), lasting fewer than 5 days, you may report your absence using the McMaster Student Absence Form. Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation. When using the MSAF, report your absence to pachaim@mcmaster.ca. You must be in contact with the instructor within 5 business days.

Communication Policy:

Electronic communication must originate from your McMaster e-mail account or Avenue. Should we need to communicate with you individually, we will use one of these accounts. Correspondence sent from third-party providers (gmail, cogeco, etc.) will not be received. This policy is in place to 1) reduce the volume of incoming spam to our accounts, 2) ensure that we know with whom we are communicating, and 3) encourage the professional use of e-mail. Note that instructors and TAs cannot return long distance telephone calls.

This course will use Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, McMaster account name, and program affiliation may be available to all other students in the same course. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns, please contact the instructor.

Students should also be aware that this course will include peer feedback. In providing such feedback, your identity may be communicated to the other student. We will take steps to ensure that sensitive communication remains anonymous, and ask that you be honest in your assessment of your peers and provide constructive comments. You will be given clear guidelines during lecture on how to conduct such assessments. Any concerns or questions regarding this process should be addressed to the instructor or TAs as soon as possible.