PSYU2236

Biopsychology and Learning

Session 2, Special circumstances 2021

Archive (Pre-2022) - Department of Psychology

Contents

Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of units with mandatory on-campus classes/teaching activities.

Visit the MQ COVID-19 information page for more detail.

General Information

Unit convenor and teaching staff
Unit convenor
Richard Ramsey
richard.ramsey@mq.edu.au
Level 3, AHH
By appointment

Lecturer
Kim Curby
kim.curby@mq.edu.au
4 First Walk
By appointment

Credit points
10

Prerequisites
((PSYC104 or PSYU1104 or PSYX104 or PSYX1104) and (PSYC105 or PSYU1105 or PSYX105 or PSYX1105)) or (PSYU1101 or PSYX1101) and (PSYU1102 or PSYX1102) and (STAT1103 or STAX1103)) or ((COGS100 or COGS1000) or (MEDI204 or MEDI2300) or (BIOL204 or BIOL2230) and (STAT170 or STAT1170))

Corequisites

Co-badged status

Unit description
This unit is designed to give students a basic knowledge of central neuronal mechanisms underlying fundamental behaviours and how these behaviours are modified through experience (learning). Half of the program describes the cytoarchitecture of central and peripheral neurons; the physiological and ionic bases of axonal and synaptic transmission; the overall anatomical organisation of the mammalian brain, and; sensory processing. These topics are followed by discussion on the central mechanisms underlying mammalian behaviours, such as motivation and psychopathology. The other half of the program provides a basic understanding of diverse phenomena in learning and behaviour, including classical conditioning and operant conditioning.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Demonstrate an understanding of the key principles and processes of learning, mechanisms of behavioural neuroscience, neurophysiology, and neuropharmacology

ULO2: Effectively use electronic databases to search for papers in relevant topics.

ULO3: Demonstrate written and oral communication skills, including through participation in class discussions.

ULO4: Develop self-awareness skills by identifying and setting targets, and applying time management.

ULO5: Critically analyse the key concepts of biopsychology and learning.

ULO6: Solve problems by comparing alternative interpretations of neuroscience data and formulating new explanations.

General Assessment Information

Late submissions, without an approved extension, will receive a 5% per day penalty including weekends and public holidays. If you submit the assessment task 10 days or more beyond the due date, you will be awarded a maximum of 50% of the overall assessment marks. No further submissions will be accepted after the marked assignments are returned and feedback is released to students.

All extensions need to be formally requested via ask.mq.edu.au in line with the special consideration policy.

Any requests for remark need to follow the Psychology process and must be applied within 2 weeks of the assessment task being returned. Information will be provided on iLearn.

It is Psychology policy that letter grades, not numeric marks, are released for written assessment tasks.

The final exam for this unit is currently scheduled to occur on Macquarie University campus. Students are expected to make themselves available for the exam, at the date and time set by the University, in line with the Assessment Policy and Procedure.

Word count penalty: 5% of the possible mark will be deducted per 100 words over the word limit for the assessment task. An additional 99 words beyond the limit can be written without penalty.

Supplementary assessment tasks will only be provided following an approved Special Consideration application, and only when appropriate. Supplementary assessment tasks, including supplementary exams, can be in a different format to the original assessment task.

Sitting the final exam is compulsory in order to be eligible to pass the unit. Any student who does not attempt the final exam will be granted a Fail Absent grade.

Assessment Tasks

Name	Weighting	Hurdle	Due
Online quiz	10%	No	Throughout the semester
Research Report	40%	No	5pm Friday, 10 September
Final Examination	50%	No	Formal University Examination Period

Online quiz

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 10 hours
Due: **Throughout the semester**
Weighting: **10%**

Regular online quizzes testing unit content.

On successful completion you will be able to:

- Demonstrate an understanding of the key principles and processes of learning, mechanisms of behavioural neuroscience, neurophysiology, and neuropharmacology
- Effectively use electronic databases to search for papers in relevant topics.
- Demonstrate written and oral communication skills, including through participation in class discussions.
- Develop self-awareness skills by identifying and setting targets, and applying time management.
- Critically analyse the key concepts of biopsychology and learning.
- Solve problems by comparing alternative interpretations of neuroscience data and formulating new explanations.

Research Report

Assessment Type [1]: Report
Indicative Time on Task [2]: 30 hours
Due: **5pm Friday, 10 September**
Weighting: **40%**

Students complete a research report on a behavioural experiment.

On successful completion you will be able to:

- Demonstrate an understanding of the key principles and processes of learning, mechanisms of behavioural neuroscience, neurophysiology, and neuropharmacology
- Effectively use electronic databases to search for papers in relevant topics.
- Demonstrate written and oral communication skills, including through participation in class discussions.
- Develop self-awareness skills by identifying and setting targets, and applying time management.
- Critically analyse the key concepts of biopsychology and learning.
- Solve problems by comparing alternative interpretations of neuroscience data and formulating new explanations.

Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 48 hours
Due: **Formal University Examination Period**
Weighting: **50%**

Final examination held within the University's formal exam period, in accordance with relevant requirements.

On successful completion you will be able to:

- Demonstrate an understanding of the key principles and processes of learning, mechanisms of behavioural neuroscience, neurophysiology, and neuropharmacology
- Effectively use electronic databases to search for papers in relevant topics.
- Demonstrate written and oral communication skills, including through participation in class discussions.
- Develop self-awareness skills by identifying and setting targets, and applying time management.
- Critically analyse the key concepts of biopsychology and learning.
- Solve problems by comparing alternative interpretations of neuroscience data and formulating new explanations.

[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Lectures: The unit will be taught weekly through lectures.

Practical/Tutorial Classes: Students will attend a practical class once a fortnight. These classes extend lecture material by examining research and practical applications of the more theoretical material covered in lectures. Attending may either be in a classroom or online via Zoom. Tutorial classes are held fortnightly, with both on-campus and online class options. At the time of publishing this unit guide, most tutorial / practical classes are scheduled to be held on campus. Class availability can be seen via eStudent class enrolment: the location of the class indicates if it is an online class or an on-campus class. However, in line with Public Health guidelines, this approach will be revised if and when necessary due to the COVID pandemic, in alignment with University policy. Changes or updates will be communicated via iLearn and/or emails sent to student email accounts. Students should stay up to date with the latest University advice at the following website: https://www.mq.edu.au/about/coronavirus-faqs/information-for-students

Textbooks used in this unit are:

Mazur, J.E. (2017). *Learning and Behavior* (8th Ed. International Ed.). Engelwood Cliffs, NJ: Prentice-Hall. Library has electronic copy available, see Leganto on the unit's iLearn site for access

Kalat, J.W. (2019, 2015, 2013, 2009, 2007). *Biological Psychology* (13th, 12th, 11th, 10th or 9th ed).

Unit Schedule

Week starting		Topic	LECTURER	TEXT	TUTORIAL
1	26 July	**Introduction to Unit.** **Non-associative learning**. **Classical Conditioning 1** — Introduction, terms and forms of CC	Ramsey & Curby	Mazur Ch. 1-3	**NO PRACTICAL**

2	2 Aug	**Classical Conditioning 2** — Variations of CC and limitations in CC **Classical Conditioning 3** —Temporal parameters of CC — Inhibition and extinction of CR	Curby	Mazur Ch. 3-4	**Practical One** Learning I **(Stream A)**
3	9 Aug	**Classical Conditioning 4** — Contingency — Rescorla Wagner	Curby	Mazur Ch. 4	**Practical One** Learning I **(Stream B)**
4	16 Aug	**Operant conditioning**	Curby	Mazur Ch. 5 & 6	**Practical Two** Learning II **(Stream A)**
5	23 Aug	**Extinction**	Curby	Mazur pp. 64-66, 126	**Practical Two** Learning II **(Stream B)**
6	30 Aug	**Punishment** **Escape and Avoidance learning**	Curby	Mazur Ch. 7	**Practical Three** Learning III **(Stream A)**
Biopsychology					
7	6 Sept	Behavioural Neuroscience: Genetics, Animal models of addiction	Ramsey	Kalat Ch. 4 & 12	**Practical Three** Learning III **(Stream B)**
SESSION BREAK					
8	27 Sept	The Nervous Systems. Brain Cells.	Ramsey	Kalat Ch. 1 & 3	**NO PRACTICAL**
9	4 Oct	Neurophysiology, Neurochemistry, Communication by Receptors.	Ramsey	Kalat Ch. 1 & 2	**Practical Four** Neuroanatomy I Kalat Ch. 2 & 3 **(Stream A)**
10	11 Oct	Neurotransmitters. Neurotransmitter System Dysfunction.	Ramsey	Kalat Ch. 2, 14 & App. A	**Practical Four** Neuroanatomy I Kalat Ch. 2 & 3 **(Stream B)**

11	18 Oct	Substance Use, Substance Use Disorder,	Cornish	Kalat Ch. 14	**Practical Five** Neuroanatomy II Kalat Ch. 3 & 4 **(Stream A)**
12	25 Oct	Neurobiology of Learning and Memory.	Ramsey	Kalat Ch. 12	**Practical Five** Neuroanatomy II Kalat Ch. 3 & 4 **(Stream B)**
13	1 Nov	Revision: Learning and Biopsychology			**NO PRACTICAL**

Policies and Procedures (optional)

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be

made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Grading

Macquarie University, and Psychology undergraduate courses, follow standards-based assessment of student performance. All individual assessment tasks are subject to moderation, consistent with the Assessment Policy and Procedure. A student's final mark for this unit, and associated grade, must reflect their attainment of the unit learning outcomes, and isn't necessarily a simple summation of their individual assessment items.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.