COGS700

Foundations of Cognitive Science

S2 Day 2018

Department of Cognitive Science

Contents

General Information

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Credit points
4

Prerequisites
Admission to MRes

Corequisites

Co-badged status

Unit description

This unit addresses the conceptual foundations of cognitive science. By covering key questions and issues in the philosophy of science, it addresses the underlying assumptions and implications of science. The unit also covers selected topics in cognitive science from a historical and theoretical perspective. The unit gives the students an overview of the major issues and allows them then to reinforce their knowledge with further discussion and reading. The unit is student-led, involving regular critical evaluation of core material, presentations and analyses of mainstream views, and ongoing discussion. This helps to reinforce the students' learning and allows them to decide on the most pertinent issues to their particular discipline and research area with support and direction from the coordinators.

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:

Critically evaluate the conceptual and/or methodological foundations of cognitive science.

Synthesise and analyse information about complex problems and issues in cognitive science research practice including experimental design and statistical methods.

Exhibit analytical research skills and show intellectual independence.

Demonstrate effective scientific communication in written and oral form for a variety of audiences.

Demonstrate a high level of ethical conduct in research activities.

General Assessment Information

LATE PENALTIES

Late submission of an assignment will attract a penalty of 10% 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 2x10%x40 = 8 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 that requests for extensions for assignments must be made via the University's Ask MQ System (as outlined in the Disruption to Studies Policy).

REQUEST FOR EXTENSIONS

Extensions will only be granted for medical or other extenuating circumstances. Students may request this by submitting an online request via ask.mq.edu.au with supporting documentary evidence (such as medical certificate, counsellor note, or similar). Neither individual tutors nor the course convenor are able to grant extensions. All requests for extensions must be made prior to the due date for the assignment.

Assessment Tasks

Name	Weighting	Hurdle	Due
Chapter presentation	40%	No	N/A
Research paper	50%	No	Week 13
Contribution to book review	10%	No	Week 13

Chapter presentation

Due: **N/A**
Weighting: **40%**

Each student will lead the class in discussion of a chapter from *The Seven Deadly Sins of Psychology.* It is expected that the presenter will provide an introduction and overview to the chapter topic, define necessary concepts/methods, provide example cases for discussion and pose questions that will elicit group discussion. The presenter should be prepared to pose counter arguments or challenges to the viewpoint of the author.

- This assessment involves orally presenting the assigned chapter (10% and marked on a pass/fail basis) and writing an accompanying 1000 word (approx. 3 page) review of the chapter (30% graded).
- Electronic submission via iLearn TURNITIN by 5pm **one week after the presentation is given in class**.
- Chapters will be assigned in week 1.

On successful completion you will be able to:
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- Demonstrate effective scientific communication in written and oral form for a variety of audiences.

Research paper

Due: **Week 13**
Weighting: **50%**

- This assessment involves writing a 2000-word (approx. 8 page) research report on one of the topics covered in the unit. Students should consult with one of the unit convenors when selecting a paper topic.
- It is expected that the essay will draw on materials beyond those provided in the book and ideally cover aspects of the debate as they pertain to the broader perception of science in the community and how they are represented in the popular media.
- The point of this essay is not to simply review the course content in an uncritical way. You need to make a reasoned argument about whether or not the viewpoint of the author should be accepted. It does not matter whether you say the author's position is extremely useful or is pointless. We are looking for a clear reasoned arguments on the topic rather than summary of the content.
- Electronic submission via iLearn TURNITIN by 5pm at the end of week 13.

On successful completion you will be able to:
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- Exhibit analytical research skills and show intellectual independence.
- Demonstrate effective scientific communication in written and oral form for a variety of audiences.
- Demonstrate a high level of ethical conduct in research activities.

Contribution to book review

Due: **Week 13**
Weighting: **10%**

The overarching aim of this course is to cover the new book by Chris Chambers, The Seven Deadly Sins of Psychology: A Manifesto for Reforming the Culture of Scientific Practice (2017, Princeton University Press). The unit will culminate in the collective writing and submission of a book review for journal publication. Broad participation from the group is required to make this successful. As a starting point for the collective book review, each student will submit a paragraph-long summary of their essay topic. These will be collated into a single shared document that will form the first draft of the book review.

On successful completion you will be able to:

- Critically evaluate the conceptual and/or methodological foundations of cognitive science.
- Synthesise and analyse information about complex problems and issues in cognitive science research practice including experimental design and statistical methods.
- Demonstrate effective scientific communication in written and oral form for a variety of audiences.

Delivery and Resources

Required text:

Chambers, Chris (2017) The Seven Deadly Sins of Psychology: A Manifesto for Reforming the Culture of Scientific Practice. Princeton, NJ: Princeton University Press. Available as e-book or hardcover through Amazon.com, Amazon.com.au, or Goodreads.com

Unit Schedule

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UNIT CONVENOR: PAUL SOWMAN; LECTURERS: MARK WILLIAMS, DAVID KAPLAN

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Required text:

Chambers, Chris (2017) *The Seven Deadly Sins of Psychology*. Princeton, NJ: Princeton University Press. Available as e-book or hardcover through Amazon.com, Amazon.com.au, or Goodreads.com

Weekly schedule:

Week	Topic	Reading
1	Introduction	None
2	The sin of bias	Chambers Ch1
3	The sin of hidden flexibility	Chambers Ch2
4	The sin of unreliability	Chambers Ch3
5	The sin of data hoarding	Chambers Ch4

6	The sin of corruptibility	Chambers Ch5
7	The sin of internment	Chambers Ch6
8	The sin of bean counting	Chambers Ch7
9	Redemption	Chambers Ch8
10	Book review working session	None
11	All doom and gloom? Perspectives from the history and philosophy of science	TBD
12	Wrap-up discussion	TBD

Assessment tasks:

Weighting	Description
10%	Individual chapter presentation
10%	Individual chapter summary (2 pages)
40%	Research report
10%	Participation/contribution to group book review

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.m q.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-centr al). 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.)*

Undergraduate 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 shown in *iLearn*, 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.

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 improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

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

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.

Graduate Capabilities

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Critically evaluate the conceptual and/or methodological foundations of cognitive science.
- Exhibit analytical research skills and show intellectual independence.

Assessment task

- Research paper

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Critically evaluate the conceptual and/or methodological foundations of cognitive science.
- Exhibit analytical research skills and show intellectual independence.
- Demonstrate effective scientific communication in written and oral form for a variety of audiences.
- Demonstrate a high level of ethical conduct in research activities.

Assessment tasks

- Chapter presentation
- Research paper

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Synthesise and analyse information about complex problems and issues in cognitive science research practice including experimental design and statistical methods.
- Exhibit analytical research skills and show intellectual independence.

Assessment task

- Research paper

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- Demonstrate effective scientific communication in written and oral form for a variety of audiences.
- Demonstrate a high level of ethical conduct in research activities.

Assessment tasks

- Chapter presentation
- Research paper
- Contribution to book review

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- Demonstrate a high level of ethical conduct in research activities.

Assessment task

- Contribution to book review