

**PSYCHOLOGY 261**  
**Physiological Psychology**  
**Fall 2007**

<b>Instructors:</b>	<b>Office:</b>	<b>Office hours:</b>
Chris Striemer	PAS 2246	2:30-3:30 Thursday
Carol Broderick	PAS 4229	3:00-4:00 Monday
<b>Teaching Assistant:</b>		
Grayden Solman	PAS 2238	1:00-2:00 Wednesday

**UW ACE:**

Information regarding the course, including announcements, the course syllabus, course readings, and course lecture notes, will be available on **UW ACE**. **All course email will be sent to your UW email account using UW ACE.** This is to ensure that all students receive the email. Be sure to check your UW email frequently. In addition, please ensure that all email to the course instructors and the TA is sent through **UW ACE**.

**Lectures: Tuesdays and Thursdays, 1:00 – 2:20 in MC 2066**

This is an introductory course to physiological psychology in which we will cover a number of topics concerning brain-behaviour relations. Because of the breadth of the field, there will not be enough time to cover all the major areas, but we will cover the basic principles of brain organisation and neural transmission, and explore topics such as psychopharmacology, vision, audition, language, memory, and neurological disorders. The course goals include the following:

- By the end of this course, you should be able to *identify* various brain areas from a variety of brain images (diagrams, pictures, etc...)
- By the end of this course, you should be able to *describe the functions and processes* of various brain areas and brain systems.
- By the end of this course, you should be able to *apply* your knowledge about the brain to various situations.

**Required Text:**

Carlson, N.R. (2007). *Physiology of Behaviour 9<sup>th</sup> Edition*. Toronto: Allyn and Bacon.  
 Also be sure to make use of the CD-ROM packaged with the textbook. It contains lots of animations that are useful for studying.

In addition to readings from the textbook we will also be posting **supplemental readings** to complement the lecture and text material. These supplemental readings will consist of short articles to help you gain a further understanding of select topics covered in the course. **These readings are required and questions pertaining to these readings will appear on the exams and quizzes.**

**Optional Text:**

Carlson, M., & Carlson, N. R. (2007). *Study Guide for 'Carlson: Physiology of Behavior' (9<sup>th</sup> Edition)*. Toronto: Allyn and Bacon.

### **Course Requirements and Evaluations:**

**Lectures:** Lectures will often cover material that is not included in the text, and material from the text will not necessarily be covered in the lectures. **For examination purposes, you are responsible for ALL material covered in the lectures (including videos or other material presented) as well as the assigned text chapters and supplemental readings.** The PowerPoint slides for each lecture will be available on UW ACE.

**Grading:** There will be five quizzes and three in-class midterm exams (30%, 30%, 25%; exams are non-cumulative). Please make sure to note the dates of the midterms and quizzes (see dates below). Midterm exams and quizzes will consist of multiple choice, diagram, and short answer questions. The 5 quizzes will be available through UW ACE. Each quiz will be available for 24 hours and will be timed. We will take the top 4 quiz marks out of 5 as part of your final grade. **This means that you can miss one quiz without penalty.**

### **Research Participation:**

Participation in research is an integral part of this course, and provides undergraduate Psychology students with opportunities to learn first hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience.

#### **Research Experiences Group (REG)**

*\*\* 5% bonus grades for study participation!!*

Psych 261 students can participate in Psychology studies to experience first-hand some of the concepts being taught in this course and in doing so earn up to 5% in bonus marks toward your final grade. If you'd rather not participate in studies your T.A. will provide alternate assignments that you can do instead.

#### *How does REG work?*

UW Psych professors and students conduct research in areas related to Physiological Psychology which you will be learning about in this class. REG coordinates researchers and participants in these studies. In-lab studies take place in research labs in the PAS building. On-line studies can be done from any computer with internet access. Study durations are 30 or 60 minutes, conducted in 1 or 2 sessions. Bonus grades are calculated as "Study Credits", one-half credit per 30 minute participation. One credit equals a 1% grade increase. Some of your other Psych classes may also be in REG. All of our studies have received ethics approval from the UW Office of Research Ethics (ORE).

#### *How do I sign up?*

REG has created an account for you on SONA (our web-based Study Sign-Up system) at <http://uwaterloo.sona-systems.com>. User ID is your Quest ID (e.g. j2smith), temporary password is your Student ID (e.g. 2001234). Log in to your account, read/acknowledge the ORE "Human Subjects/Privacy Policy" then complete a very brief (5-10 minute) "Prescreen" questionnaire to provide basic demographic info. You won't receive a credit for this and you may decline if you wish however completing it will increase your eligibility for other studies. Once you have completed (or declined) the Prescreen questionnaire you should go to "My Profile" and enter your preferred (Alternate) email address. Then you can go to "Study Sign-Up" and select a Psych 261-eligible study that interests you and a day/time that fits your schedule. You'll receive a confirmation email and a reminder the day before the study. Upon completion of the study you are granted your Study Credit and given feedback about the study hypothesis, design and predictions.

*When should I sign up?*

Right away, the sooner the better!!! The On-line study “Mass Testing Survey F07” (one full credit) will only be offered for a few weeks and you should do this study as soon as possible. Researchers often select participants based on their responses and doing this survey increases your eligibility for other studies. Note that you can only do this survey if you have completed the Prescreen questionnaire. We’d appreciate it if you’d do both.

*Are there any restrictions to the studies I can sign up for?*

Yes ... i) the study must be eligible for a credit in Psych 261 (as noted in the study description) ii) only 2 of your 5 credits can be for On-line studies and iii) you should try to spread your participation out over the term. The last day to participate for credit is December 3. You can participate for pay anytime.

*Where can I get more information, instructions, help with login problems etc?*

REG website: <http://www.arts.uwaterloo.ca/~regadmin/regparticipant>

REG Coordinator: [regadmin@watarts.uwaterloo.ca](mailto:regadmin@watarts.uwaterloo.ca)

Educational focus of participation in research

To maximize the educational benefits of participating in experimental studies, students will receive feedback information following their participation in each experiment detailing the following elements:

- Purpose or objectives of the study
- The dependent and independent variables
- Expected results
- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions
- Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the ethical issues surrounding research with human participants

Alternative to participating in research

Students are not required to participate in research, and not all students wish to do so. As an alternative to participation in research, students may opt to review articles relevant to physiological psychology and write a short 1 page review. **Each review article counts as 1 percentage point.** An article can come from almost any source provided that it has a genuine physiological psychology focus. The review must:

- Be submitted by **November 27, 2007**
- Be typed
- Include title, author, source and date of the article. A copy of the article must be attached.
- Identify the psychological concepts in the article and indicate the pages in the text that are applicable.

- Clearly evaluate the application or treatment of those concepts in the article.

Students may complete any combination of a) participation in research or b) article review up to a total of 5% points.

### **OVERALL GRADING SUMMARY**

Midterm 1	30%
Midterm 2	30%
Midterm 3	25%
5 Quizzes (top 4 @ 2.5% each)	10%
Research participation	5%
<b>Total</b>	<b>100%</b>

### **NOTE REGARDING ACADEMIC OFFENSES:**

This is an excerpt from the undergraduate calendar:

Student offences punishable by disciplinary action are described in Policy 71\*. Refer to the section (\*\*\*) at the end of Policy 33 for a list of on-campus individuals, services/facilities available to advise students of their rights under this Policy and to advise on the procedures to be followed.

**Academic offences** shall include, but shall not be limited to, the following:

- Infringing unreasonably on the work of other members of the University community (e.g. disrupting classes or examinations; harassing, intimidating or threatening others).
- Violation of safety regulations in a laboratory or other academic setting.
- Cheating on examinations, assignments, work term reports, or any other work used to judge student performance.
- Impersonating another student or entering into an arrangement with another person to be impersonated for purposes of taking examinations or tests, or carrying out assignments.
- Plagiarism, which is the act of presenting the ideas, words or other intellectual property of another as one's own.
- Obtaining by improper means examination papers, tests, or similar materials, or using or distributing such materials to others.
- Falsifying academic records, including tests and examinations, or submitting false credentials.
- Oral or written misrepresentations (e.g., fraudulent health claims) which may have an effect on academic evaluations.
- Submitting an essay, report, or assignment when a major portion has been previously submitted or is being submitted for another course without the express permission of all instructors involved.

**Disciplinary Penalties.** One or more of the following disciplinary penalties may be imposed:

- A **reprimand** or warning to the student that her/his behaviour has been unacceptable.
- **Submission of a failing grade** in an examination, test, assignment, or course, or in a term.
- **Disciplinary probation** for the balance of the period of registration at the University in the degree program in which the student was registered at the time of the offence.
- **Restraining orders** in the case of threats to individuals or restitution for property or other damages.
- **Expunging** grades or **revoking** degrees.
- **Suspension** of a student from the University, which shall not exceed three years.
- **Expulsion**, which shall be permanent.

\* *The full text of Policy 71 is available on the web.*

*(<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.pdf>). Copies can also be obtained from the Secretariat (Needles Hall, Room 3060); the Co-ordinator, Ethical Behaviour and Human Rights (Mathematics and Computer Building, Room 4049); and the Ombudsperson (Student Life Centre, Room 2128).*

An additional note from the Associate Dean of Arts for Undergraduate Affairs:

“Note on avoidance of academic offences: **All students registered in the courses of the Faculty of Arts are expected to know what constitutes an academic offences, to avoid committing academic offences, and to take responsibility for their academic actions.** When the commission of an offences is established, disciplinary penalties will be imposed in accord with Policy #71 (Student Academic Discipline). For information on categories of offenses and types of penalties, students are directed to consult the summary of policy #71 (Student Academic Discipline) which is supplied in the undergraduate calendar. If you need help in learning how to avoid offenses such as plagiarism, cheating, and double submission, or if you need clarification of aspects of the discipline policy, ask your course instructor for guidance. Other resources regarding the discipline policy are your academic advisor and the Undergraduate Associate Dean.”

## Tentative Lecture Schedule

<u>Date</u>	<u>Lecture Topic</u>	<u>Readings</u>
Sept 11	Introduction - Chris/Carol	Chapter 1
Sept 13	Structure and function of neurons - Carol	Chapter 2
Sept 18	Structure and function of neurons - Carol	
Sept 20	Neuroanatomy - Carol	Chapter 3
Sept 25 <b>Q1</b>	Neuroanatomy - Carol	Chapter 3, Article 1
Sept 27	Research Methods - Chris	Chapter 5
Oct 2	Vision - Chris	Chapter 6
Oct 4 <b>Q2</b>	Vision - Chris	Chapter 6, Article 2
Oct 9	Audition - Chris	Chapter 7
<b>Oct 11</b>	<b>*MIDTERM 1 (Covers introduction-audition)*</b>	
Oct 16	Body senses/ Movement control - Carol	Chapters 7 & 8
Oct 18	Movement control - Carol	Chapter 8, Article 3
Oct 23 <b>Q3</b>	Sleep and biological rhythms - Carol	Chapter 9
Oct 25	Emotion - Carol	Chapter 11
Oct 30	Human communication - Carol	Chapter 14
Nov 1	Learning and Memory - Chris	Chapters 13
Nov 6 <b>Q4</b>	Learning and Memory - Chris	Chapter 13, Article 4
<b>Nov 8</b>	<b>*MIDTERM 2 (Covers body senses-learning and memory)*</b>	
Nov 13	Neurological disorders- Carol	Chapter 15
Nov 15	Schizophrenia - Chris	Chapter 16
Nov 20	Affective disorders - Chris	Chapter 16,
Nov 22 <b>Q5</b>	Anxiety disorders and ADHD - Chris	Chapter 17, Article 5
Nov 27	Drug abuse - Chris	Chapter 18
<b>Nov 29</b>	<b>*MIDTERM 3 (Covers neurological disorders-drug abuse)*</b>	