



# PSYU3354

## Experimental Neuroscience

Session 1, Weekday attendance, North Ryde 2020

*Department of Psychology*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Jennifer Cornish

[jennifer.cornish@mq.edu.au](mailto:jennifer.cornish@mq.edu.au)

Credit points

10

Prerequisites

(130cp at 1000 level or above) including ((BIOL247 or BIOL2220) or (BIOL257 or BIOL2230) or (MEDI204 or MEDI2300) or (PSY236 or PSYU2236 or PSYX236 or PSYX2236) or ((BIOL122 or BIOL1320) and ((BIOL108 or BIOL1210) or BIOL115 or BIOL1110)))

Corequisites

Co-badged status

Unit description

This unit is designed to provide students with advanced knowledge in the field of neuroscience, from an experimental perspective. Students are taught by experts in neuroscience, spanning the Department of Psychology, the Department of Biomedical Sciences and the Department of Cognitive Science. Topics are research led and cover areas such as neuroanatomy, neurophysiology, neuroimaging, neuropsychopharmacology, emotion, language, attention, memory, sensory and motor systems, together with cardiovascular and respiratory neuroscience. Students are also trained in grant writing skills for future research funding.

## 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 advanced understanding of disorders of the nervous system (mental health, cardiovascular, neuroinflammation).

**ULO2:** Demonstrate an in-depth understanding of the contemporary techniques in studying brain function, particularly in reference to mental health disorders (such as anxiety, addiction).

**ULO3:** Understand and reflect on the value of using animal models in research and how

they translate to the human condition.

**ULO4:** Formulate arguments, judge the relevance and accuracy of information, and compare different points of view through critical review of neuroscience journal articles.

**ULO5:** Design a research protocol in the field of neuroscience.

## Assessment Tasks

### Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

## Delivery and Resources

### Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: [https://ask.mq.edu.au/account/pub/display/unit\\_status](https://ask.mq.edu.au/account/pub/display/unit_status)

This unit is delivered as weekly 2 hour lectures. There are 4 practicals/tutorials, held in weeks 3, 4, 5 & 6. Please see ilearn for more information.

We use the textbook Neuroscience: Exploring the brain by Bear, Connors and Paradiso - 3rd or 4th Edition. Suggested readings will be provided by each lecturer to help support your learning.

## Unit Schedule

### Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult [iLearn](#) for latest details, and check here for updated delivery information: [https://ask.mq.edu.au/account/pub/display/unit\\_status](https://ask.mq.edu.au/account/pub/display/unit_status)

Please always check ilearn for the most recent version of the timetable for PSYU3354. The below is a draft schedule and may change.

PSYU3354 Experimental Neuroscience

Lecture and Tutorial Schedule 2020		
<u>Date</u>	<u>Lecturer</u>	<u>Subject &amp; Text</u>
<b>Week 1</b>		
Feb 25	Cornish	<b>Introduction to Neuroscience</b> Ch 1, 2 & 23 (3 <sup>rd</sup> or 4 <sup>th</sup> Ed)
<b>Week 2</b>		
March 3	Baracz	<b>Neuropharmacology</b> Ch 15
<b>Week 3</b>		
March 10	Cornish	<b>Optogenetics and Neuroscience</b> Ch4 & 22 (4 <sup>th</sup> Ed)
	<b>Tutorial 1</b>	<i>Neuro Prac 1: Neuroscience Techniques</i>
<b>Week 4</b>		
March 17	McMullan	<b>Connectomes I</b> Ch7 (4 <sup>th</sup> Ed)
	<b>Tutorial 2</b>	<i>Neuro Prac 2: How to Critique Journal Articles</i>
<b>Week 5</b>		
March 24	McMullan	<b>Connectomes II</b> Ch7 (4 <sup>th</sup> Ed)
	<b>Tutorial 3</b>	<i>Grant Writing 1</i>
<b>Week 6</b>		
March 31	Everett	<b>Fibre Photometry &amp; Calcium Imaging</b>
	<b>Tutorial 4</b>	<i>Grant Writing 2</i>
<b>Week 7</b>		
April 7	Wright	<b>Neurodegeneration</b>

		<i>Mid Semester Break</i>
<b>Week 8</b>		
April 28	Staff	<b>Mid-term Test (Examines Lectures in week 1-5 ONLY)</b>
<b>Week 9</b>		
May 5	Hildreth	<b>Neuromodulation</b>
		<i>Grant Proposals due by 11:59pm Sunday May 10<sup>th</sup>, 2020</i>
<b>Week 10</b>		
May 12	Cornish	<b>Translation of Experimental to Clinical Neuroscience</b>
<b>Week 11</b>		
May 19	Sowman	<b>Non-invasive electrical stimulation in Cognitive Science</b>
<b>Week 12</b>		
May 26	Cornish	<b>In Class Cinema &amp; Course Evaluation</b>
<b>Week 13</b>		
June 2	NA	<b>Reading Week – No Lecture</b>

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

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

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## 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](http://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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.