



COMP6200

Data Science

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Computing

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General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Corequisites

Co-badged status

COMP2200

Unit description

This unit introduces students to the fundamental techniques and tools of data science, such as the graphical display of data, predictive models, evaluation methodologies, regression, classification and clustering. The unit provides practical experience applying these methods using industry-standard software tools to real-world data sets. Students who have completed this unit will be able to identify which data science methods are most appropriate for a real-world data set, apply these methods to the data set, and interpret the results of the analysis they have performed.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Industry, Innovation and Infrastructure

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: Identify the appropriate Data Science analysis for a problem and apply that method to the problem.

ULO2: Interpret Data Science analyses and summarise and identify the most important aspects of a Data Science analysis.

ULO3: Present the results of their Data Science analyses both verbally and in written form.

ULO4: Discuss the broader implications of Data Science analyses.

General Assessment Information

Release Dates

The assignments will be released no later than the following dates:

- **Assessment 1 (Machine Learning Project):** End of Week 3 (14/08/2026)
- **Assessment 2 (Python Project):** End of Week 7 (11/09/2026)

Requirements to Pass this Unit

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

Late Submission Policy

- 5% penalty per day: If you submit your assessment late, 5% of the total possible marks will be deducted for each day (including weekends), up to 7 days.
 - Example 1 (out of 100): If you score 85/100 but submit 20 hours late, you will lose 5 marks and receive 80/100.
 - Example 2 (out of 30): If you score 27/30 but submit 1 day late, you will lose 1.5 marks and receive 25.5/30.
- After 7 days: Submissions more than 7 days late will receive a mark of 0.
- Extensions:
 - **Short Extension:** Some assessments are eligible for a short extension. You can only apply for a short extension before the due date to request an extra 3 calendar days to complete eligible assessments.
 - **Special Consideration:** If you need more time due to serious issues and for any assessments that are not eligible for Short Extension, you must apply for Special Consideration.

Need help? Review the Special Consideration page [HERE](#)

Assessments where Late Submissions will be accepted

- Assessment 1 – YES, Standard Late Penalty applies
- Assessment 2 – YES, Standard Late Penalty applies

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 <http://connect.mq.edu.au/>.

Generative AI

- **Open** These assessments do not restrict the application of AI tools. However, it is expected that the use of AI is acknowledged in an appropriate manner, similar to the expectation to provide references for other resources or tools that are used in producing your work. Any use of AI should comply with the University's [Responsible and Ethical Use of Artificial Intelligence Policy](#).
- **Observed** These tasks are either fully or partly observed or invigilated. AI use will either not be permitted or will be restricted during the assessment. For more information, please see <https://students.mq.edu.au/study/assessment-exams/assessments/ai-and-assessment>

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Machine Learning Project	25%	No	04/09/2026	Individual	Yes	Open
Python Project	25%	No	23/10/2026	Individual	Yes	Open
Examination	50%	No	Exam Period	Individual	No	Observed

Machine Learning Project

Assessment Type ¹: Experiential task

Indicative Time on Task ²: 20 hours

Due: **04/09/2026**

Weighting: **25%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

This assessment will consist of a number of data analysis problems that will involve writing code to analyse one or more data sets. Machine learning models will be employed and implemented in Python to conduct data analysis. A report will be submitted to analyse, visualise and summarise data analysis findings.

On successful completion you will be able to:

- Identify the appropriate Data Science analysis for a problem and apply that method to the problem.
- Interpret Data Science analyses and summarise and identify the most important aspects of a Data Science analysis.
- Present the results of their Data Science analyses both verbally and in written form.

Python Project

Assessment Type ¹: Experiential task

Indicative Time on Task ²: 20 hours

Due: **23/10/2026**

Weighting: **25%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

This assessment project focuses on fundamental Python programming skills for processing data and fundamental ideas of data science, implementing statistical analysis with Python, including the application of data science techniques on one or more data sets collected from the real world and/or simulated data.

On successful completion you will be able to:

- Identify the appropriate Data Science analysis for a problem and apply that method to the problem.
- Interpret Data Science analyses and summarise and identify the most important aspects of a Data Science analysis.
- Present the results of their Data Science analyses both verbally and in written form.

Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 30 hours

Due: **Exam Period**

Weighting: **50%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

This examination will assess your knowledge and understanding of the data analysis and machine learning methods covered in the semester.

On successful completion you will be able to:

- Interpret Data Science analyses and summarise and identify the most important aspects of a Data Science analysis.
- Discuss the broader implications of Data Science analyses.

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
- [Academic Success](#) 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.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

During most weeks, the unit consists of 2 hours of lectures and 2 hours of practicals. All required software will be installed on the computers in the allocated PC labs; however, students are encouraged to bring a laptop capable of running Orange (<https://orangedatamining.com/>) and a recent version of Python if they prefer to use their own device.

Lectures and practicals start on Week 1.

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.

Unit Web Page

Note that the majority of the unit materials is publicly available while some material requires you to log in to [iLearn](#) to access it.

The unit will make extensive use of discussion boards hosted within [iLearn](#). Please post questions there, they will be monitored by the staff on the unit.

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 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.

- [Ask a Study Coach](#)
- [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 <https://students.mq.edu.au/support/technology/service-desk>.

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

We value student feedback as a way to continually improve how we offer our units. We encourage students to provide constructive feedback via student surveys, directly to teaching staff, or through the FSE Student Experience & Feedback link on the iLearn page.

Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity of assessment requirements and the support provided by teaching staff. As such, only minor changes to the delivery of the unit are planned. Some content will be refined to support clearer and more effective learning. We will continue to strive to improve student support and engagement.

Unit information based on version 2026.04 of the [Handbook](#)