COGS7010

Research Frontiers in Cognitive Science

Session 1, Weekday attendance, North Ryde 2020

Department of Cognitive Science

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General Information

Unit convenor and teaching staff
Anina Rich
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Credit points
10

Prerequisites
Admission to MRes

Corequisites

Co-badged status

Unit description
This unit will engage students in critical research issues in cognitive science. We examine the assumptions and methodological issues of the main techniques used across the different fields of cognitive science (e.g., neuroimaging, behavioural, and neuropsychological techniques). The unit will include seminars by experts in the various techniques and student-led analyses of recently published papers. The aim is to provide students with the tools to critically appraise published studies and the inferences made on the basis of experimental data. Activities are based on seminar attendance, directed reading of research articles, and critical discussion of research in both written and oral form.

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: identify the key critical issues in common methods used in cognitive science.
ULO2: provide critical analysis when reading academic research papers, and critically evaluate scientific methods, results and interpretations.
ULO3: demonstrate an advanced understanding of the methods available for research into cognitive science.
ULO4: demonstrate an advanced understanding of the common underlying assumptions in studying cognition.
ULO6: critically analyse information from a variety of sources.

ULO5: clearly articulate an argument in written and oral form to a variety of audiences.

ULO7: Demonstrate an understanding of scientific integrity and the need for rigorous and transparent methodology and reporting of research.

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

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.

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

ABOUT THIS UNIT

This unit will engage students in critical research issues in cognitive science. We examine the assumptions and methodological issues of the main techniques used across the different fields

of cognitive science (e.g., neuroimaging, behavioural, and neuropsychological techniques). The course will include lectures by experts in the various techniques and student-led analysis of recent published papers. The aim is to provide students with the tools to critically appraise published studies and the inferences made on the basis of experimental data. Activities are based on seminar attendance, directed reading of research articles, and critical discussion of research in both written and oral form.

Delivery

There will be 13 weekly seminars that run for 2 hours each.

Seminars will start in Week 1 of Session 1 on **Mondays from 1.30-3.30pm** in the Australian Hearing Hub, Level 3, seminar room 3.610 (Marrie), except for on the 9th March and 6th April which will be in the Seminar room on Level 5.

100% attendance to the weekly seminars is expected. If there are any issues with attendance, please email Prof. Anina Rich in advance of the class. All students have to participate in the discussion in the journal club seminars, which requires thorough reading of the assigned papers.

Resources

The required readings for this unit will be nominated by students.

Recommended readings will be given by lecturers for each lecture.

Slides and readings from each lecture will be available on this unit's iLearn page.

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

Date	Topic
24th Feb (Week 1)	Overview & experiment design/analysis
2nd March (Week 2)	Behavioural papers
9th March (Week 3)	Functional Magnetic Resonance Imaging (fMRI)

16th March (Week 4)	fMRI papers
23rd March (Week 5)	Patient studies (single case vs. group)
30th March (Week 6)	Patient papers
6th April (Week 7)	Electroencephalography (EEG)
13th April	*Mid-Semester Break*
20th April	*Mid-Semester Break*
27th April (Week 8)	EEG papers
4th May (Week 9)	Magnetoencephalography (MEG)
11th May (Week 10)	MEG papers
18th May (Week 11)	Neural stimulation
25th May (Week 12)	Neural stimulation papers
1st June (Week 13)	Summing up

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). 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). 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 (https://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 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.

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 as quietly as possible to minimise disruption. 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, you are asked to close down all other applications to avoid distraction to you and others.

COGS7010 involves methods that allow us to study the brain. We therefore may use images and videos of human brains and dissections, as well as discussing patients with brain damage and animal research. It is a discussion-based interactive course, which means all students need to feel comfortable contributing to class conversations. Please treat both staff and your fellow students with the utmost respect.

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 preference, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone. The Unit Convenor is a member of the Ally Network and an active supporter of equity and diversity at Macquarie University. She is happy to provide additional support if needed.

Changes since First Published

Date	Description
12/02/2020	Schedule updated as 27th April is no longer a University holiday.