COGS3040

Space and Time in the Brain

Session 1, In person-scheduled-weekday, North Ryde 2022

School of Psychological Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor and Lecturer
David Kaplan
david.kaplan@mq.edu.au
Australian Hearing Hub 3.824
By appointment

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

Lecturer
Mike Richardson
michael.richardson@mq.edu.au

Credit points
10

Prerequisites
130cp including COGS2000 or COGS202

Corequisites

Co-badged status

Unit description
Behaviour must be coordinated exquisitely in both space and time. A reach for the glass that is off target, results in a spill. A tennis serve that comes too early or too late, results in a miss. A poorly timed and spatially inaccurate spin of a dance partner, results in a fall. This unit explores fundamental spatial and temporal aspects of human behaviour from computational, neural, and dynamical perspectives. Topics include sensorimotor transformations, motor learning, motor timing and inhibition, and spatiotemporal coordination dynamics.

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 role of space and time in perception, action, and cognition.

ULO2: Demonstrate advanced knowledge of the structure and function of the brain with an emphasis on how space and time are represented.

ULO3: Interpret and critically evaluate the results of studies addressing how space and time are represented in the brain.

ULO4: Display effective scientific communication in written form.

General Assessment Information

Late Penalty

Late submissions will receive a 5% per day penalty including weekends and public holidays, unless an extension has been granted through special consideration. No late submissions will be accepted more than 5 days after the submission deadline, unless special consideration has been granted. No further submissions will be accepted after the marked assignments are returned and feedback is released to students.

Academic Integrity

All students are expected to understand and adhere to the University's Academic Integrity Policy. To gain a better understanding of the policy, it is recommended that students complete the Academic Integrity Module early in the semester. If you are unsure about which activities count as violations of the policy, please see this list of "unacceptable academic activities". All forms of cheating including "contract cheating" are strongly prohibited and serious penalties will apply.

In addition, the following behaviours associated with contract cheating also violate the University's Academic Integrity Policy. In some cases, these behaviours might also be against the law.

- Uploading University-copyrighted teaching materials such as unit of study outlines, lecture slides and assignment questions to 'study notes' sharing websites.
- Selling University-copyrighted teaching materials to private tutoring or ghostwriting companies, or sharing these materials on social media platforms.
- Sharing or discussing information about the content of an exam (including exam questions and answers) with others including on social media platforms.

Assessment Tasks

Name	Weighting	Hurdle	Due
Data Analysis Writeup 1	20%	No	Week 6
Commentary Paper	20%	No	Week 9
Data Analysis Writeup 2	20%	No	Weeks 10-12

Name	Weighting	Hurdle	Due
Final Exam	40%	No	Formal Examination Period

Data Analysis Writeup 1

Assessment Type [1]: Quantitative analysis task
Indicative Time on Task [2]: 14 hours
Due: **Week 6**
Weighting: **20%**

Data analysis and writeup of curated data set.

On successful completion you will be able to:

- Explain the role of space and time in perception, action, and cognition.
- Demonstrate advanced knowledge of the structure and function of the brain with an emphasis on how space and time are represented.
- Interpret and critically evaluate the results of studies addressing how space and time are represented in the brain.
- Display effective scientific communication in written form.

Commentary Paper

Assessment Type [1]: Report
Indicative Time on Task [2]: 14 hours
Due: **Week 9**
Weighting: **20%**

Short highly structured critical analysis of scientific paper. 700 words max.

On successful completion you will be able to:

- Explain the role of space and time in perception, action, and cognition.
- Demonstrate advanced knowledge of the structure and function of the brain with an emphasis on how space and time are represented.
- Interpret and critically evaluate the results of studies addressing how space and time are represented in the brain.
- Display effective scientific communication in written form.

Data Analysis Writeup 2

Assessment Type [1]: Quantitative analysis task
Indicative Time on Task [2]: 14 hours
Due: **Weeks 10-12**

Weighting: **20%**

Data analysis and writeup of curated data set.

On successful completion you will be able to:

- Explain the role of space and time in perception, action, and cognition.
- Demonstrate advanced knowledge of the structure and function of the brain with an emphasis on how space and time are represented.
- Interpret and critically evaluate the results of studies addressing how space and time are represented in the brain.
- Display effective scientific communication in written form.

Final Exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 30 hours
Due: **Formal Examination Period**
Weighting: **40%**

2 hr exam, conducted in class during official exam period. Combination of multiple choice and short answer questions.

On successful completion you will be able to:

- Explain the role of space and time in perception, action, and cognition.
- Demonstrate advanced knowledge of the structure and function of the brain with an emphasis on how space and time are represented.

---

[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

Readings

All readings will be made available through iLearn and Leganto.

iLearn

You will need access to the internet to access the unit's iLearn page. Through iLearn you will be

able to access the lecture recordings (Echo360), additional readings, and feedback and marks for the assessment tasks. You are also required to submit assessment tasks 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.

Lectures

All lectures will be delivered face-to-face in **25 Wallys Walk (A209 Tutorial Room)**, starting in Week 1. The officially scheduled lecture time is **Friday 9:30 AM - 11:00 AM**. Although attendance at lectures is strongly encouraged, all lectures will be recorded and made available for asynchronous viewing through Echo360. Lecture slides will be uploaded to iLearn just before the lecture time under the lecture link in the relevant week below.

Tutorials

All tutorials will be delivered face-to-face in **12 Second Way - 421 Faculty PC Lab**, starting in Week 1. Attendance at tutorials is strongly encouraged. The tutorials are designed to reinforce complex material and concepts introduced in unit readings and lectures. In addition, many tutorials are designed to help you complete unit assessment tasks.

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
- Assessment Procedure
- Complaints Resolution 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

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the 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

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault

- Social support including information about finances, tenancy and legal issues

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

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.