COGS2000

Cognitive Neuroscience

Session 1, Special circumstances 2021

Archive (Pre-2022) - Department of Cognitive Science

Contents

Notice

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to timetable viewer. To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff
Lecturer
Blake Johnson
blake.johnson@mq.edu.au

Lecturer
Nathan Caruana
nathan.caruana@mq.edu.au

Lecturer
Lyndsey Nickels
lyndsey.nickels@mq.edu.au

Lecturer
Paul Sowman
paul.sowman@mq.edu.au

Lecturer
Paul Strutt
paul.strutt@mq.edu.au

Bianca De Wit
bianca.dewit@mq.edu.au

Anina Rich
anina.rich@mq.edu.au

Credit points
10

Prerequisites
COGS1000 or COGS100

Corequisites

Co-badged status

Unit description
This unit will cover the rapidly evolving field of cognitive neuroscience: bridging cognitive science and neuroscience to understand cognitive functions in humans and their underlying neural bases. Topics covered may include the neural mechanisms underlying perception, action, attention, memory, language, and decision making. The unit will also explore some of the powerful new methods for studying the human brain including functional neuroimaging.

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: Explain the brain mechanisms responsible for a range of human cognitive functions

ULO2: Demonstrate understanding of the main experimental methods in cognitive neuroscience, including their strengths and limitations

ULO3: Critically evaluate empirical data and conclusions drawn from data as presented as graphs, tables or text

ULO4: Collect and analyse behavioural and neural data using appropriate techniques and methods from cognitive neuroscience

ULO5: Demonstrate effective scientific report writing skills

General Assessment Information

Late submission of an assignment will attract a penalty of 5% of the maximum mark for every day that the assignment is late (including weekend days). For example, if the assignment is worth 40 marks and your assignment is submitted 2 days late, a penalty of 2x5%x40 = 4 marks will be applied and subtracted from the awarded mark for the assignment. Work submitted more than 7 days after the submission deadline will not be marked and will receive a mark of 0. Please note that it is the student's responsibility to notify the University of a disruption to their studies and requests for extensions for assignments must be made via the University's Ask MQ System (as outlined in the Special Consideration Policy).

For written assignments, there will be 5% leeway in the word limit (e.g., up to 100 words over 2000), but beyond that you will be penalised 5% of your report mark for every further 100 words over the limit.

Questions about the assessment tasks?

Please email the unit convenor for clarification or questions about any of the assessments - the convenor is happy to discuss essay directions in advance of submission if necessary.

Assessment Tasks

Name	Weighting	Hurdle	Due
Weekly online quizzes	10%	No	Weeks 2-5, 7-12 (inclusive)
Mid-semester exam	20%	No	29/3/2021
Experimental report	25%	No	5pm 14/5/2021
Final exam	45%	No	Final exam period

Weekly online quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 5 hours
Due: **Weeks 2-5, 7-12 (inclusive)**
Weighting: **10%**

Short online multiple-choice quizzes completed before each lecture

On successful completion you will be able to:

- Explain the brain mechanisms responsible for a range of human cognitive functions
- Demonstrate understanding of the main experimental methods in cognitive neuroscience, including their strengths and limitations

Mid-semester exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 16 hours
Due: **29/3/2021**
Weighting: **20%**

1-hour multiple-choice exam

On successful completion you will be able to:

- Explain the brain mechanisms responsible for a range of human cognitive functions
- Demonstrate understanding of the main experimental methods in cognitive neuroscience, including their strengths and limitations

Experimental report

Assessment Type [1]: Report
Indicative Time on Task [2]: 20 hours
Due: **5pm 14/5/2021**

Weighting: **25%**

Max 2000 words

On successful completion you will be able to:

- Critically evaluate empirical data and conclusions drawn from data as presented as graphs, tables or text
- Collect and analyse behavioural and neural data using appropriate techniques and methods from cognitive neuroscience
- Demonstrate effective scientific report writing skills

Final exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 37.5 hours
Due: **Final exam period**
Weighting: **45%**

2-hour exam with multiple choice and short answer questions

On successful completion you will be able to:

- Explain the brain mechanisms responsible for a range of human cognitive functions
- Demonstrate understanding of the main experimental methods in cognitive neuroscience, including their strengths and limitations
- Critically evaluate empirical data and conclusions drawn from data as presented as graphs, tables or text
- Collect and analyse behavioural and neural data using appropriate techniques and methods from cognitive neuroscience

---

[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

COGS2000 Unit Overview

Professor Anina Rich is the Convenor of the course. The course is taught through lectures and

tutorials with support from web-based resources such as iLearn and the Active Learning Platform.

Lectures will be delivered live online on Mondays 10am-12noon using Zoom. Links to join the lecture will be posted in iLearn prior to each week.

Tutorials will be predominantly offered on-campus (please check eStudent to see which tutorial you are enrolled in, or if you wish to enrol in a different tutorial).

In lectures, we will cover key content areas such as perception, action, attention, emotion, social cognition, memory, language. The lectures will include interactive activities using the Active Learning Platform within iLearn, which you will access on your own internet-enabled device. We will also have discussion points, demonstrations of methods, and opportunities for questions. You are strongly encouraged to attend the lectures live as then you can fully engage with the interactive aspects and have the opportunity to ask questions, as well as make sure you keep up with the fast-paced course content.

The tutorials are a combination of research-intensive laboratory sessions, scientific method and writing training, and content review. They are designed to consolidate your learning from the lectures and learn other key skills required to complete the assessments, giving you research training in collecting, analysing and interpreting behavioural and neural data. The tutorials and assessments will support development of scientific written communication skills and an understanding of important aspects of experimental design and practice.

Attending both lectures and tutorials is crucial for doing well in COGS2000. The iLearn discussion board allows students to discuss topics in greater depth, to provide peer support, and to access additional learning resources and examples. There are opportunities to get feedback during the course including through the weekly online quizzes and the major Experimental Report; you can also get feedback on your understanding of key concepts during tutorials through interactions with your tutor.

Delivery

The timetable for lectures & tutorials can be found on the University web site at: http://www.timetables.mq.edu.au/

Lectures are held weekly (2 hours), starting in Week 1. Please check http://www.timetables.mq.edu.au/ for time and iLearn for the Zoom link. Lecture recordings are available via Echo360 in iLearn. Lectures will include interactive activities.

Tutorials are held weekly (1.5 hours), starting in Week 1. Please check eStudent for the time and location of your tutorial.

Due to restrictions on the availability of resources in the laboratory and to health and safety regulations you should attend the tutorial to which you have been assigned. Although students might be able to occasionally attend a different tutorial, most classes are likely to be full, in which case those not attending their assigned tutorial will be asked to leave. Under these circumstances, no special provisions will be made for attendance at an alternative tutorial class.

Requests for tutorial changes: **Changes to tutorials need to be done online via eStudent**

only. After week 2, no further changes will be made unless supporting documentation about the reason for changing is provided and there is space in the tutorial you wish to enrol in. Please note that changes to tutorials cannot be made by the unit convenor or tutor.

Textbook

Purves D. et al. (Eds.) (2013) *PRINCIPLES OF COGNITIVE NEUROSCIENCE, Second edition.* MA, USA: Sinauer Associates, Inc.

This is an excellent textbook for learning the fundamentals of cognitive neuroscience in a relatively accessible way, with linked online support resources. It has all the essential reading for the course and is the basis of the weekly online quiz material, as well as forming part of the mid-semester and final exams.

Additional reading

Additional supplementary material for each lecture will be listed on the unit iLearn page. This reading is listed as optional but typically supports areas of lectures that are either not covered in the textbook or provide additional insights into the material.

Access to Assigned Reading Material

The required text is available for purchase through Booktopia, in addition to the copies available at the library. There is also an e-book version that can be 'rented' for 6 or 12 months through Oxford University Press (**oup.com.au/findmybook).**

iLearn

You will need access to a computer that can reliably connect to the internet to access the unit's iLearn page. Through iLearn you will be able to attend the lectures (the Zoom link will be posted there for each week), access the interactive activities (Active Learning Platform) during lectures, lecture recordings (Echo360), additional readings, and feedback and marks for the assessment tasks. You are also required to submit one of the assessment tasks (Experimental Report) via iLearn, using the Turnitin submission tool. Please allow time to familiarise yourself with how to access iLearn and how to submit a Turnitin assignment.

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

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.

Changes from Previous Offering

Due to the Special Circumstances (COVID), this semester the lectures will be delivered over Zoom.

There is a new tutorial to support student learning in Neuroanatomy, in collaboration with the Department of Anatomy.

Frequently Asked Questions

Who can I ask if I have questions about the unit?

Your tutor can answer most of the questions that you may have about the unit, including questions about the unit in general and specific questions about the tutorials. If you experience difficulty in this unit, you should approach your tutor first. You can get in touch with your tutor before or after your tutorial, via email, or via the dialogue tool on iLearn. Please note that your tutor is your first point of contact for any of these questions.

For content questions, please ask your tutor first, then if they are unable to answer, contact the unit convenor via email. You can make an appointment via email to see Prof. Rich.

Do I need to look at iLearn? (short answer: Yes!)

You should check the iLearn web site at regular intervals for announcements, online quizzes, lecture slides, examples of relevant phenomena in picture, video and sound files and other supplementary learning materials. It also features a discussion board on which you may converse with other students about course material, or any other legitimate business related to COGS2000. The iLearn site also has the Zoom link for the lecture and Active Learning Platform activities for during the lecture as well as the links to Echo360, which will have the lecture recordings. The feedback and marks for the assessment tasks are also delivered via iLearn. It is recommended that you visit this site regularly and make full use of the facilities.

What does it take to do well in COGS2000?

You are expected to pay close attention to all lectures and to take notes to aid your retention of the material. Although Echo360 will be invaluable when attendance is impossible, **it is recommended that you attend all lectures 'live' at the scheduled time**, particularly as we

incorporate interactive activities, discussion and demonstrations within the lectures. Attending the lectures at the right time will help you keep up with the fast-paced course and ensure you have all the information prior to your tutorial, which is how the course is designed to run. Review of the material (individually, or in group sessions) in the your own time will be essential to consolidate knowledge and enhance understanding.

Required reading should be completed **before** the relevant lecture - the online quizzes are designed to help you keep up with this reading. These online quizzes offer the chance to answer questions while using resources such as the textbook. This open book format is unlike formal examinations, and offers an opportunity for grade enhancement that should not be missed.

You also need to attend and engage with the tutorials, completing all the activities and making the most of the opportunities to develop research skills and consolidate understanding of the lecture and tutorial content.

Please note that according to Senate guidelines, workloads should involve 3 hours per credit point per week. This results in 9 hours per week (including lectures and tutorials) for a 3 credit point unit such as COGS2000.

Note: Assessment will be based on the successful understanding of material from lectures, tutorials and from the required reading. Please note that rote learning alone is unlikely to be a successful strategy, as the assessments will test for deeper appreciation of the course material in a variety of formats. Simply remembering the “facts” will not suffice. You need to demonstrate your understanding of the principles, and demonstrate the ability to apply such understanding in new contexts.

What material is examinable?

Questions on the mid-semester exam will come from topics covered during lectures, required readings and tutorials from the preceding weeks. The additional information in the supplementary reading is not directly examined but is likely to deepen and support your understanding of key concepts described in the lecture. The final exam will be cumulative, covering content from lectures, required readings and tutorials from the whole course.

How do I upload my assignment via iLearn?

You are required to submit your Experimental Report via iLearn, using the Turnitin submission tool. Please use the following step-to-step guide on how to submit a Turnitin assignment.

What if I need an extension, medical leave and/or have a disruption to my studies?

The way the written assignment is structured should assist you in preparing the Experimental Report in time for the deadline. If you have an unavoidable situation where you need an extension, please note that it is your responsibility to notify the University of a disruption to your studies. Your tutor and convenor cannot give you an extension or special consideration - all requests for extensions, medical leave and/or disruption to studies should be made prior to the due date for the assignment **directly** via the University’s online Ask MQ system (as outlined in the Special Consideration Policy).

Statement on academic courtesy

It is the right of each student to learn in an environment that is free of disruption and distraction. Please arrive to all classes on time, and if you are unavoidably detained, please enter the tutorial as quietly as possible to minimise disruption. Although some lectures will have discussion sections or questions during lectures, using the chat to talk between students while the lecturer is talking is distracting and is strongly discouraged. Phones, pagers, and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities such as accessing the Active Learning Platform activities, you are asked to close down all other applications to avoid distraction to you and others.

As this semester we have to give lectures online, it is even more important for you to close other applications and ensure your learning environment is free from distractions.

COGS2000 is a study of the brain. We therefore will be using images, demonstrations, and videos of human brains and dissections, as well as discussing patients with brain damage and animal research. It is also a research-intensive course, involving delicate experimental equipment and data collection from other students. Please treat both the equipment and your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let your tutor know.

COVID safety precautions are in place for the in-person tutorials. Please make sure you follow all the guidelines carefully.

Statement on social inclusion and diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others on the basis of their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All lecturers, tutors and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone. **The Unit Convenor is an active supporter of equity and diversity at Macquarie University, including being a member of the Ally network, and is happy to provide additional support if needed.**