



Course Outline

PSYC3241

Psychobiology of Memory and Motivation

School of Psychology

Faculty of Science

T1, 2019

1. Staff

Position	Name	Email	Consultation times and locations	Contact Details
Course Convenor	Prof. Rick Richardson	r.richardson@unsw.edu.au	By appointment, Mathews 511	9385 1048
Lecturer	Prof. Rick Richardson	r.richardson@unsw.edu.au	By appointment, Mathews 511	9385 1048
Lecturer	Dr Bronwyn Graham	b.graham@unsw.edu.au	By appointment, Mathews 1311	9385 3886
Lecturer	Dr Kathryn Baker	k.baker@unsw.edu.au	By appointment, Mathews 508	9385 0552
Tutor				

2. Course information

Units of credit: 6
Pre-requisite(s): PSYC2001 and PSYC2081
Teaching times and locations: [PSYC3241 Timetable](#)

2.1 Course summary

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. The laboratory component of the course will provide “hands on” experience in observing various aspects of rodent behaviour that are frequently used in studies on the psychobiology of memory and 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). The course is divided into the following broad topics: basic concepts of memory; consolidation and reconsolidation; fear memory; spatial memory; extinction of learned fear, and forgetting.

2.2 Course aims

The overall aim of this course is for students to develop and gain further understanding of 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 memory and forgetting.

2.3 Course learning outcomes (CLO)

At the successful completion of this course the student should be able to:

1. Demonstrate an advanced level of knowledge and understanding of the theoretical perspectives, and empirical research relating to the biological basis of behavior, memory, forgetting, and motivation.
2. Understand and apply research methods used in psychobiology.
3. Demonstrate practical skills in laboratory-based behavioural research with rodents.
4. Demonstrate effective verbal and written scientific communication skills.
5. Be able to apply psychological principles to broader issues involving memory and motivation, including their role in understanding human mental disorders.

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2.4 Relationship between course and program learning outcomes and assessments

Program Learning Outcomes							
CLO	1. Knowledge	2. Research Methods	3. Critical Thinking Skills	4. Values and Ethics	5. Communication, Interpersonal and Teamwork	6. Application	Assessment
1.	Lectures, tutorials, lab practicals, online activities, formative quiz, discussion forum	Lectures, tutorials, lab practicals, online activities, formative quiz, discussion forum					Formative quiz, Mid-session exam, Proposal, Final exam
2.	Lectures, tutorials, lab practicals, online activities, formative quiz	Lectures, tutorials, lab practicals, online activities, formative quiz		Lectures, tutorials, lab practicals, online activities, formative quiz		Lectures, tutorials, lab practicals, online activities, formative quiz	Formative quiz, Mid-session exam, Proposal, Final exam
3.		Lectures, tutorials, lab practicals, online activities		Lectures, tutorials, lab practicals, online activities		Lectures, tutorials, lab practicals, online activities	Mid-session exam, Proposal, Final exam
4.					Tutorials, lab practicals, discussion forum		Proposal
5.	Lectures, tutorials, lab practicals, online activities, discussion forum			Lectures, tutorials, lab practicals, online activities, discussion forum		Lectures, tutorials, lab practicals, online activities, discussion forum	Mid-session exam, Proposal, Final exam

3. Strategies and approaches to learning

3.1 Learning and teaching activities

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.

The laboratory component of the course will provide “hands on” experience in observing various aspects of rodent behaviour that are frequently used in studies on the psychobiology of memory and an opportunity for small group discussion/debate on various issues relevant to the material described in the lecture component of the course.

Attendance is monitored in the tutorial/lab component of the course. Attendance at face to face tutorials is essential in accordance with UNSW Assessment Implementation Procedure. Students are required to attend at least 80% of tutorial/lab classes, and be punctual in this attendance (i.e., coming late may mean that you will be marked as absent). **Students should make sure that their name has been marked on the class roll for each class that they attend.** Failure to meet these specified attendance requirements may result in course failure. Explanations for an occasional absence from a class or requests for permission to be absent from a class should be discussed with the lecturer / tutor, and where applicable, accompanied by a medical certificate.

The Discussion Forum on Moodle provides students with an opportunity to question and clarify course content. Students are strongly encouraged to engage with this forum by posting questions or comments, and reading, answering, or replying to other student's posts to enhance understanding of the content, critical thinking, and written communication skills.

An online formative quiz is available for students and provides an opportunity to evaluate understanding of course material prior to the census date.

3.2 Expectations of students

It is expected that students are aware of UNSW Assessment policy and understand how to apply for special consideration if they are unable to complete an assignment/exam due to illness and/or misadventure.

It is expected that students have read through the School of Psychology Student Guide.

All news updates and announcements will be made on the 'Announcements' forum on the Moodle page and/or by email. It is the student's responsibility to check Moodle and their student emails regularly to keep up to date.

The final exam for this course will take place during the UNSW examinations period. Students should not arrange travel during the UNSW exam period until the date of the final exam has been released. Students who arrange travel prior to the release of the final exam date will not be granted consideration in the event they are scheduled to be out of country when the final exam is to occur. This is especially important for study abroad students – do not arrange travel home until the final exam date has been released.

Students registered with Disability Support Services must contact the course coordinator immediately if they intend to request any special arrangements for later in the course, or if any special

arrangements need to be made regarding access to the course material. Letters of support must be emailed to the course coordinator as soon as they are made available.

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4. Course schedule and structure

Each week this course typically consists of 2 hours of face-to-face lecture material, 1.5 hours of face-to-face tutorials, and 8 hours of online modules and/or self-determined activities (i.e. reading, work on assessments, exam preparation and revision).

Week	Lecture topic/s	Tutorial/lab topics	Online modules	Self-determined activities
Week 1 18/02/2019	Memory consolidation and modulation	No labs	Effects of stress on memory Spatial memory	Reading on memory consolidation; reading on stress and memory
Week 2 25/02/2019	Memory reconsolidation	How to write a research proposal; Play and USV animal demonstrations	Jove videos on neuroanatomy and neural staining; interactive exercises on writing	Reading on memory reconsolidation; revision; mid-semester exam prep; work on research proposal
Week 3 4/03/2019	Fear memory Neurogenesis and memory	Hands-on animal exercises	Formative quiz	Reading on neurogenesis and memory; revision; mid-semester exam prep; work on research proposal
Week 4 11/03/2019	Development of fear memory	Hands-on animal exercises	Infantile amnesia lecture video Effects of early-life stress on memory development	Reading on fear memory development; reading on neural bases of learned fear; revision; mid-semester exam prep; work on research proposal
Week 5 18/03/2019	Transgenerational effects of stress on memory	Hands-on animal exercises	Extinction lecture video; Treating the effects of early-life stress	Reading on transgenerational transmission of early-life stress; revision; mid-semester exam prep; work on research proposal

Week 6 25/03/2019	Mechanisms of sex differences in extinction	Class presentations	Sex differences in extinction lecture video Interactive revision poll	Reading on sex differences in extinction; revision; mid-semester exam prep; work on research proposal
Week 7 1/04/2019	Sex hormones and associative learning; effects of motherhood	Class presentations		Reading on sex hormones and memory; work on research proposal
Week 8 8/04/2019	Adolescence and fear regulation	No labs	Unlearned fear lecture; Interactive revision poll	Reading on adolescence and fear regulation; work on research proposal
Week 9 15/04/2019	Spatial memory	Ethics		Reading on spatial learning in rats; reading on spatial memory across species; work on research proposal
Week 10 22/04/2019	Individual differences in memory	Brain game	Modulation of fear regulation in adolescents lecture video	Reading on individual differences in memory; work on research proposal
Study period 2/05/2019				Exam preparation, revision
Exam period 6/05/2019				Exam preparation, revision

5. Assessment

5.1 Assessment tasks

All assessments in this course have been designed and implemented in accordance with UNSW Assessment Policy.

Assessment task	Length	Weight	Mark	Due date
Assessment 1: Formative quiz	3 MCQ & 1 short answer	0% (formative)	N/A	N/A
Assessment 2: Mid-session exam	45 min	20%	/100	29/03/2019
Assessment 3: Research proposal	1500-2000 words	30%	/100	26/04/2019
Assessment 4: Final exam	2 hrs	50%	/100	Exam period

Assessment 1: This online quiz will consist of 3 multiple-choice questions and one short-answer question, and will be released on Friday 16 March. Students can take it whenever they wish, but it is designed to provide some formative feedback in terms of whether the course material is being understood. The answers are given at the end of the quiz.

Assessment 2: This 45-min exam (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 on Thursday 29 March at 5- 6pm (i.e., in regularly-scheduled lecture time period). This exam will be based on lecture material covered in lectures from February 26 - March 19 (first 7 lectures, all by RR), and the readings for those lectures.

Assessment 3: This involves a written research proposal 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 26th April (Friday of Week 10) to allow for plagiarism checks via Turnitin. Penalties will be imposed for late submission of this assignment (see 5.3), and for plagiarism. The deadline for absolute fail (i.e., the date of submission after which the task will not be assessed is 10th May).

Assessment 4: 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 from the lectures given after 19 March, and the readings for those lectures.

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

5.2 Assessment criteria and standards

Further details and marking criteria for each assessment will be provided to students closer to the assessment release date (see 4.1: UNSW Assessment Design Procedure).

5.3 Submission of assessment tasks

Assessment 3: In accordance with UNSW Assessment Policy the research proposal must be submitted online via Turnitin. No paper or emailed copies will be accepted.

Late penalties: deduction of marks for late submissions will be in accordance with School policy (see: [Psychology Student Guide](#)).

Special Consideration: Students who are unable to complete an assessment task by the assigned due date can apply for special consideration. Special consideration applications must be submitted to Student Central within 3 working days of the assessment due date along with a physical copy of the supporting documentation. Students who have experienced significant illness or misadventure during the assessment period may be eligible. Only circumstances deemed to be outside of the student's control are eligible for special consideration (see - <https://student.unsw.edu.au/special-consideration>). In the case of take-home assessment tasks, misadventure must occur for at least 3 consecutive days during the assessment period. If approved, students may be given an extended due date to complete take-home assessments, or an alternative assessment may be set.

Alternative assessments: will be subject to approval and implemented in accordance with UNSW Assessment Implementation Procedure.

Supplementary examinations: will be made available for students with approved special consideration application and implemented in accordance with UNSW Assessment Policy.

5.4. Feedback on assessment

Feedback on all pieces of assessment in this course will be provided in accordance with UNSW Assessment Policy.

Assessment	When	Who	Where	How
Formative quiz	Immediate	Richardson	Online	Moodle
Mid-session exam	12/04/2019	Richardson	Online	Moodle
Research proposal	10/05/2019	Tutor	Online	Moodle
Final exam	TBA	N/A	N/A	N/A

6. Academic integrity, referencing and plagiarism

The APA (6th edition) referencing style is to be adopted in this course. Students should consult the publication manual itself (rather than third party interpretations of it) in order to properly adhere to APA style conventions. Students do not need to purchase a copy of the manual, it is available in the library or online. This resource is used by assessment markers and should be the only resource used by students to ensure they adopt this style appropriately:

[APA 6th edition.](#)

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect,

responsibility and courage.¹ At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and **plagiarism** can be located at:

- The *Current Students* site <https://student.unsw.edu.au/plagiarism>, and
- The *ELISE* training site <http://subjectguides.library.unsw.edu.au/elise/presenting>

The *Conduct and Integrity Unit* provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

7. Readings and resources

Textbook	Nil
Course information	Available on Moodle
Required readings	School of Psychology Student Guide .
Recommended internet sites	UNSW Library UNSW Learning Centre ELISE Turnitin Student Code of Conduct Policy concerning academic honesty Email policy UNSW Anti-racism policy statement UNSW Equity and Diversity policy statement UNSW Equal opportunity in education policy statement

8. Administrative matters

The [School of Psychology Student Guide](#) 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
- Student code of conduct
- Student complaints and grievances
- Disability Support Services

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

- Health and safety

It is expected that students familiarise themselves with the information contained in this guide.

9. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>
- Disability Support Services: <https://student.unsw.edu.au/disability-services>
- UNSW IT Service Centre: <https://www.it.unsw.edu.au/students/index.html>

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