Faculty of Science
School of Psychology

PSYC3241
Psychobiology of Memory and Motivation

Semester 1, 2015

1. Information about the Course

FACULTY	Science		
SCHOOL OR DEPARTMENT	Psychology		
COURSE CODE	PSYC3241		
COURSE NAME	Psychobiology of Memory and Motivation		
SEMESTER	Semester 1	**YEAR**	2015
UNITS OF CREDIT	6	**LEVEL OF COURSE**	3rd year
ASSUMED KNOWLEDGE, PREREQUISITES OR CO-REQUISITES	PSYC2001 and PSYC2081		
SUMMARY OF THE COURSE	This course examines research and theory on memory and motivation as they underpin adaptive behaviour. The focus is primarily on animal research but the application of this work to the understanding of memory and motivation in humans will be made explicit. For example, the implications of this work for our understanding of memory disorders in humans, and the origin and treatment of clinical disorders will be discussed.		

2. Staff Contact Details

COURSE COORDINATOR

Name	Phone	Email	Office	Contact Time & Availability
Professor Rick Richardson	9385 1048	r.richardson@unsw.edu.au	511 Mathews	By appointment

LECTURERS

Name	Phone	Email	Office	Contact Time & Availability
Professor Rick Richardson	9385 1048	r.richardson@unsw.edu.au	511 Mathews	By appointment
Dr Bronwyn Graham	9385 3886	bgraham@psy.unsw.edu.au	1311 Mathews	By appointment

TUTORS & DEMONSTRATORS

Name	Phone	Email	Office	Contact Time & Availability
Rick Richardson	9385 1048	r.richardson@unsw.edu.au	511 Mathews	By appointment
Gabrielle King	--	g.king@student.unsw.edu.au	Level 14 Mathews	By appointment
Caitlin Cowan	--	c.cowan@unsw.edu.au	Level 14 Mathews	By appointment
Janice Kan	--	janice.kan@unsw.edu.au	Level 14 Mathews	By appointment
Nathalie Elliott	--	nathalie.elliott@student.unsw.edu.au	Level 16 Mathews	By appointment

3. Course Timetable

Component	Class Number	Day	Time	Location
Lecture 1	3537	Thursday	14:00 - 15:00	CLB 6
Lecture 2	3537	Friday	13:00 - 14:00	CLB 6
Tutorial	3546	Monday	09:00-11:00	203 Mathews
Tutorial	3538	Monday	16:00-18:00	203 Mathews
Tutorial	3543	Tuesday	11:00-13:00	203 Mathews
Tutorial	3541	Tuesday	16:00-18:00	203 Mathews
Tutorial	3545	Wednesday	09:00-11:00	203 Mathews
Tutorial	3539	Wednesday	14:00-16:00	203 Mathews
Tutorial	3540	Thursday	16:00-18:00	203 Mathews
Tutorial	3542	Friday	09:00-11:00	203 Mathews

NB. Course timetables are subject to change without notice. Students are advised to check regularly for updates on the Blackboard course site.

4. Aims of the Course

This course examines the psychobiology of memory and motivation, with an emphasis on memory. Behavioural experiments demonstrating the basic concepts associated with memory, and forgetting, will be described as will experiments that are aimed at determining the neural bases of both memory and forgetting. Much of the research described in the course involves non-human animals, but the implications of this research for our understanding of memory, and forgetting, in humans are highlighted in most sections of the course.

The course is divided into the following broad topics:
  (1) Basic concepts of memory; consolidation and reconsolidation
  (2) Fear memory
  (3) Spatial memory
  (4) Extinction
  (5) Forgetting

Lab course:
The laboratory component of the course has two primary goals: (1) to provide "hands on" experience in observing various aspects of rodent behaviour that are frequently used in studies on the psychobiology of memory, and (2) to provide an opportunity for small group discussion/debate on various issues relevant to the material described in the lecture component of the course.

Note that the "hands-on" part of the tutorial will involve handling and experimentation on animal subjects (rats); this work will be group-work (e.g., groups of students will be doing any particular task, and only some will need to actually touch the rats). Please contact your tutor as soon as possible if you would prefer to not take part in these activities (alternatives will be arranged for those particular tutorials).

5. Student Learning Outcomes

By the end of this course you will be able to:

1. Critically evaluate experiments and hypotheses about memory and forgetting, enabling you to:	1.1. Apply knowledge of the scientific method in thinking about problems related to behaviour and mental processes underlying memory and motivation. 1.2. Identify and question claims that arise from untested assumptions. 1.3. Demonstrate an attitude of critical thinking that includes persistence, open- mindedness, and intellectual engagement. 1.4. Demonstrate a capacity for higher-order analysis, including the capacity to identify recurrent patterns in behaviour, or inconsistencies in patterns of reported research findings. 1.5. Evaluate the quality of information, including differentiating empirical evidence from speculation. 1.6. Identify and evaluate the source and context of behaviour. 1.7. Use reasoning and evidence to recognise, develop, defend, and criticise arguments and persuasive appeals. 1.8. Demonstrate creative and pragmatic problem solving.
2.An advanced knowledge of research methods in psychology, enabling you to:	2.1 Describe, apply and evaluate different research methods used to study memory. 2.2. Demonstrate practical skills in laboratory-based behavioural research with rodents. 2.3. Locate, evaluate, and use information appropriately in the research process. 2.4. Design basic studies to address psychological questions; frame research questions; undertake literature searches; critically analyse theoretical and empirical studies; formulate testable hypotheses; operationalise variables; choose an appropriate methodology to test questions of

	interest; describe and interpret results.
3. Develop effective communication skills, including the ability to:	3.1. Write effectively in a variety of formats (essays, research proposals) and for a variety of purposes (e.g., informing, arguing).
	3.2. Demonstrate effective oral communication skills in various formats (e.g., group discussion/debate, presentation).
	3.3. Demonstrate effective interpersonal communication skills including : listening accurately and actively; provide constructive feedback to others; adopt flexible techniques to communicate sensitively and effectively with diverse ethnic and cultural partners, including in the context of team-work.
4. A knowledge and understanding of psychology at an advanced level with regard to:	4.1 The biological basis of behaviour, memory, and forgetting.
	4.2. Psychobiology of memory and motivation as a discipline and its major objectives.
	1.3. Major themes in the study of memory and forgetting, from both the behavioural and neural perspectives.
	1.4. The ability to explain psychological phenomena using concepts, language and major theories drawn from psychobiology.

6. Graduate Attributes		
School of Psychology Graduate Attributes[*]	**Level of Focus** 0 = No focus 1 = Minimal 2 = Minor 3 = Major	**Activities/Assessment**
1. Core knowledge and understanding	3	Participation in lectures & tutorials – assessed in exam performance, which requires an advanced understanding of the major concepts, theoretical perspectives, empirical findings, and historical trends in multiple aspects of the psychobiology of memory and motivation; the development of a research proposal, which will require advanced understanding of a particular topic in the area – assessed by written research proposal.
2. Research methods in psychology	3	The development of a research proposal, which will consist of a novel experiment to explore some issue related to memory and motivation. In addition, active participation in tutorials (assessed by tutor), including various "hands-on" tutorials designed to illustrate basic behavioural procedures commonly used to study memory and motivation, will provide multiple opportunities to experience and improve basic research methods in psychology.
3. Critical thinking skills	3	Development of a literature review for research proposal, showing use of critical and creative thinking, sceptical inquiry, and the scientific approach to solve problems related to memory and motivation, from a behavioural or neural perspective.
4. Values, research and professional ethics	3	Ongoing discussion of the ethical issues surrounding animal research (assessed through tutorial participation), and the development of an experimental protocol to yield meaningful empirical evidence (assessed through the

		written research proposal), showing a knowledge of the value of empirical evidence, tolerance of ambiguity during the search for greater understanding of behaviour, and the ability to act ethically in the development of experiments involving animals.
5. Communication skills	3	Development of in-class presentations of research literature review and proposal will encourage you to communicate effectively in a variety of contexts, both as presenter and critical audience. Participation in demonstration experiments will show collaboration in group work (assessed through tutorial participation).
6. Learning and application of psychology	3	Be able to apply psychological principles to broader issues involving memory and motivation, including their role in understanding human mental disorders.

7. Rationale for the Inclusion of Content and Teaching Approach

This course provides an advanced treatment of the neuroscience of learning, memory, and motivation. It follows on, and assumes knowledge, from PSYC2081 Learning and Physiological Psychology. This course is complementary to PSYC3051 Physiology Psychology in the sense that both courses provide an advanced perspective on issues in biological psychology.

8. Teaching Strategies

9. Course Schedule			
Week	**Lecture Topic & Lecturer**	**Tutorial/Lab Content**	**Suggested Readings**
1	Introduction to memory and motivation; modulation of memory (Richardson)	*No labs*	
2	Consolidation and reconsolidation (Richardson)	Introduction; how to write research proposal	
3	Fear (Richardson)	Play behaviour and USVs	
4	Fear (Richardson)	Animal exercises	
5	Midterm exam	*No labs*	
6	Extinction (Graham)	Animal exercises	
7	Sex differences in extinction (Graham)	Animal exercises	
8	Sex differences in memory (Graham)	class presentations	
9	To be determined (Richardson)	class presentations	
10	To be determined (Richardson)	*No labs*	
11	Forgetting (Richardson)	Ethics	
12	Forgetting (Richardson)	Brain game	

10. Assessment

Assessment Task	Weight	Learning Outcomes Assessed	Graduate Attributes Assessed	Date of		Feedback		
				Release	Submission	Who	When	How
Mid-session exam	20			Week 5, lecture 1	Week 5, lecture 1	Lecturer	Week 7	Moodle
Final exam	40			Exam period	Exam period	Lecturer	When marks released by University	University
Research proposal	30			Week 1	Friday of Week 12	Tutor	26 June	Moodle
Tutorial participation	10			Week 1	Friday of Week 12	Tutor	26 June	Moodle

1. Mid-session exam: This 45-min exam (could consist of multiple choice, short-answer, and/or fill-in-the-blank questions; more specific details provided prior to the exam) will be given on Thursday 2 April at 2-3 (i.e., in regularly-scheduled lecture time period). This exam will be based on lecture material covered in lectures from March 2 – March 27 (first 8 lectures, all by RR), and the readings for those lectures.
2. Final exam: This 2-hr exam (which could consist of multiple choice, short-answer, and/or fill-in-the-blank questions; more specific details will be provided prior to the exam) will be given during the formal exam period. This exam will cover material covered in lectures from April 13- 29 May (all the lectures after the mid-session exam), and the readings for those lectures.
3. Research proposal: This involves a written research proposal (1,500-2,000 words in length, and following general APA guidelines) on a proposed experiment (based on material/ideas covered in the course). An electronic version of the assignment must be submitted to the course's Moodle module by 4 PM on May 29 (Friday of Week 12) to allow for plagiarism checks via Turnitin. Penalties will be imposed for late submission of this assignment. See the Psychology Student Guide for details.
4. Tutorial participation: These marks will be determined by regular attendance, and active participation, in all tutorials. However, an emphasis will be given for providing constructive feedback to fellow students in those tutorials where oral presentations have been scheduled. Note that mere attendance will only result in a maximum of 1 out of 10 marks being awarded (i.e., these marks are based on active, constructive, participation in the tutorials) .

11. Expected Resources for Students	
TEXTBOOKS	none
COURSE MANUAL	none
REQUIRED READINGS	These are provided on the course Moodle page
RECOMMENDED INTERNET SITES	none

12. Course Evaluation & Development
Courses are periodically reviewed and students' feedback is used to improve them. Feedback is gathered using various means including UNSW's Course and Teaching Evaluation and Improvement (CATEI) process.

13. Plagiarism & Academic Integrity

What is plagiarism?

Plagiarism is presenting someone else's thoughts or work as your own. It can take many forms, from not having appropriate academic referencing to deliberate cheating.

UNSW groups plagiarism into the following categories:

- **Copying:** using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This also applies to images, art and design projects, as well as presentations where someone presents another's ideas or words without credit.
- **Inappropriate paraphrasing:** changing a few words and phrases while mostly retaining the original structure and information without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit. It also applies to piecing together quotes and paraphrases into a new whole, without referencing and a student's own analysis to bring the material together.
- **Collusion:** working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student before the due date, or for the purpose of them plagiarising at any time, paying another person to perform an academic task, stealing or acquiring another person's academic work and copying it, offering to complete another person's work or seeking payment for completing academic work.
- **Duplication:** submitting your own work, in whole or in part, where it has previously been prepared or submitted for another assessment or course at UNSW or another university.

Where can I find out more information?

In many cases plagiarism is the result of inexperience about academic conventions. The University has resources and information to assist you to avoid plagiarism. The first place you can look is the section about referencing and plagiarism in each Course Guide, as this will also include information specific to the discipline the course is from. There are also other sources of assistance at UNSW:

- **How can the Learning Centre help me?**

  The Learning Centre assists students with understanding academic integrity and how to not plagiarise. Information is available on their website: www.lc.unsw.edu.au/plagiarism. They also hold workshops and can help students one-on-one.

- **How can Elise help me?**

  ELISE (Enabling Library & Information Skills for Everyone) is an online tutorial to help you understand how to find and use information for your assignments or research. It will help you to search databases, identify good quality information and write assignments. It will also help you understand plagiarism and how to avoid it. All undergraduate students have to review the ELISE tutorial in their first semester and complete the quiz, but any student can review it to improve their knowledge: http://elise.library.unsw.edu.au.

- **What is Turnitin?**

  Turnitin is a checking database which reviews your work and compares it to an international collection of books, journals, Internet pages and other student's assignments. The database checks referencing and whether you have copied something from another student, resource, or off the Internet. Sometimes students submit their work into Turnitin when they hand it in, but academics can also use it to check a student's work when they are marking it. You can find out more about Turnitin here: http://telt.unsw.edu.au/turnitin.

What if plagiarism is found in my work?

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first year, such as stealing another student's work or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in a honours thesis) even suspension from the university. The Student Misconduct Procedures are available here

www.unsw.edu.au/studentmisconductprocedures.pdf

Examples of plagiarism

Using the internet appropriately

A first year student handed in an assignment where she had copied from a website. Her lecturer realised she didn't understand you have to reference websites in the same way you reference books and journal articles. The lecturer explained how to reference and sent her to a workshop at the Learning Centre to help her improve her skills.

Working together on a math assignment

A group of Mathematics students worked together on an assignment when they had been told this was not allowed. All questions where the students had worked together were given zero, and this lead to some student failing the assessment.

No referencing in an assessment

A third year student submitted a major assessment that included material from a journal article published in Canada. When his essay was submitted into Turnitin, it let the academic know that the student didn't reference the material. The student was given zero for the essay, and because it was worth 50 per cent he failed the course.

Copying design work

A final year design student used images of someone else's designs in her work and he said the designs were his own. The matter was formally investigated by his Faculty and he was found to have committed academic misconduct and failed the course.

Further information and assistance

If you would like further information or assistance with avoiding plagiarism, you can contact the Learning Centre. The Learning Centre at The University of New South Wales has two locations:

UNSW Learning Centre

Lower Ground Floor, North Wing, Chancellery Building

(C22 Kensington Campus – near Student Central)

www.lc.unsw.edu.au

Phone: 9385 2060

Email: learningcentre@unsw.edu.au

Opening Hours:

Monday to Thursday: 9am - 5pm and

Friday: 9am - 2.30pm

COFA Campus Learning Centre

Email: cofalearningcentre@unsw.edu.au

Phone: 9385 0739

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14. Administrative Matters

The *School of Psychology Student Guide*, available on http://www.psy.unsw.edu.au/students/current/files/Student_Guide.pdf, contains School policies and procedures relevant for all students enrolled in undergraduate or Masters psychology courses, such as:

- Attendance requirements;
- Assignment submissions and returns;

- Assessments;
- Special consideration in the event of illness or misadventure;
- Student Code of Conduct;
- Student complaints and grievances;
- Student Equity and Disability Unit; and
- Occupational Health & Safety.

Students should familiarise themselves with the information contained in this *Guide*.