COMP3300

Data Privacy and Information Security

Session 2, In person-scheduled-weekday, North Ryde 2024

School of Computing

Contents

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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

REQUIREMENTS TO PASS THIS UNIT

To pass this unit you must achieve a total mark equal to or greater than 50%.

LATE ASSESSMENT POLICY AND PENALTY

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation 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. The submission time for all uploaded assessments is **11:55 pm**. A 1-hour grace period will be 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, please apply for Special Consideration. For example, if the assignment is worth 8 marks (of the entire unit) and your submission is late by 19 hours (or 23 hours 59 minutes 59 seconds), 0.4 marks (5% of 8 marks) will be deducted. If your submission is late by 24 hours (or 47 hours 59 minutes 59 seconds), 0.8 marks (10% of 8 marks) will be deducted, and so on.

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

Mid and end of semester exams: NO, Unless special consideration is granted.

SPECIAL CONSIDERATION

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due
Weekly Tasks	10%	No	Weekly
Mid semester examination	36%	No	Week 8
End of Semester Examination	36%	No	Week 13
Assignment	18%	No	Week 12

Weekly Tasks

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 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.

Mid semester examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 18 hours
Due: **Week 8**
Weighting: **36%**

An online test, that will be held mid semester. This will test understanding of the material covered in the first part of the course.

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.

End of Semester Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 18 hours
Due: **Week 13**
Weighting: **36%**

An online test, that will be held end of semester. This will test understanding of the material covered in the second part of the course.

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 [1]: Project
Indicative Time on Task [2]: 19 hours
Due: **Week 12**
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.

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[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

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 review the weekly course content consisting of readings and videos in order to prepare for the weekly homework submission. There is also a one-hour face-to-face workshop every week, and a one hour face-to-face Q&A session where you are expected to bring questions for clarification which will be answered by the lecturers. The hands-on exercises in workshops help to reinforce concepts introduced in the weekly course content. You should have chosen a workshop on enrollment. You will find it helpful to read the workshop instructions before your scheduled workshop - 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:

- Corporate computer security, by Randall J. Boyle and Raymond R. Panko (available online from the library).
- Information privacy engineering and privacy by design, by William Stallings (available online from the library).
- The Science of Quantitative Information Flow, by M. Alvim, K. Chatzikokolakis, A. McIver, C. Morgan, C. Palamidessi, G. Smith. (available online from the library)
- 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/).

Videos of some material will be avaiable through iLearn.

METHODS OF COMMUNICATION

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

GENERAL NOTES

• Engage with the course content, go to the one hour Q&A, ask questions.

• Go to weekly workshops.

• Read appropriate sections of the text, add to your notes, and prepare questions for your lecturer or other teaching staff.

• Work on any assignments that have been released.

COVID Information

For the latest information on the University's response to COVID-19, please refer to the Coronavirus infection page on the Macquarie website: https://www.mq.edu.au/about/coronavirus-faqs. Remember to check this page regularly in case the information and requirements change during semester. If there are any changes to this unit in relation to COVID, these will be communicated via iLearn.

Unit Schedule

Please refer to the course schedule on the COMP3300 iLearn pages.

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

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.

Changes from Previous Offering

There will be no formal lectures this offering. Course content will instead be delivered via short videos and suggested readings. Students will also have an opportunity to ask questions of the lecturers at the weekly face-to-face session.

Unit information based on version 2024.02 of the Handbook