



PICT8954

Simulation in Cyber Security

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

Department of Security Studies and Criminology

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General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Admission to MCyberSec or MSecStrategicStudMCyberSec or MIntellMCyberSec or MCyberSecMCTerrorism or MCyberSecMCrim or Master of Cyber Security Analysis or BSecStudMCyberSecAnalysis

Corequisites

60cp at 8000 level or above including (PICT8012 or PICT812) and (PICT8080 or PICT808) and (PICT8040 or PICT840) and (PICT8048 or PICT848) and (PICT8049 or PICT849)

Co-badged status

Unit description

This unit provides students with an opportunity to apply the knowledge they have gain throughout their program of study to a real world crisis. By participating in a dynamic simulation, students will be required to solve problems and find solutions to real world challenges. Students will be assigned to an executive team that includes students with different skill sets and knowledge. These executive teams may include strategists, intelligence analysts, criminologists, counter terrorism experts, and cyber security analysts. Students enrolled in Simulation in Cyber Security will perform the role of the cyber security analyst. Their mission will be to formulate solutions by employing the academic, research, analysis and workplace skills they acquired throughout their program. In particular, they will be required to use their knowledge of cyber security suites -including offensive tools- to provide detailed assessments of the evolving situation/scenario. They will also be responsible for the cyber security sections of ministerial briefing papers that each group will have to provide as part of their assessment tasks. The student will be required to make policy recommendations based on his assessment of the situation.

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: Understand the strengths and weaknesses of simulation & role playing as an educational and professional tool.

ULO2: Understand decision-making, bargaining situations and group dynamics in a political-strategic context.

ULO3: Evaluate tools and software commonly used to attack/protect networks in complex and evolving real-world situations.

ULO4: Communicate disciplinary knowledge to professional audiences through the Cyber Security sections of the briefing papers.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Small simulation</u>	15%	No	Week 5
<u>Quiz</u>	15%	No	Week 7
<u>Ministerial Brief</u>	35%	No	Week 9
<u>Main Simulation</u>	35%	No	Week 11-12

Small simulation

Assessment Type ¹: Simulation/role play

Indicative Time on Task ²: 8 hours

Due: **Week 5**

Weighting: **15%**

Small simulation (inclass & Ilearn)

On successful completion you will be able to:

- Understand the strengths and weaknesses of simulation & role playing as an educational and professional tool.
- Understand decision-making, bargaining situations and group dynamics in a political-strategic context.

Quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 3 hours

Due: **Week 7**

Weighting: **15%**

Multiple choice quiz.

On successful completion you will be able to:

- Understand the strengths and weaknesses of simulation & role playing as an educational and professional tool.
- Understand decision-making, bargaining situations and group dynamics in a political-strategic context.

Ministerial Brief

Assessment Type ¹: Professional writing

Indicative Time on Task ²: 50 hours

Due: **Week 9**

Weighting: **35%**

Working as part of a team tasked with writing a ministerial brief/memo on a security and criminology-related scenario, write a 'Cyber Security Threat Assessment'; and contribute to the team executive summary and recommendations.

On successful completion you will be able to:

- Evaluate tools and software commonly used to attack/protect networks in complex and evolving real-world situations.
- Communicate disciplinary knowledge to professional audiences through the Cyber Security sections of the briefing papers.

Main Simulation

Assessment Type ¹: Simulation/role play

Indicative Time on Task ²: 15 hours

Due: **Week 11-12**

Weighting: **35%**

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 turns.

On successful completion you will be able to:

- Understand decision-making, bargaining situations and group dynamics in a political-strategic context.
- Evaluate tools and software commonly used to attack/protect networks in complex and evolving real-world situations.
- Communicate disciplinary knowledge to professional audiences through the Cyber Security sections of the briefing papers.

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

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/

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](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

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