

307 Human Neuropsychology – Fall 2012

Instructor: James Danckert
PAS 4040
Ext. 37014
Email: jdanker@uwaterloo.ca
Office Hours: By appointment only.

*** Mondays and Wednesdays 10:00 - 11:20 a.m. AL 211 ***

Teaching Assistants

Office:
Office Hours:
Email:

Office:
Office Hours:
Email:

Course Web Page: Lectures will be available on LEARN.

Course Description and Aims

This course will provide you with a broad understanding of methods in human neuropsychological research including functional imaging and group and single case lesion studies, as a means of providing a broad understanding of human neuropsychology. Both basic research and clinical examples will be used to explore the brain - behaviour relationships inherent in motor control, language, vision and attention, memory, and executive control. The course will be run in three separate sections with each section examined in class (exams will not be cumulative and there will be no final exam in the University's exam period).

Assessment

Each section's exam will be a mixture of multiple choice, fill-in-the-blanks, diagrams and short answer questions. Together, the first two exams account for 50% of the final grade. The best result of the first two midterms will be given the higher weighting. That is, the higher exam mark will be weighted at 30% of the final course grade and the lower exam mark will be weighted at 20% of the final grade. The final exam will be worth 25% of the final grade. Thus, the three midterms make up 75% of the final grade.

You can earn four percent (4%) in **bonus marks** from participation in experiments through the Research Experiences Group (see details below under **Research Experiences Group (REG) Participation in Psychology Research**). In this instance .5% can be earned by participating in one half hour experiment, so to get the full 4% you will need to complete 4 full hours of experiments (see details below). If you decide you do not want

to participate in experiments you can complete an alternate assignment to be determined by Dr. Danckert (alternate assignments will each be worth 1%).

The final 25% of your grade will come from a written assignment. You can choose from the following assignments all of which have the same following constraints:

- must be double-spaced 12 point font
- maximum word limit INCLUDING references of 3,000 words
- references can NOT all come from the web – source material MUST include some original journal articles

Choose one of the following options for your assignment.

1. Are single case studies of neurological patients still relevant in an fMRI world? Justify your response with reference to specific cases.
2. Explain how you would bring to bear *converging* methodologies to understand the neural correlates of consciousness.
3. How does memory inform personal identity? Discuss in relation to the case of HM.

Due date for the assignment is Monday, November 19th.

Experimental credits must all be finalised by December 3rd.

Extra Credit

Two course lectures will be placed on LEARN as background material (largely a refresher of 261 – see details below). There will be a quiz associated with these lectures that you can take on ACE for 3% extra credit if you wish.

Alternate Exams

Students unable to take the mid term exams on the scheduled dates for any reason will be able to take make up exams scheduled with the instructor. Note, make up exams will not necessarily be in the same format as the original exam. The format chosen will be at the discretion of the instructor and could be in essay format, oral exam or in a standard (e.g., multiple choice) format.

Summary of Assessment for Grade

Mid term 1	20 or 30% (higher weighting for better grade in comparison to MT1)
Mid term 2	20 or 30% (higher weighting for better grade in comparison to MT1)
Mid term 3	25%
Assignment	25%
Bonus marks	
REG participation	4%
On-line quiz	3%

YouTube

I often trawl YouTube for videos to help illustrate the points made in class. I want this to be an interactive component of the course. Look ahead to each new topic (slides are all up on LEARN already). Then search YouTube for relevant videos. These don't have to be strictly educational – they could also be humorous. But they do need to be relevant. There will be a forum on LEARN for you to post your links and rate the links that others have posted. The TAs and I will look at the postings and play the most relevant/popular YouTube videos in class at the relevant time. I don't have a way to include this as part of the course assessment. But I do hope that you use it as an opportunity to engage in the topics covered in class.

Course Text

Banich, M. T. *Cognitive Neuroscience and Neuropsychology*, (2003) Houghton Mifflin Co. New York.

Course Outline

I have placed two topics on LEARN that I consider to be background material for this course. The topics covered are:

1. Neuroanatomy (Banich Ch 1 & 2)
2. Methods in Cognitive Neuroscience (Banich Ch 3)

Each of these topics is on LEARN as a Powerpoint file. I had created audio files to accompany these lectures but this made the files too large to upload. If you need clarification of any of the material in these lectures please consult your TAs. There will be a single quiz that you can take on LEARN at any time prior to the end of the course for extra credit.

Section 1

	Introduction to Human Neuropsychology	
Topic 1	History of Neuropsychology	
Topic 2	Single Case Methodology	
Topic 3	Hemispheric Specialisation	(Banich Ch 4)
Topic 4	Motor Control	(Banich Ch 5)
Topic 5	Basic Vision	
Topic 6	Dual Pathways to Vision	

*** Section 1 exam – Wednesday Oct 10th ***

Section 2

Topic 7	Object Recognition	(Banich Ch 6)
Topic 8	Spatial Processing	(Banich Ch 7)
Topic 9	Attention	(Banich Ch 8)
Topic 10	Unilateral Neglect	

Topic 11	Language	(Banich Ch 9)
Topic 12	Memory	(Banich Ch 10)

***** Section 2 exam – Wednesday Nov 7th *****

Section 3

Topic 13	Emotion	(Banich Ch 12)
Topic 14	Executive Functions	(Banich Ch 11)
Topic 15	Aging and the brain	(Banich Ch 13)
Topic 16	Dementias	(Banich Ch 14)
Topic 17	Schizophrenia	(Banich Ch 14)
Topic 18	Revision and Career Advice	(if time permits)

***** Section 3 exam – Monday Dec 3rd *****

Special Circumstances

Students who are requesting accommodation for course requirements (assignments, midterm tests, final exams, etc.) due to illness should do the following:

- seek medical treatment as soon as possible and obtain a completed UW Verification of Illness Form:
http://www.healthservices.uwaterloo.ca/Health_Services/verification.html
- submit that form to the instructor within 48 hours.
- (preferably) inform the instructor by the due date for the course

requirement that you will be unable to meet the deadline and that documentation will be forthcoming.

In the case of a missed final exam, the instructor and student will negotiate an extension for the final exam which will typically be written as soon as possible, but no later than the next offering of the course. In the case of a missed assignment deadline or midterm test, the instructor will either:

- a) waive the course component and re-weight remaining term work as he/she deems fit according to circumstances and the goals of the course, or
- b) provide an extension.

In the case of bereavement, the instructor will provide similar accommodations to those for illness. Appropriate documentation to support the request will be required.

Students who are experiencing extenuating circumstances should also inform their academic advisors regarding their personal difficulties.

Research Experiences Group (REG)
Participation in Psychology Research : Guidelines for Psychology 307, Fall 2012

Experiential learning is considered an integral part of the undergraduate program in Psychology. Participation in research is one example of this. A number of undergraduate courses have been expanded to include opportunities for Psychology students to volunteer as research participants enabling them to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience.

Since experiential learning is highly valued in the Department of Psychology, students may earn up to 4% bonus marks in this course through research experience.

This can be done in two ways. First, you may participate in studies conducted by students and faculty in the Department of Psychology. Participation is worth 0.5 participation credits (percentage points) for each half-hour of participation. Researchers will record student's participation and the REG Coordinator will advise the course instructor of the total credits earned by each student at the end of the term. Second, if you do not wish to participate in research, you may choose an alternative approach to earning the same number of credits; this is explained below in "Alternative to participating in research."

Please note 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 wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which sh/he participated.

How to sign up for studies:

Once you are registered in this course, you will get an account on Sona (our web-based Study Sign-Up system) at <http://uwaterloo.sona-systems.com> and you will receive an email with your UserID and Password. IF YOU DO NOT RECEIVE this email, please report this to regadmin@uwaterloo.ca immediately. .

- 1) Log On to Sona: User ID is your Quest ID (eg. j2smith)
Password is your Student ID (eg 2001234)
- 2) Human Subjects/Privacy Policy: Please Read/Acknowledge
- 3) Prescreen Questionnaire: Please take 10 minutes to provide this demographics information. There is no credit for this and you may decline if you wish however completing it will increase your eligibility for studies.
- 4) Sign-up for Online Surveys and/or Lab studies:
 - a. Go to “Studies” page to view the list of available studies.
 - b. Click on the Titles of studies that are eligible for this course.
 - c. Read the Study Information page.
 - d. For Online studies: Click on “View Timeslots” and/or “Participate”.
 - e. For Lab studies: Click on “View Timeslots” to set up lab appointments.
- 5) Feedback and Credits: Upon completion of the study you will receive feedback about the study hypothesis, design and predictions. Within 48 hours you will be granted the credit. Credits will be converted to grades and added to your final grade at the end of the term.

Mass Testing Survey (for 1.0 participation credit):

Researchers often select participants based on their responses to the measures in this survey. Completing it increases your eligibility for other studies. Note that you can only do this survey if you have completed the Prescreen questionnaire. Doing both Prescreen Questionnaire and Mass Testing Survey helps you (by providing more qualifying studies) and it helps researchers (by identifying more qualified participants). The Mass Testing Survey will be available until Tuesday October 20 at which time it will go offline, so please try to complete it before that date.

Study Restrictions and Important Dates:

- i) The first day to start participating in studies is Tuesday September 14.
- ii) The study must be eligible for a credit in this course (as noted in the Eligibility Requirements column on your Studies page).
- iii) **Only 2 of your credits for this course** can be for **Online** studies.
- iv) You should try to spread your participation out over the term i.e., if you wait until late in the term there may not be enough studies available for you.
- v) The last day to participate for **credit** is Friday December 4.
- vi) The last day to participate for **remuneration/pay** is Tuesday December 22.

Denial of access to studies: Completing studies that you have signed up for!

It is very important that you complete the studies that you have signed up for. For Lab studies this means showing up for the scheduled appointment. For Online studies this means completing the survey before the deadline that is posted in the timeslot. Please note that a study sign-up is a firm commitment to the researcher running the study so if

you cannot keep the lab appointment or complete the survey before the deadline, please cancel the Sign-Up or contact the researcher in advance. Failure to attend 3 (THREE) Lab and/or Online studies that you have signed up for without providing adequate prior notice to the researcher may result in denial of access to further studies. Details are provided on the FAQ page on your Sona account.

For information, instructions, help with login problems etc. please contact:

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

REG Coordinator: regadmin@uwaterloo.ca

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 submit short reviews (1½ to 2 pages) of journal articles relevant to the course material. Each review article counts as one percentage point. You should contact your TA to get approval before writing the review. To receive credit, you must follow specific guidelines. The article review must:

- **Be submitted before December 4. Late submissions will NOT be accepted under ANY circumstances.**
- Be typed
- Fully identify the title, author(s), 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 textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible.
- Clearly evaluate the application or treatment of those concepts in the article.
- Keep a copy of your review in the unlikely event we misplace the original.

Students may complete any combination of a) participation in research or b) article review up to a total of 4 credits (i.e., 4% bonus marks).