



School of Psychology

Psyc 327: Cognitive and Behavioural Neuroscience Course Outline

Trimester 2, 2012: Monday July 16 – Friday October 19 (exam after that)

Course Coordinator: Assoc. Prof. Bart Ellenbroek

This paper provides students with an advanced course in brain/behaviour relationships. The paper is divided into two main sections. Part 1 (Behavioural Neuroscience) will delve into neuroscience with lectures and readings devoted to neuroanatomy, neurochemistry, methods and specific disorders involving neuropathology in well-defined brain systems. Part 2 (Cognitive Neuroscience) will examine the neural basis of higher level cognitive functions, drawing on evidence from brain-damaged individuals and neuroimaging studies.

Course Objectives

At the end of the course, students should be able to:

1. (Parts 1 and 2) Explain and evaluate the methods used to gather information in behavioural and cognitive neuroscience.
2. (Part 1) Understand the basic organization of the brain and the role of various brain structures and neurotransmitters in specific normal and abnormal behaviours.
3. (Part 1) Understand the fundamental principles of behavioral pharmacology and how it can be used to investigate the neurobiological basis for and treatment of certain psychological disorders.
4. (Part 2) Describe and evaluate research into the neural underpinnings of different cognitive skills in humans and how they are affected by brain damage.
5. (Part 2) Analyse and interpret actual data from brain damaged patients, and present your findings according to scientific convention.

Lecture times and location

Mondays 12.00 – 12.50 in HMLT105
Tuesdays 12.00 – 12.50 in SUMT228
Thursdays 12.00 – 12.50 in KKLT301

Laboratory programme

All laboratory classes take place in room EA402. Note that labs are only run in 6 weeks (see outline below). Laboratory classes will start in the week 2 of lectures. You must sign up to **one** of the following available laboratory times:

Mon: 3.00 - 5.00pm

Tues: 1.00 – 3.00pm, 3.00 – 5.00pm

Wed: 9.00 – 11.00am, 11.00am – 1.00pm, 1.00 – 3.00 pm, 3.00 – 5.00 pm

Thurs: 10.00 – 12.00 pm, 2.00 – 4.00 pm

Frid: 2.00 – 4.00 pm.

Although we will do our best to put you in the session of your choice, but your first choice may not always be available. Selection of laboratory classes will take place electronically through the program 'S-Cubed'.

<https://signups.victoria.ac.nz>

This will be made available Monday 16 July. Note that S-Cubed sign-ups will close midday on Thursday 19 July!! You must only attend the lab that you have been signed into, and you may not attend a different one unless you have obtained permission from the Teaching Assistant (Paula Speer).

Teaching Staff

Assoc. Prof. Bart Ellenbroek EA619, tel. ext. 6159
(Course Coordinator) Email: Bart.Ellenbroek@vuw.ac.nz
Office hour: Monday 2-3, or email me for a different time

Dr. Steven Prime *to be announced*
(Lecturer) Email: steven.prime@vuw.ac.nz
Office hour: Wednesday 2-3, or email me for a better time

Paula Speer Email: Paula.Speer@vuw.ac.nz
(Teaching Assistant) Office hour: Tuesday 11-12, or email me for a better time

Lab Tutors:

Anne Arola Email: arolaanne@myvuw.ac.nz

Kate Bray Email: braykath@myvuw.ac.nz

Sam Knight Email: Sam.Knight@vuw.ac.nz

Alana Oakly Email: alanaoakly@gmail.com

Materials and Equipment

For the lab classes, you'll need to purchase a lab manual, available from Student Notes. No other materials or equipment such as calculators are required for the course or examination.

Course-Related Notices and *Blackboard*

Any information relating to Psyc 327 or any last-minute changes to the course will be posted on *Blackboard*. Copies of lecture slides as well as lecture notes will be posted on

Blackboard prior to each class (in most cases, the preceding week). Log on to Blackboard at <http://blackboard.vuw.ac.nz/>. Log in using your student email username and password, and click on the link to Psyc 327.

Attendance

Lectures: Attendance at lectures is not mandatory. However, if you miss a lecture, you're still responsible for learning the material presented. Also, there are four in-class tests scheduled during the lecture time (see Assessment section below). You must be present for these in order to gain credit.

Lab Sessions: Attendance at labs is not compulsory, but strongly recommended. Many of the labs are assessed. Also, material from labs will appear in the tests (see Assessment below). Also, in borderline cases, lab attendance will be taken into consideration.

Workload

The expected workload is no less than six hours per week in addition to the three hours of lectures and two hours of practical work. This should be viewed as an absolute minimum - how much you get out of this course will depend on the work you put in.

Assessment

60% of your marks for Psyc 327 will come from internal assessments, divided equally between Part 1 and Part 2. The remaining 40% of your marks will come from a 2-hour final examination, again weighted equally between Parts 1 and 2 of the course.

The assessments are comprised of the following:

Internal assessment, Part 1 (counts for 30% of final mark)

1. One in-class test scheduled for **Thursday August 23**, which counts 20% towards your final grade. This will cover material from all classes in Part 1. This will include material from lectures, labs as well as assigned readings. (*Assesses Objectives 1, 2 and 3*).
2. An in-class exercise and practical test on neuroanatomy, which together count for 5% of your final grade. The in-class exercise will be completed during labs in Week 2 (week starting Mon July 23), and counts for 1% of your final grade. The in-class test will be held during Week 3 (week starting Mon July 30), and counts for 4% of your final grade. (*Assesses Objective 3*).
3. A lab assignment based on the *Drugs and Aggression* Lab in Week 4 (week starting Aug 6). Worth 5%. **Due Thursday August 16, 5pm.**

Internal assessment, Part 2 (counts for 30% of final mark):

1. One in-class test scheduled for **Monday October 15**, which will count 20% of the marks towards your final grade. This test will cover all Part 2 material, including lectures, labs and assigned readings (*Assesses Objectives 1, 4 and 5*)
2. A short lab report on a data set provided for you. Worth 8%. **Due Thursday September 27, 5pm.** Further details in the Part 2 lab manual. (*Assesses Objectives 1 & 5*)
3. Three Lab exercises to be completed in labs: Worth 2% total. See Lab manual for details. (*Assesses Objectives 1, 4 and 5*)

Final Exam (counts for 40% of final mark)

There will be a two-hour final exam, which will assess all material from lectures, labs and assigned readings. It will be equally weighted towards Part 1 and Part 2. It will consist of a mix of multi-choice/short answer questions, and longer, paragraph-answer questions. More details of exam structure and question format will be given in class

Please note the dates of in-class tests carefully. Anyone who doesn't attend will score a zero, unless: a) there is a documented medical or other emergency - which you must tell us about as soon as possible; or b) prior arrangements have been made (in this case, contact the TA well before the date).

Written assignments lose 1 mark for each day late (so a mark of 6/8 becomes 5/8). If you have a documented medical or other emergency, tell one of us *as soon as possible*, and we'll consider your case. If you know in advance of some good reason why you cannot submit on time, contact us at least two weeks before the due date, and we'll try to assist.

Minimum requirements for passing the course and Mandatory course requirements

You must gain an overall mark of at least 50%. There are no Mandatory course requirements.

Recommended textbook and other readings

For Part 1 of the paper, additional lecture notes will be made available on Blackboard. In addition, we recommended:

Bear, Connors and Paradiso. (2006). *Neuroscience Exploring the Brain*, 3rd edition, Lippincott Williams & Wilkins.

The book can be purchased in the University Book Centre. Copies will also be available on 3-day Loan and Closed Reserve at the library.

For Part 2, readings will be provided on Blackboard for you to download and print. If you'd like to buy a good text in this area, we recommend:

Ward, J. (2006). *The Student's Guide to Cognitive Neuroscience*. Psychology Press.

Class Representative

A class representative will be elected in the first meeting, and that person's name and contact details will be posted on Blackboard. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

Withdrawal Dates

For information on final dates for withdrawal from this paper, go to:
<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

Lecture and Laboratory Outline

Date	Lecture	Lecturer	Lab Programme
Mon July 16	Introduction	BE	
Tues July 17	Neural Structure and Function I	BE	
Thurs July 19	Neural Structure and Function II	BE	
Mon July 23	Behavioural Pharmacology I	BE	} Neuroanatomy Lab
Tues July 24	Behavioural pharmacology II	BE	
Thurs July 26	Behavioural pharmacology III	BE	
Mon July 30	Behavioural pharmacology IV	BE	} Neuroanatomy Test
Tues July 31	The autonomic nervous system	BE	
Thurs Aug 02	Animal modeling I	BE	
Mon Aug 6	Animal modeling II	BE	} Drugs and Aggression
Tues Aug 7	Schizophrenia I	BE	
Thurs Aug 9	Schizophrenia II	BE	
Mon Aug 13	To be announced	BE	
Tues Aug 14	To be announced	BE	
Thurs Aug 16	To be announced	BE	Lab assignment due 5pm
Mon Aug 20	To be announced	BE	
Tues Aug 21	No Class	--	
Thurs Aug 23	Test 1 (20%)	--	
<i>Mid-Trimester Break</i>			
Mon Sept 10	Methods in Cognitive Neuroscience I	SP	
Tues Sept 11	Methods in Cognitive Neuroscience II	SP	
Thurs Sept 13	Object perception I	SP	
Mon Sept 17	Object perception II	SP	} Group studies in Neuro / Neglect
Tues Sept 18	Spatial perception and Attention	SP	
Thurs Sept 20	Memory I	SP	
Mon Sept 24	Memory II	SP	
Tues Sept 25	Language I	SP	
Thurs Sept 27	Language II	SP	Short Lab report due 5pm
Mon Oct 1	Reading	SP	} Single case analysis/ Amnesia
Tues Oct 2	Executive function I	SP	
Thurs Oct 4	Executive function II	SP	
Mon Oct 8	Emotional regulation/Decision making	SP	} Aphasia and Dyslexia
Tues Oct 9	Generalised disorders	SP	
Thurs Oct 11	No class	SP	
Mon Oct 15	Test 2 (20%)	--	
Tues Oct 16	No class	--	
Thurs Oct 18	No class	--	
<i>Final Exam: Date to be advised</i>			

GENERAL INFORMATION

Academic integrity and plagiarism

Academic integrity means that university staff and students, in their teaching and learning are expected to treat others honestly, fairly and with respect at all times. It is not acceptable to mistreat academic, intellectual or creative work that has been done by other people by representing it as your own original work.

Academic integrity is important because it is the core value on which the University's learning, teaching and research activities are based. Victoria University's reputation for academic integrity adds value to your qualification.

The University defines plagiarism as presenting someone else's work as if it were your own, whether you mean to or not. 'Someone else's work' means anything that is not your own idea. Even if it is presented in your own style, you must acknowledge your sources fully and appropriately. This includes:

- Material from books, journals or any other printed source
- The work of other students or staff
- Information from the internet
- Software programs and other electronic material
- Designs and ideas
- The organisation or structuring of any such material

Find out more about plagiarism, how to avoid it and penalties, on the University's website:

www.victoria.ac.nz/home/studying/plagiarism.html

Where to find more detailed information

Find key dates, explanations of grades and other useful information at www.victoria.ac.nz/home/study. Find out about academic progress and restricted enrolment at www.victoria.ac.nz/home/study/academic-progress. The University's statutes and policies are available at www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at www.victoria.ac.nz/home/study/calendar (See Section C). Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx