PICT8048

Applied Cyber Security

Session 1, Online-flexible 2025

School of International Studies

Contents

General Information

Unit convenor and teaching staff
Ed Moore
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Credit points
10

Prerequisites
Admission to MPICT or MCPICT or GradDipPICT or GradDipCPICT or PGCertPICT or GradCertPICT or GradCertCPICT or MPICTMIntSecSt or MCPICTMIntSecSt or MIntSecStud or GradDipIntSecStud or GradCertIntell or MInfoTech or MCyberSec or MSecStrategicStudMCyberSec or MIntellMCyberSec or MCyberSecMCTerrorism or MCyberSecMCrim or Master of Cyber Security Analysis or admission to BSecStudMCyberSecAnalysis or MInfoSystMgmt.

Corequisites

Co-badged status

Unit description
In today's world, organisations must be able to protect and defend against threats in cyberspace. This unit provides a solid understanding of the theory and practice used to manage information security on computer systems and networks. Students will be exposed to multiple cyber security technologies, processes and procedures, learn how to analyse threats, vulnerabilities and risks present in these environments, and develop appropriate strategies and policies to mitigate potential cyber security problems. Topics include: an overview of computer and communications security, risk assessment, human factors, identification and authentication, access controls, malicious software, software security and legal and ethical issues. Students will have the opportunity to use tools and software commonly used to attack/ protect networks in order to develop workplace skills.

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: Demonstrate a comprehensive understanding of cyber security threats,

technologies and management practices within public and private sectors.

ULO2: Evaluate the significance and relevance of the governing principles behind cyber security, the theory and practice behind technology risks and countermeasures and the role that security management plays in the wider picture of cyber security

ULO3: Critique and evaluate threats faced in the cyber world and contrast them against those in the physical world.

ULO4: Demonstrate a comprehensive awareness of the procedures and practices involved in managing cyber security risks and threats and apply these to a real world situation, through the establishment of a cyber security risk assessment exercise

Assessment Tasks

Name	Weighting	Hurdle	Due
Laboratory Exercises	18%	No	Ongoing
Quizzes	45%	No	Ongoing
Major Report	37%	No	Week 8

Laboratory Exercises

Assessment Type [1]: Practice-based task
Indicative Time on Task [2]: 13 hours
Due: **Ongoing**
Weighting: **18%**

Laboratory exercises to be submitted fortnightly

On successful completion you will be able to:

- Demonstrate a comprehensive understanding of cyber security threats, technologies and management practices within public and private sectors.
- Evaluate the significance and relevance of the governing principles behind cyber security, the theory and practice behind technology risks and countermeasures and the role that security management plays in the wider picture of cyber security
- Demonstrate a comprehensive awareness of the procedures and practices involved in managing cyber security risks and threats and apply these to a real world situation, through the establishment of a cyber security risk assessment exercise

Quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 33 hours
Due: **Ongoing**
Weighting: **45%**

Online quizzes to assess coursework.

On successful completion you will be able to:
- Demonstrate a comprehensive understanding of cyber security threats, technologies and management practices within public and private sectors.
- Demonstrate a comprehensive awareness of the procedures and practices involved in managing cyber security risks and threats and apply these to a real world situation, through the establishment of a cyber security risk assessment exercise

Major Report

Assessment Type [1]: Report
Indicative Time on Task [2]: 30 hours
Due: **Week 8**
Weighting: **37%**

A report to reflect current industry demands.

On successful completion you will be able to:
- Demonstrate a comprehensive understanding of cyber security threats, technologies and management practices within public and private sectors.
- Evaluate the significance and relevance of the governing principles behind cyber security, the theory and practice behind technology risks and countermeasures and the role that security management plays in the wider picture of cyber security
- Critique and evaluate threats faced in the cyber world and contrast them against those in the physical world.
- Demonstrate a comprehensive awareness of the procedures and practices involved in managing cyber security risks and threats and apply these to a real world situation, through the establishment of a cyber security risk assessment exercise

[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 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a mark of, 0 (zero) will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical issue.

This late penalty will apply to non-timed sensitive assessment (incl essays, reports, posters, portfolios, journals, recordings etc). Late submission of time sensitive tasks (such as tests/ exams, performance assessments/presentations, scheduled practical assessments/labs etc) will only be addressed by the unit convenor in a Special consideration application. Special Consideration outcome may result in a new question or topic

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 deviates from the limit by more than 10%, then penalties will

apply. These penalties are 5% of the awarded mark for every 100 words deviation from the word limit. If a paper is 300 words over, for instance, it will lose 3 x 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 Final Grade Appeal procedure as part of the Assessment policy in cases where students feel their work was graded inappropriately: https://policies.mq.edu.au/document/view.php?id=277

- In accordance with the Grade Appeal procedure, 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). 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 connect.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/

Academic Success

Academic Success 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 Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, 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.

Changes from Previous Offering

Modified assessments to comply with new assessment policy.

Unit information based on version 2025.02 of the Handbook