



MEDI3300

Neuroscience

Session 2, Weekday attendance, North Ryde 2021

Medicine, Health and Human Sciences Faculty level units

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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

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Credit points

10

Prerequisites

(MEDI204 or MEDI2300) or (BIOL257 or BIOL2230) or (COGS2000 or COGS202)

Corequisites

Co-badged status

Unit description

In this unit you will expand on the knowledge gained in MEDI2300 to explore more complex neural processing. You will learn about the higher-order processing of movement, sensation and cognitive function, and apply this knowledge to neuropathology. You will engage in hot topic discussions on the latest developments in neuroscience to deepen your knowledge and understanding.

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: Evaluate the higher-order neural processes required for the generation of movement, sensation, cognitive function and the maintenance of homeostasis.

ULO2: Appraise the pathological consequences that result from disruption to the central processing of movement, sensation, cognitive function and maintenance of homeostatic function.

ULO3: Critique the role of discovery in advancing the field of neuroscience in both a clinical and medical research setting.

General Assessment Information

General Assessment Information

Grade descriptors and other information concerning grading are contained in Schedule 1 of the Macquarie University Assessment Policy, which is available at: <https://staff.mq.edu.au/work/strategic-planning-and-governance/university-policies-and-procedures/policies/assessment>.

Further details for each assessment task will be available on iLearn.

All final grades are determined by a grading committee and are not the sole responsibility of the Unit Convenor.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, attempt all assessment tasks, meet any ungraded requirements including professionalism and achieve an SNG of 50 or better.

Student Professionalism

In the Faculty of Medicine and Health Sciences, professionalism is a key capability embedded in all our courses. As part of developing professionalism, students are expected to attend all small group interactive sessions including tutorials, as well as clinical- and laboratory-based practical sessions.

Furthermore, lectures and seminars are key learning activities that you are expected to attend throughout completion of the Bachelor of Clinical Sciences. While audio recordings and lecture slides may be made available following these large group sessions, it is important to recognise that such resources are a study aid and should not be considered an alternative to lecture or seminar attendance.

Students are required to attend a minimum of 80% of all sessions. Students that do not meet this requirement may be deemed unable to meet expectations regarding professionalism and may be referred for disciplinary action (which may include exclusion from assessments and unit failure).

Similarly, as part of developing professionalism, students are expected to submit all work by the due date. Applications for assessment task extensions must be supported by appropriate evidence and submitted via www.ask.mq.edu.au. For further details please refer to the Special Consideration Policy available at <https://students.mq.edu.au/study/my-study-program/special-consideration>.

Late Submission

Late submissions 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, without an approved extension, you will be awarded a maximum of 50% of the overall assessment marks.

For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
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Friday 14th	Monday 17th	3	15%	75%	60%
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Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Mid-Semester Examination</u>	30%	No	Week 8
<u>Online Quiz</u>	15%	No	Weeks 2,3,5,6, 9-12
<u>Hot Topic Debate</u>	15%	No	Week 7
<u>Final Exam</u>	40%	No	Details from University Examinations Office

Mid-Semester Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 10 hours

Due: **Week 8**

Weighting: **30%**

Mid-session exam that assesses learning up until that point.

On successful completion you will be able to:

- Evaluate the higher-order neural processes required for the generation of movement, sensation, cognitive function and the maintenance of homeostasis.
- Appraise the pathological consequences that result from disruption to the central processing of movement, sensation, cognitive function and maintenance of homeostatic function.

Online Quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 3 hours

Due: **Weeks 2,3,5,6, 9-12**

Weighting: **15%**

Eight online open book quizzes that provide students with ongoing feedback.. Highest 5 marks counted.

On successful completion you will be able to:

- Evaluate the higher-order neural processes required for the generation of movement, sensation, cognitive function and the maintenance of homeostasis.
- Appraise the pathological consequences that result from disruption to the central processing of movement, sensation, cognitive function and maintenance of homeostatic function.

Hot Topic Debate

Assessment Type ¹: Debate

Indicative Time on Task ²: 20 hours

Due: **Week 7**

Weighting: **15%**

An assessment that involves a team debate that critically evaluates a current and emerging area of neuroscience research. Group and individual performance will be assessed.

On successful completion you will be able to:

- Evaluate the higher-order neural processes required for the generation of movement, sensation, cognitive function and the maintenance of homeostasis.
- Appraise the pathological consequences that result from disruption to the central processing of movement, sensation, cognitive function and maintenance of homeostatic function.
- Critique the role of discovery in advancing the field of neuroscience in both a clinical and medical research setting.

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 30 hours

Due: **Details from University Examinations Office**

Weighting: **40%**

Formal written exam using a combination of question types assessing content delivered across the session. This task is completed under examination conditions during the University examination period.

On successful completion you will be able to:

- Evaluate the higher-order neural processes required for the generation of movement, sensation, cognitive function and the maintenance of homeostasis.
- Appraise the pathological consequences that result from disruption to the central processing of movement, sensation, cognitive function and maintenance of homeostatic function.
- Critique the role of discovery in advancing the field of neuroscience in both a clinical and medical research setting.

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

This unit build on the neuroscience topics of MEDI2300 and puts an emphasis on higher-order processes and recent research advances in our neuroscience knowledge. It is delivered by means of online lectures and practicals and onsite tutorials. It is assessed by regular short quizzes, by group and individual work on the critical appraisal of a current neuroscience topic and by mid- and end of session assessments.

The unit begins with a consideration of how the visual world is processed by the brain, then moves on to mechanisms underlying auditory processing and language. This is followed by the neurobiology of movement control, including the interaction of the motor- proprioceptive and vestibular-systems. We will look at recent research on how- and why- we sleep and the neural basis of reward and substance abuse. and reward. We will also analyse the neurobiology of learning, memory and cognitive processing. Throughout the unit, practicals and tutorials will reinforce the lecture content. You will also be helped by tutors to critique research papers on relevant neuroscience and to develop a presentation critiquing a neuroscience paper of your choice. By the end of the unit, you will have a broad grounding in neuroscience, an appreciation of the areas where knowledge is currently limited and have acquired transferable skills in critical appraisal.

Unit Schedule

MEDI 3300 Neuroscience (II). Weekly schedule

WEEK 1

- | | |
|--------------------------------|--------|
| 1. Lectures (online): | Vision |
| 2. Practical (online): | none |
| 3. Tutorials (onsite, Thurs): | Vision |
| 4. Weekly assessment (online): | none |

WEEK 2

- | | |
|--------------------------------|------------------------------|
| 1. Lectures (online): | Hearing |
| 2. Practical (online): | none |
| 3. Tutorials (onsite, Thurs): | Critical analysis of a paper |
| 4. Weekly assessment (online): | Vision |

WEEK 3

- | | |
|--------------------------------|---------------------------|
| 1. Lectures (online): | Language |
| 2. Practical (online): | Vision, hearing, language |
| 3. Tutorials (onsite, Thurs): | none |
| 4. Weekly assessment (online): | Hearing, language |

WEEK 4

- | | |
|--------------------------------|-------------------------|
| 1. Lectures (online): | Balance, proprioception |
| 2. Practical (online): | none |
| 3. Tutorials (onsite, Thurs): | Hearing, language |
| 4. Weekly assessment (online): | none |

WEEK 5

- | | |
|--------------------------------|-----------------------------------|
| 1. Lectures (online): | Movement |
| 2. Practical (online): | Movement |
| 3. Tutorials (onsite, Thurs): | Critical analysis of a paper |
| 4. Weekly assessment (online): | Balance, proprioception, movement |

WEEK 6

- | | |
|--------------------------------|----------------|
| 1. Lectures (online): | Sleep and wake |
| 2. Practical (online): | none |
| 3. Tutorials (onsite, Thurs): | Sleep and wake |
| 4. Weekly assessment (online): | Sleep and wake |

WEEK 7

- | | |
|-----------------------|------|
| 1. Lectures (online): | none |
|-----------------------|------|

- 2. Practical (online): none
- 3. Tutorials (onsite, Thurs): none
- 4. Weekly assessment (online): none

ASSESSMENT TASK 3 (Hot topic individual assignment and group presentations) Thursday

WEEK 8

- 1. Lectures (online): Reward and substance use
- 2. Practical (online): none
- 3. Tutorials (onsite, Thurs): none
- 4. Weekly assessment (online): none

ASSESSMENT TASK 2 (Mid-session assessment) Thursday

WEEK 9

- 1. Lectures (online): Opioid use disorder
- 2. Practical (online): none
- 3. Tutorials (onsite, Thurs): Reward and substance use
- 4. Weekly assessment (online): Substance use

WEEK 10

- 1. Lectures (online): Amnesia
- 2. Practical (online): Attention, learning, memory
- 3. Tutorials (onsite, Thurs): none
- 4. Weekly assessment (online): Reward and addiction

WEEK 11

- 1. Lectures (online): Dementia
- 2. Practical (online): none
- 3. Tutorials (onsite, Thurs): none
- 4. Weekly assessment (online): Learning and memory

WEEK 12

- 1. Lectures (online): none
- 2. Practical (online): Neuroanatomy overview
- 3. Tutorials (onsite, Thurs): Learning and memory
- 4. Weekly assessment (online): Unit review

WEEK 13 (REVISION)

- 1. Lectures (online): none

- | | |
|--------------------------------|------|
| 2. Practical (online): | none |
| 3. Tutorials (onsite, Thurs): | none |
| 4. Weekly assessment (online): | none |

END OF SESSION ASSESSMENT (Details from University examinations office)

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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

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.