Psych 396 Spring, 2015

Tuesday and Thursday, 1230-220 PM, PAS 4032

Instructor and T.A. Information

Instructor: Colin Ellard
Office: PAS 4034
Office Phone: 519-888-4567 ext 36852
Office Hours: Wednesdays 1-2 pm or by arrangement
Email: cellard@uwaterloo.ca
The best way to reach me is by email. You can normally expect a response from me within 24 hours. I will hold regular office hours on Wednesdays but you can reach me at other times and I will do my best to set an appointment for either a face to face meeting or a phone call with you at a time that works for both of us.

T.A.	Christie Haskell
Email	christie.haskell@uwaterloo.ca
Office	PAS 4043
Office Hours	TBA

Course Description

The main objective of the course is to deepen your understanding of neuroanatomy and brain function using a variety of approaches ranging from lecture and seminar presentations to experimentation and anatomical dissection.

Course Goals and Learning Outcomes

Upon completion of this course, students should be able to:

A. Describe the basic elements of the mammalian brain
   - Describe and locate structures on a real brain
   - Describe many of the major pathways connecting brain areas

B. Read critically and comment on primary research papers in neuroscience
   - Conduct literature reviews, identify key papers in a restricted area of neuroscience
   - Read primary research papers and comment critically on their content

C. Write a full APA style journal article based on an experiment in behavioural neuroscience
   - Know how to conduct a simple study using provided tools
   - Know how to describe the findings of such a study in written format

D. Prepare and deliver a seminar presentation on a topic in neuroscience
   - Plan an oral presentation by reading an assigned paper and conducting library research to fill in necessary context
   - Deliver an oral presentation soliciting feedback from class members to ensure understanding

Required Texts and Materials

- -Vanderwolf, C. H. & Cooley, R. K. The sheep brain: A photographic series.
- -Original journal articles as specified on the syllabus.
- You'll want to buy a labcoat to protect your clothing during the brain dissection classes. Lab coats are available at Chemical Stores or at Write Stuff on campus.

Readings Available on LEARN

- Course notes associated with each module
- Original research articles
- Powerpoint slides used for lectures

Course Requirements and Assessment

Assessment	Date of Evaluation (if known)	Weighting
Quiz 1	June 4	15
Quiz 2	June 30	15
Lab 1	June 21	15
Presentation	Various	10
Quiz 3	July 21	15
Lab 2	July 29	20
Participation/attendance	Various	10
Total		100%
***up to 4 bonus points available through SONA participation		

Notes on Assessments

Quizzes The first two tests include a practical ("bell-ringer") component and a written component. The third test is just a written test. A bell-ringer requires you to identify different locations on a physical/tissue specimen and so is geared towards assessing your understanding of the layout of the brain. The written portion will test both your identification skills and your understanding of the function of different parts of the brain and methods of research used to acquire such understanding. The written portions of tests will be based on both lecture content (including the things I say in class and not just the things that appear on slides) and assigned readings. More details on both will be provided prior to their dates.

Written assignments. The experiments will be conducted during class time. The first assignment will consist of written answers to questions that I will provide related to the first laboratory exercise. The purpose of this assignment is both to deepen your understanding of a content area in neuroscience (embodiment) and to give you some practice in writing experimental papers. This first paper will be due on June 21 (this is much longer than you need following completion of the lab, but I don't want it to interfere with the midterm on June 4). The second paper will be a full experimental write-up (cover page, abstract, method, results, discussion, and references) adhering to APA format. It is due on the last day of term.

Seminar presentation: Each student will be provided a short paper to present. I will expect your presentation (roughly 15-20 minutes in length) to cover the content of the paper and also to provide any additional content required for the class to understand the paper. The paper presentations will be embedded within a larger discussion in the classroom on a topic related to your presentation.

Participation/attendance: In order to support classmates who are giving presentations and your partners in the anatomy sessions, I expect you to attend and to contribute to each class. To encourage this, a modest portion of your grade will accrue from your contributions to the class and to regular attendance. If you cannot make a class for any reason, I expect you to let me know in advance.

Course Outline

You'll notice that there is a fair bit of inevitable moving from classroom to lab and back again as we progress through the course. Lectures and presentations will take place in 4032. Labs will take place on the second floor lab area. You should also take careful note of the dates of tests and deadlines for assignments.

Week	Date	Topic	Location
1	May 5	Welcome to the class and introductions	PAS 4032
1	May 7	Cellular neuroanatomy	PAS 4032
2	May 12	Introduction to gross anatomy	PAS 4032
2	May 14	Sheep brain dissection 1	Lab
3	May 19	Sensory systems – lecture and dissection 2	PAS 4032 and Lab
3	May 21	Intro to VR – lecture and lab visit	PAS 4032
4	May 26	No class	
4	May 28	Anatomy review session – optional	Lab
5	June 2	Lab 1/review	Lab
5	June 4	Quiz 1 – practical and written	Lab
6	June 9	Embodiment and presence – debrief on Lab 1	PAS 4032
6	June 11	Motor systems – Lecture and dissection 3	PAS 4032 and Lab
7	June 16	The comparative method – lecture and presentations	PAS 4032
7	June 18	Limbic system – Lecture and dissection 4	PAS 4032 and Lab
8	June 23	The lesion method – lecture and presentations	PAS 4032
8	June 25	Review	Lab
9	June 30	Quiz 2 – practical and written	Lab
9	July 2	Lab 2 – visual action in VR	PAS 4032
10	July 7	Debrief on Lab 2/writing an APA paper	PAS 4032
10	July 9	Electrophysiological methods – lecture and presentations	PAS 4032
11	July 14	Imaging methods – lecture and presentations	PAS 4032
11	July 16	Genetic methods – lecture and presentations	PAS 4032
12	July 21	Quiz 3 – written only	PAS 4032
12	July 23	Final lab report tutorial (optional)	PAS 4032

Late Work

Deadlines for papers are clearly stated in the syllabus. Except for accommodations due to illness or bereavement, a penalty of 5% per day will be imposed on late submissions (weekend days included). Drop boxes for written assignments will close 7 days following the stated deadlines, after which written work will no longer be accepted.

Experiential Learning with SONA

Since experiential learning is highly valued in the Department of Psychology, students may earn a "bonus" grade of up to 4% in this course through research experience. Course work will make up 100% of the final mark and a "bonus" of up to 4% may be earned and will be added to the final grade if/as needed to bring your final grade up to 100%.

The two options for earning research experience grades (participation in research and article review) are described below. Students may complete any combination of these options to earn research experience grades.

Option 1: Participation in Psychology Research, Research Experiences Group (REG)

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in lab and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychology studies have undergone prior ethics review and clearance through the Office of Research Ethics.

Educational focus of participation in research

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

Purpose or objectives of the study
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 about the study

Contact information for the Director of the Office of Research Ethics should the student want to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in LAB studies is worth 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies is worth .25 credits for each 15-minutes of participation. Researchers will record student's participation and will advise the course instructor of the total credits earned by each student at the end of the term.

How to participate?

Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account. You must get started early in the term.

For instructions on how to log in to your SONA account and for a list of important dates and deadlines please, as soon as possible go to:

*** Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website.***

Option 2: Article Review as an alternative to participation in research

Students are not required to participate in research, and not all students want to do so. As an alternative, students may opt to gain research experience by writing short reviews (1½ to 2 pages) of research articles relevant to the course.

You must contact your TA to get approval for the article you have chosen before writing the review. Each review article counts as one percentage point. To receive credit, you must follow specific guidelines. The article review must:

Be submitted before the last day of lectures. Late submissions will NOT be accepted under ANY circumstances.

Information on Plagiarism Detection

I have chosen not to use plagiarism detection software in this course. You should know, however, that both the teaching assistants and I have an expert eye for cheating developed over many years of experience. Any suspected violations of the University's integrity policy will be treated seriously and reported to the appropriate authorities. As per the note on integrity below, it is the student's responsibility to understand what plagiarism is and to avoid committing it.

Electronic Device Policy

You are welcome to use notebook computers or smartphones in my classroom for note-taking, and even the occasional Google search of something related to discussion would not be inappropriate. I would appreciate it if all chimes, beeps, tweets and ringtones (especially those which sample music I

don't like) be muted during class. Also, surfing of unrelated sites during the class can be very disruptive to your fellow students. If I see you doing this, I will ask you to stop.

Attendance Policy

There is ample evidence that students who attend class regularly do better than those who don't. This, and the fact that you're investing a large amount of money to obtain a good education, should make questions about class attendance a no-brainer. You should come to class as often as you can. If you can't come to class, please let me know in advance.

Accommodations for Students with Disabilities Access-Ability Services, located in Needles Hall Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with Access-Ability Services at the beginning of each academic term.

Concerns About the Course or Instructor (Informal Stage) We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Studies (Richard Eibach) is available for consultation and to mediate a resolution between the student and instructor. Contact information is as follows:

Richard Eibach Email reibach@uwaterloo.ca Ph 519-888-4567 ext 38790

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 and 71 below for further details.

Academic Integrity, Academic Offenses, Grievance, and Appeals

To protect course integrity, as well as to provide appropriate guidance to students, course outlines in the Faculty of Arts must include the following note on avoidance of academic offenses:

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Further details: Academic Integrity Webpage]

Discipline: A student is expected to know what constitutes academic integrity [Academic Integrity Webpage] , to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course instructor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 - Student Discipline. For information on categories of offenses and types of penalties, students should

refer to Policy 71 - Student Discipline [http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm].

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4 [http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm].

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals [http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm]. (Include also the following paragraph if you will be using Turnitin*): Plagiarism detection software (Turnitin) will be used to screen assignments in this course. This is being done to verify that use of all materials and sources in assignments is documented. In the first week of the term, details will be provided about arrangements for the use of Turnitin in this course.

Academic Integrity website (Arts): http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Academic Integrity Office (UW): http://uwaterloo.ca/academicintegrity/.

Note for Students with Disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.