



# COMP3300

## Data Privacy and Information Security

Session 2, In person-scheduled-weekday, North Ryde 2022

*School of Computing*

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## General Information

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Credit points

10

Prerequisites

COMP2300 and (MATH1007 or DMTH137)

Corequisites

Co-badged status

Unit description

This unit deals with the concepts, techniques, tools, and management processes that contribute to the design and implementation of data privacy and information security requirements for IT systems and business practices. Building on techniques from probability, statistics, cryptography, and algorithms, the unit addresses topics such as encryption, privacy-preserving techniques in statistical and machine learning analysis, content security solutions, or secure data management.

## 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 and explain the concepts of data privacy and information security.

**ULO2:** Perform risk assessment (including privacy risk) on digital information and datasets.

**ULO3:** Embed privacy in the design and architecture of IT systems and business practices.

**ULO4:** Apply adapted privacy and security technologies and tools to enhance the security properties of data.

**ULO5:** Analyse the trends for managing data security.

## General Assessment Information

### Late Assessment Submission Penalty

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following university standard late penalty applied. Please see <https://students.mq.edu.au/study/assessment-exams/assessments> for more information.

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 grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at **11:55 pm**. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for [Special Consideration](#).

### Assessments where Late Submissions will be accepted

In this unit, late submissions will accepted as follows:

**Assignment:** YES, Standard late penalty applies

**Weekly Tasks:** NO, Unless special consideration is granted

**Module Exams 1--3:** NO, Unless special consideration is granted

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Module Exam 3</a>	24%	No	Week 13
<a href="#">Assignment</a>	18%	No	Week 13
<a href="#">Weekly Tasks</a>	10%	No	Weekly
<a href="#">Module Exam 2</a>	24%	No	Week 9
<a href="#">Module Exam 1</a>	24%	No	Week 5

### Module Exam 3

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

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Week 13**

Weighting: **24%**

A 50-minute, online examination, worth 24%, that will be held in Week 13. This will test understanding of the material covered in Weeks 9 to 12.

On successful completion you will be able to:

- Embed privacy in the design and architecture of IT systems and business practices.
- Apply adapted privacy and security technologies and tools to enhance the security properties of data.
- Analyse the trends for managing data security.

## Assignment

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

Indicative Time on Task <sup>2</sup>: 19 hours

Due: **Week 13**

Weighting: **18%**

This assignment deals with concepts learned in data privacy and information security and is due in Week 12. The assignment is to be submitted via iLearn.

On successful completion you will be able to:

- Understand and explain the concepts of data privacy and information security.
- Perform risk assessment (including privacy risk) on digital information and datasets.
- Embed privacy in the design and architecture of IT systems and business practices.
- Apply adapted privacy and security technologies and tools to enhance the security properties of data.
- Analyse the trends for managing data security.

## Weekly Tasks

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

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Weekly**

Weighting: **10%**

Each week, a set of exercises related to that week's lecture topic will be worked out during the practical class. One or two questions from those exercises will be the weekly quiz task.

On successful completion you will be able to:

- Understand and explain the concepts of data privacy and information security.
- Perform risk assessment (including privacy risk) on digital information and datasets.
- Embed privacy in the design and architecture of IT systems and business practices.
- Apply adapted privacy and security technologies and tools to enhance the security properties of data.

## Module Exam 2

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

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Week 9**

Weighting: **24%**

A 50-minute, online examination, worth 24%, that will be held in Week 9. This will test understanding of the material covered in Weeks 5 to 8.

On successful completion you will be able to:

- Understand and explain the concepts of data privacy and information security.
- Perform risk assessment (including privacy risk) on digital information and datasets.
- Apply adapted privacy and security technologies and tools to enhance the security properties of data.

## Module Exam 1

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

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Week 5**

Weighting: **24%**

A 50-minute, online examination, worth 24%, that will be held in Week 5. This will test understanding of the material covered in Weeks 1 to 4.

On successful completion you will be able to:

- Understand and explain the concepts of data privacy and information security.

- Perform risk assessment (including privacy risk) on digital information and datasets.
- Embed privacy in the design and architecture of IT systems and business practices.
- Apply adapted privacy and security technologies and tools to enhance the security properties of data.

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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

### COMPUTING FACILITIES

COMP3300 is a BYOD (Bring Your Own Device). You will be expected to bring your own laptop computer (Windows, Mac, or Linux) to the workshop, install and configure the required software, and incorporate secure practices into your daily work (and play!) routines.

### CLASSES

Each week you should complete any assigned readings and review the lecture slides in order to prepare for the lecture. There are two hours of lectures and a one-hour workshop every week. The hands-on exercises in workshops help to reinforce concepts introduced during the lectures. You should have chosen a practical on enrollment. You will find it helpful to read the workshop instructions before attending - that way, you can get to work quickly! For details of days, times, and rooms consult the timetables webpage. Note that Workshops commence in Week 1. Please note that you will be required to submit work every week.

### RECOMMENDED TEXTS

The following textbooks contain the bulk of weekly readings:

1. Corporate computer security, by Randall J. Boyle and Raymond R. Panko ([available online from the library](#)).
2. Information privacy engineering and privacy by design, by William Stallings ([available online from the library](#)).
3. The Science of Quantitative Information Flow, by M. Alvim, K. Chatzikokolakis, A. McIver, C. Morgan, C. Palamidessi, G. Smith. ([available online from the library](#))
4. Other material in the form of scientific papers and course notes will be made available as needed.

## WEB RESOURCES

**Unit Websites.** COMP3300 is administered via iLearn (<http://ilearn.mq.edu.au/>).

**Lecture recordings.** Digital recordings of lectures may be available. When available they will be linked from iLearn.

## DISCUSSION BOARDS

This unit makes use of discussion boards hosted within iLearn. Please post questions there; they are monitored by the staff on the unit.

## GENERAL NOTES

- Attend lectures, take notes, ask questions.
- Attend weekly practical sessions.
- Read appropriate sections of the text, add to your notes, and prepare questions for your lecturer/tutor.
- Work on any assignments that have been released.

## 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](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)

## 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/](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.