



# PICT8964

## Decision Making, Scenario Planning and Simulation in Cyber Security

Session 2, Fully online/virtual 2021

*Department of Security Studies and Criminology*

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#### Disclaimer

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#### Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

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Visit the [MQ COVID-19 information page](#) for more detail.

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## General Information

Unit convenor and teaching staff

Yves-Heng Lim

[yves-heng.lim@mq.edu.au](mailto:yves-heng.lim@mq.edu.au)

Credit points

10

Prerequisites

Admission to MCyberSecAnalysis or MCyberSecMCT or MSecStrategicMCyberSec or MIntellMCyberSec or MCyberSecMCrim and (PICT951 or PICT8951 or PICT952 or PICT8952 or PICT953 or PICT8953 or PICT955 or PICT8955)

Corequisites

(PICT8080 or PICT808) and (PICT8040 or PICT840) and (PICT8048 or PICT848) and (PICT8049 or PICT849)

Co-badged status

Unit description

This unit introduces students to scenario planning and simulation (serious game) techniques as critical thinking tools in the context of security policy analysis and planning. In the first modules, students are introduced to the broad logic and use of scenarios and simulations, as well as to their strengths and weaknesses. The second part of the unit is structured around one main contemporary security and criminology-related question that is examined in detail using scenario planning techniques and the conduct of a serious game. Students enrolled in this will take the role of the cyber security analyst.

## 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:** Apply scenario-planning techniques to major contemporary security- and criminology-related issues.

**ULO2:** Communicate disciplinary knowledge to professional audiences.

**ULO3:** Demonstrate understanding of decision-making, bargaining situations and group dynamics in a political-strategic context.

**ULO4:** Use tools and software commonly used to attack/protect networks in complex and evolving real-world situations.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Ministerial Brief</a>	30%	No	17 October (23.55)
<a href="#">Small simulation</a>	10%	No	Week 4
<a href="#">Quiz</a>	10%	No	4 Sept (00.05)-5 Sept (23.55)
<a href="#">Main Simulation</a>	30%	No	Week 13-14
<a href="#">Scenario Planning Exercise</a>	20%	No	Week 7 (ext), 11 September (int)

### Ministerial Brief

Assessment Type <sup>1</sup>: Professional writing

Indicative Time on Task <sup>2</sup>: 51 hours

Due: **17 October (23.55)**

Weighting: **30%**

Working as part of a team tasked with writing a ministerial brief/memo on a security and criminology-related scenario, write a cyber threat assessment; and contribute to the executive summary and recommendations in that assessment.

On successful completion you will be able to:

- Communicate disciplinary knowledge to professional audiences.
- Demonstrate understanding of decision-making, bargaining situations and group dynamics in a political-strategic context.
- Use tools and software commonly used to attack/protect networks in complex and evolving real-world situations.

### Small simulation

Assessment Type <sup>1</sup>: Simulation/role play

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 4**

Weighting: **10%**

Small simulation conducted in the first half of the semester

On successful completion you will be able to:

- Communicate disciplinary knowledge to professional audiences.
- Demonstrate understanding of decision-making, bargaining situations and group dynamics in a political-strategic context.

## Quiz

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

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **4 Sept (00.05)-5 Sept (23.55)**

Weighting: **10%**

Quizzes covering subject matter week 1-4.

On successful completion you will be able to:

- Demonstrate understanding of decision-making, bargaining situations and group dynamics in a political-strategic context.

## Main Simulation

Assessment Type <sup>1</sup>: Simulation/role play

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **Week 13-14**

Weighting: **30%**

Each student team will be presented with a simulation scenario. Each team will be required to provide policy recommendations to the control group (convenors) as the situation unfolds over a number of simulation moves or turns

On successful completion you will be able to:

- Communicate disciplinary knowledge to professional audiences.
- Demonstrate understanding of decision-making, bargaining situations and group dynamics in a political-strategic context.
- Use tools and software commonly used to attack/protect networks in complex and evolving real-world situations.

## Scenario Planning Exercise

Assessment Type <sup>1</sup>: Simulation/role play

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

Due: **Week 7 (ext), 11 September (int)**

Weighting: **20%**

For this assessment, students will be presented with one major contemporary security and criminology-related issue and will use a structured approach to develop scenarios.

On successful completion you will be able to:

- Apply scenario-planning techniques to major contemporary security- and criminology-related issues.
  - Use tools and software commonly used to attack/protect networks in complex and evolving real-world situations.
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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

### UNIT REQUIREMENTS AND EXPECTATIONS

- You should spend an average of 12 hours per week on this unit. This includes listening to lectures prior to seminar or tutorial, reading weekly required materials as detailed in iLearn, participating in iLearn discussion forums and preparing assessments.
- Internal students are expected to attend all seminar or tutorial sessions, and external students are expected to make significant contributions to on-line activities.
- In most cases students are required to attempt and submit all major assessment tasks in order to pass the unit.

### REQUIRED READINGS

- The citations for all the required readings for this unit are available to enrolled students through the unit iLearn site, and at Macquarie University's library site. Electronic copies of required readings may be accessed through the library or will be made available by other means.

### TECHNOLOGY USED AND REQUIRED

- Computer and internet access are essential for this unit. Basic computer skills and skills in word processing are also a requirement.

- This unit has an online presence. Login is via: <https://ilearn.mq.edu.au/>
- Students are required to have regular access to a computer and the internet. Mobile devices alone are not sufficient.
- Information about IT used at Macquarie University is available at [http://students.mq.edu.au/it\\_services/](http://students.mq.edu.au/it_services/)

## SUBMITTING ASSESSMENT TASKS

- All text-based assessment tasks are to be submitted, marked and returned electronically. This will only happen through the unit iLearn site.
- Assessment tasks must be submitted as a MS word document by the due date.
- Most assessment tasks will be subject to a 'Turnitin' review as an automatic part of the submission process.
- The granting of extensions is subject to the university's Special Consideration Policy. Extensions will not be granted by unit conveners or tutors, but must be lodged through Special Consideration: <https://students.mq.edu.au/study/my-study-program/special-consideration>

## LATE SUBMISSION OF ASSESSMENT TASKS

Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – 10 marks out of 100 credit will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted seven days (incl. weekends) after the original submission deadline. No late submissions will be accepted for timed assessments - e.g. quizzes, online tests.

## WORD LIMITS FOR ASSESSMENT TASKS

- Stated word limits include footnotes and footnoted references, but not bibliography, or title page.
- Word limits can generally deviate by 10% either over or under the stated figure.
- If the number of words exceeds the limit by more than 10%, then penalties will apply. These penalties are 5% of the awarded mark for every 100 words over the word limit. If a paper is 300 words over, for instance, it will lose  $3 \times 5\% = 15\%$  of the total mark awarded

for the assignment. This percentage is taken off the total mark, i.e. if a paper was graded at a credit (65%) and was 300 words over, it would be reduced by 15 marks to a pass (50%).

- The application of this penalty is at the discretion of the course convener.

## REASSESSMENT OF ASSIGNMENTS DURING THE SEMESTER

- Macquarie University operates a Grade Appeal Policy in cases where students feel their work was graded inappropriately: <http://www.mq.edu.au/policy/docs/gradeappeal/policy.html>
- In accordance with the Grade Appeal Policy, individual works are not subject to regrading.

## STAFF AVAILABILITY

- Department staff will endeavour to answer student enquiries in a timely manner. However, emails or iLearn messages will not usually be answered over the weekend or public holiday period.
- Students are encouraged to read the Unit Guide and look at instructions posted on the iLearn site before sending email requests to staff.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/su\)](https://students.mq.edu.au/su)



[pport/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](mailto: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](mailto: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.