

Psych 3LL3

General Experimental Psychology Laboratory



Instructor: Dr. Brett Beston (bestonbr@mcmaster.ca)

Office Phone: (905)-525-9140 x21272

Lectures: Friday 11:30 - 2:20

Course Description:

This course is designed to help students develop critical thinking skills relevant for effective research design, data analysis, and interpretation. In this course, students will have the opportunity to learn about various approaches in psychology, neuroscience & behaviour. Working in groups, students select a topic area, design an experiment based on background readings, obtain, collect and analyze data in class, make oral presentations, and prepare written reports.

Course Objectives:

1. Learn approaches in psychology, neuroscience and behaviour through demonstrations and hands on experience.
2. Gain Experience in research design including, forming experimental hypotheses, designing experiments, collecting data, analyzing data, interpreting the empirical results, critically evaluating relevant literature.
3. Gain experience communicating ideas and research findings via written and verbal presentations.

Required Text: Vanderwolf, C.H. and Cooley, R.K. (1990). *The Sheep Brain: A Photographic Series*. London, Ontario, Canada: A.J. Kirby Co.

Course Evaluation:

Weekly assignments & presentations

In the first few weeks of class, we will be addressing topics significant to research in psychology. Following each of these discussions, students will be assigned into small groups or given an individual assignment. All reports and / or presentations will be due the following week in class

Neuroanatomy

Students will be given an opportunity to gain an in-depth understanding of neuroanatomy through hands-on sheep brain dissection. Students will be evaluated through a “bell ringer exam” whereby students will be required to identify structures of the brain at several stations.

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Observation lab

Groups will take part in a behaviour observation experiment. Students will be expected to establish the parameters of the experiments and collect data within small groups. Each individual will then be expected to submit a brief observation report (4-5 pages, double spaced).

Final research report

The main research project will involve a comprehensive analysis of a topic related to psychology, neuroscience and behaviour. Students will be put into groups (assigned according to your interests) and will be responsible proposing a meaningful experimental question, ethics proposal, and designing an effective experiment. We will then collect data, analyze the results, and interpret the results. Groups will be responsible for handing in a full lab report. Students will also present their findings at an "In-Class Conference" to take place during the last class. Abstract submissions for the conference are due one week before the conference.

Participation / Attendance

Participation grades will be given considering student's performance on: attending class and group meetings, contributing to class and group discussions, contributing to projects and assignments, providing feedback to other groups, providing feedback and suggestions regarding the design of the course.

Evaluation breakdown		
Weekly assignments	Written assignments	5% x 3 = 15%
	In-class presentations	5% x 3 = 15%
Observation lab report	Individual lab report	10%
Neuroanatomy exam		20%
Final research report	Literature review and proposal	10%
	Abstract	5%
	Presentation	10%
	Final Report (individually written results and discussion section)	10%
Participation		5%

Course Policies:

Details of the course requirements may change. If it becomes necessary to make changes to some part of the course during the term, reasonable notice and communication will be provided between the students and lecturer. Updates will be discussed in class and will be posted on the class web page.

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Ethical research involving humans:

In this course, we will be conducting experiments using human subjects. Please note that every researcher has an obligation to adhere to ethical standards even when research subjects are unaware of, or unconcerned with, our ethical principles. Take the time to review McMaster University's policy statement for research involving human participants. All students are expected to read and understand the ethics of research involving humans available at <http://www.mcmaster.ca/ors/ethics/>

Communication policy:

E-mail communications must originate from your designated McMaster e-mail account (either mcmaster.ca account or LearnLink account). Should we need to communicate with you about individual matters, the e-mail will be sent to your mcmaster.ca account. You should monitor this account regularly. E-mail sent from third-party providers (yahoo, hotmail, cogeco, sympatico, etc.) will not be received. We have this policy for three reasons: 1. reduce the amount of incoming spam to our accounts; 2. ensure that we know with whom we are communicating; 3. teach the professional use of e-mail. Please note that instructors cannot return long distance telephone calls.

In this course we will be using ELM (formerly known as WebCT). Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Late assignments:

Reports / Proposals that are handed in late will lose 10%/day following the day that they are due. Weekly assignments and presentations will not be accepted following the date they are due and a mark of 0 will be given.

Scaling:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59	F = 0-49
A = 85-89	B = 73-76	C = 63-66	D = 53-56	
A- = 80-84	B- = 70-72	C- = 60-62	D- = 50-52	

*Final marks may be adjusted up or down on an individual basis, in light of special circumstances and or the student's overall performance in the course

Academic Integrity:

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour 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.

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It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at <http://www.mcmaster.ca/academicintegrity>

The professor reserves the right to change any and all course requirements if the need should arise. Any change in the course requirements will be posted on the webpage and the details will be announced in class. Any concerns about announced changes should be addressed with the professor as soon as the changes are announced.

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Course Schedule	
Week	Topic
1	Introduction to the scientific method
2	Experimental design <i>Due: Assignment and presentation</i>
3	Writing in research <i>Due: Assignment and presentation</i>
4	Behavioural observation lab and ethics Introduction to sheep brain dissection <i>Due: Assignment</i>
5	Sheep brain dissection (continued) Introduction to <i>major group project</i> <i>Due: Observation lab presentation and report</i>
6	Sheep brain dissection (continued) Group Consultations
7	Sheep brain dissection (continued) Proposal critique.
8	<i>Neuroanatomy Exam</i>
9	Proposals due (The Friday before class by 5pm)
10	<i>Data collection day</i>
11	Analyze data and feedback
12	<i>Due: Final presentation</i>
13	<i>Due: Final research report & peer evaluation</i>
14	