COGS3220
Advanced topics in Cognitive Science: Exploring Human-Technology Interactions
Session 2, Weekday attendance, North Ryde 2021
Department of Cognitive Science

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Notice
Some on-campus classes have moved online for the first two weeks of Session, before returning to campus in Week 3. If you are studying a unit outside of the primary Session 2 timetable, please contact your teaching staff team for further details.

Some classes/teaching activities cannot be moved online and must be taught on campus. To find out if you are enrolled in one of these classes/teaching activities, you can check to see if your unit is on the list of units with mandatory on-campus classes/teaching activities.

Your Unit Convenor will provide more information via an iLearn announcement when your iLearn unit becomes available.
General Information

Unit convenor and teaching staff
Unit Convener
Emily Cross
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Unit Convener
Nathan Caruana
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Credit points
10

Prerequisites
130cp including (COGS2000 or COGS202) and ((COGS2010 or COGS210) or COGS2020 or COGS2030 or COGS2040 or COGS2050)

Co-requisites

Co-badged status

Unit description
This unit is one of the Advanced Topics in Cognitive Science units. This unit provides an overview of the fundamentals and latest research developments, challenges and opportunities of social robotics, virtual reality, and artificial intelligence, with a strong focus on the use of psychological and neuroscientific techniques. In particular, research discussed in this unit describes how these types of technology can be used as tools for advancing our understanding of human neurocognitive function. Topics include but are not limited to an introduction to artificial intelligence, history of social robotics, psychological methods for examining human-technology interaction, neuroscientific methods for examining human-technology interaction, developmental robotics, cross-cultural issues related to human-technology interactions, and the future of human-technology interactions. Tutorials will focus on reading and discussing 2 popular press books (one fiction, one non-fiction) concerning humans’ relationship with technology, and will also feature students presenting an overview of the research they plan to propose in the final research proposal (the focus of the final exam assignment) and receive peer feedback and discussion on these ideas.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://students.mq.edu.au/important-dates
Learning Outcomes
On successful completion of this unit, you will be able to:

ULO1: Explain current concepts, theories, methods, and findings in the cognitive and brain sciences that relate to human-technology interactions.
ULO2: Identify strengths and limitations of recent research associated with using virtual reality, robotics, and AI in the cognitive and brain sciences.
ULO3: Discuss points of integration and conflict between technology and human cognitive and brain sciences.
ULO4: Critically evaluate issues and controversies in the cognitive and brain sciences with intellectual independence.
ULO5: Synthesise information from a wide variety of sources to formulate scientific arguments and ideas for new research directions.

General Assessment Information

Late Policy

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.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical reflection</td>
<td>15%</td>
<td>No</td>
<td>From Week 2. Complete both by Sunday 17th October (11.59 PM)</td>
</tr>
<tr>
<td>Group discussion lead</td>
<td>15%</td>
<td>No</td>
<td>Weeks 3-12 (in tutorial)</td>
</tr>
<tr>
<td>Proposal presentation</td>
<td>20%</td>
<td>No</td>
<td>Weeks 8-9 (in tutorial)</td>
</tr>
<tr>
<td>Research project proposal</td>
<td>50%</td>
<td>No</td>
<td>Sunday 31st October (11.59 PM)</td>
</tr>
</tbody>
</table>

Critical reflection

Assessment Type: Report
Indicative Time on Task: 10 hours
Due: From Week 2. Complete both by Sunday 17th October (11.59 PM)
Weighting: 15%
At two points during the session, students will post a critical reflection on big questions, ideas or controversies that were introduced in class or inspired by class material. Students will also comment on a post written by one of their classmates.

On successful completion you will be able to:

• Explain current concepts, theories, methods, and findings in the cognitive and brain sciences that relate to human-technology interactions.
• Discuss points of integration and conflict between technology and human cognitive and brain sciences.
• Synthesise information from a wide variety of sources to formulate scientific arguments and ideas for new research directions.

Group discussion lead

Assessment Type 1: Facilitation
Indicative Time on Task 2: 15 hours
Due: Weeks 3-12 (in tutorial)
Weighting: 15%

Lead tutorial book discussion and submit a prepared set of questions and related issues to fuel class discussion.

On successful completion you will be able to:

• Identify strengths and limitations of recent research associated with using virtual reality, robotics, and AI in the cognitive and brain sciences.
• Discuss points of integration and conflict between technology and human cognitive and brain sciences.
• Critically evaluate issues and controversies in the cognitive and brain sciences with intellectual independence.

Proposal presentation

Assessment Type 1: Presentation
Indicative Time on Task 2: 20 hours
Due: Weeks 8-9 (in tutorial)
Weighting: 20%
Pitch of research proposal idea for the final research project proposal, including submission of presentation materials used. Students will give feedback on each other's presentations.

On successful completion you will be able to:

- Identify strengths and limitations of recent research associated with using virtual reality, robotics, and AI in the cognitive and brain sciences.
- Critically evaluate issues and controversies in the cognitive and brain sciences with intellectual independence.

Research project proposal

Assessment Type: Report
Indicative Time on Task: 40 hours
Due: Sunday 31st October (11.59 PM)
Weighting: 50%

Research project proposal for new research study.

On successful completion you will be able to:

- Explain current concepts, theories, methods, and findings in the cognitive and brain sciences that relate to human-technology interactions.
- Identify strengths and limitations of recent research associated with using virtual reality, robotics, and AI in the cognitive and brain sciences.
- Discuss points of integration and conflict between technology and human cognitive and brain sciences.
- Critically evaluate issues and controversies in the cognitive and brain sciences with intellectual independence.
- Synthesise information from a wide variety of sources to formulate scientific arguments and ideas for new research directions.

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

https://unitguides.mq.edu.au/unit_offers/136729/unit_guide/print
the Learning Skills Unit 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 involves essential on campus learning activities which will be delivered in accordance with a COVID Safe plan. You will be expected to attend relevant on campus activities unless the Public Health Order and/or University advice changes. Given the current COVID situation in NSW, all lectures for this unit will be delivered via Zoom (see iLearn for the link). It is likely that the first few tutorials will have to be transferred to online (via Zoom) also but that we will return to on-campus tutorials later in the Session. Please see the iLearn site for week-to-week information.

Required Reading for Unit (these two books will form part of our book club tutorial sessions for weeks 3 & 4 and weeks 11 & 12)


Individual readings related to each week's lecture will be posted, when relevant, to the relevant week's content on iLearn.

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 (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/admin/other-resources/student-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](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/](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 Enquiry Service**

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)

**Equity 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.
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.