



# PSYH4437

## Thinking, Reasoning and Decision Making in Theoretical and Applied Settings

Session 2, Special circumstance 2020

*Department of Psychology*

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#### Disclaimer

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#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online 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

Unit Convenor

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Email for an appointment

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Credit points

10

Prerequisites

Corequisites

PSYH490 or PSYH4490 or PSYH495 or PSYH4495

Co-badged status

#### Unit description

This unit will explore and examine the nature and structure of human thinking, reasoning and decision making, in other words how human beings process information and utilise it to meet the demands of their lives. The unit will cover a diverse range of theoretical, empirical and social questions ranging across domains such as financial, scientific, medical, personal, military, aviation, forensics.

## 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:** Critically evaluate empirically based research articles.

**ULO2:** Critique the central assumptions of the major approaches to the study of human thinking, reasoning and decision-making.

**ULO3:** Collaboratively develop and verbally communicate an integrative critique of a topic area by group preparation and presentation.

**ULO4:** Describe and critique the Dual (Multi) Process models of human thinking, reasoning and deciding.

**ULO5:** Review the psychosocial impact of artificial intelligence with respect to human decision making.

## General Assessment Information

**Essay:** Students may answer either one of two questions provided to the class or students may propose their own essay question [provided it is NOT closely related to their Honours thesis] but this must be approved by the Unit convenor before the mid semester break.

**Group Presentation:** You will be allocated to small groups to prepare and present a 15 min talk in the final week of Semester. You have a week to prepare in Week 8. An individual mark will be applied to all students.

**Quizzes:** Ten weekly quizzes relating to the content in the weekly lecture and are due the following Tuesday at 5pm.

## Assessment Tasks

Name	Weighting	Hurdle	Due
Essay	45%	No	Friday Week 8 at 5pm

Name	Weighting	Hurdle	Due
<a href="#">Group seminar presentation</a>	35%	No	Week 12 in class
<a href="#">Online quiz</a>	20%	No	Tuesday the following week after lecture by 5pm

## Essay

Assessment Type <sup>1</sup>: Essay

Indicative Time on Task <sup>2</sup>: 50 hours

Due: **Friday Week 8 at 5pm**

Weighting: **45%**

A 2000 word essay on either (a) a topic relevant to the topics covered in the unit OR (b) student-selected in consultation with the unit convener

On successful completion you will be able to:

- Critically evaluate empirically based research articles.
- Critique the central assumptions of the major approaches to the study of human thinking, reasoning and decision-making.
- Collaboratively develop and verbally communicate an integrative critique of a topic area by group preparation and presentation.
- Review the psychosocial impact of artificial intelligence with respect to human decision making.

## Group seminar presentation

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 40 hours

Due: **Week 12 in class**

Weighting: **35%**

Each group will give a 15 minute talk on an pre-approved chosen topic relevant to the content of the unit presented during the online seminar

On successful completion you will be able to:

- Critically evaluate empirically based research articles.
- Critique the central assumptions of the major approaches to the study of human thinking, reasoning and decision-making.
- Collaboratively develop and verbally communicate an integrative critique of a topic area by group preparation and presentation.
- Describe and critique the Dual (Multi) Process models of human thinking, reasoning and deciding.
- Review the psychosocial impact of artificial intelligence with respect to human decision making.

## Online quiz

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 16 hours

Due: **Tuesday the following week after lecture by 5pm**

Weighting: **20%**

An online quiz following each week's lecture content across 10 weeks.

On successful completion you will be able to:

- Critique the central assumptions of the major approaches to the study of human thinking, reasoning and decision-making.
- Collaboratively develop and verbally communicate an integrative critique of a topic area by group preparation and presentation.
- Describe and critique the Dual (Multi) Process models of human thinking, reasoning and deciding.
- Review the psychosocial impact of artificial intelligence with respect to human decision making.

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<sup>1</sup> 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.

<sup>2</sup> 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

### Textbooks

There are no set textbooks for this unit, but for your interest these are available through the Library:

Stanovich, K., (2010). Decision Making and Rationality in the Modern World. New York: Oxford University Press.

Bazerman, M & Moore, D. (2013) Judgment in Managerial Decision Making [8th Edition]. Hoboken, NJ: Wiley

Hardman, D., (2009). Judgment and Decision Making: Psychological Perspectives. Chichester, UK: BPS Blackwell.

Hastie, R., & Dawes, R. M., (2010). Rational choice in an uncertain world 2nd edition. Thousand Oakes, CA: Sage Publications.

Kahneman, D. (2011). Thinking, Fast and Slow. New York: Farrar, Straus and Giroux.

Newell, B. R., Lagnado, D. A., & Shanks, D. R. (2015). Straight Choices: The psychology of decision making. Second Edition. New York: Psychology Press.

### Additional reading

There may be additional reading for the week uploaded to iLearn.

### Classes

Twelve weeks:

- 10 x 2-hour lecture
- 1 x 2-hour group presentations preparation.
- 3 hour seminar for group presentations in Week 12.

Lectures will involve theory and challenge questions. Where applicable, real world case studies will be discussed.

In some weeks, lectures will be delivered via Zoom, so that we can participate in group work. There is an assumption that all students are able to attend these classes to receive maximum benefit. All will be pre recorded and found in Echo.

The only exception to this is Week 13, which will be vacant as there is no set exam in 2020.

Students are expected to complete readings prior to attending the lecture, and they are expected to participate in class discussions.

## Unit Schedule

Week	Lecture topic (subject to change)	
1	Introduction to unit and to the study of Human Information Processing	
2	Early approaches of deciding: Expected Utility Theory (EUT) Bounded Rationality	
3	Prospect Theory: Subjective Utility	
4	Ecological rationality and Adaptive Heuristics	
5	a) Deduction and induction: Reasoning both formal and flexible b) Analogical Reasoning	
6	a) Problem solving b) Inputs of HIP: Perception and Memory	
7	Decision making and human error	
8	Presentation preparation	
9	Belief bias, conflict detection and intuitive logic	
10	a) Dual Process models of thinking b) Complex Emergent Modularity	
11	a) Human/machine collaboration in applied settings b) The cognitive and social aspects of the human/machine collaboration	
12	Presentations	

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](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) (<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) (<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/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](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/>

## 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 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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.