



# STAT1250

## Business Statistics

Session 3, In person-scheduled-weekday, North Ryde 2022

*School of Mathematical and Physical Sciences*

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#### **Disclaimer**

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## General Information

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

Data is the foundation of sound business decisions. In this unit you will learn the fundamentals of analysing, solving and communicating business problems using quantitative information.

The unit will cover the statistical concepts that provide a foundation for the study of and professional practice in business and economics. The focus will be on tools and approaches that are used every day in business. Problems and examples will be drawn from current real-world experience.

## 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:** organise and summarise data graphically and numerically

**ULO2:** use appropriate techniques to analyse data

**ULO3:** use Excel to manipulate and analyse data

**ULO4:** draw conclusions from the results of data analysis

**ULO5:** apply statistical techniques to problems arising from diverse fields of research including examples on sustainability

**ULO6:** demonstrate foundational learning skills including active engagement in your learning process

## General Assessment Information

### General Assessment Information

You need to have the latest version of **Excel with the Data Analysis add-on enabled** for the assessment tasks (see iLearn for information on how to access Excel for free from the university).

**Participation Hurdle:** You need to pass participation hurdle (see SGTA and Practicals) to be able to pass this unit.

**Hurdle Quizzes: There are 5 (five) Hurdle Quizzes.** If you fail any of the Hurdle Quizzes your highest possible mark for this unit will be 49 with a grade of Fail Hurdle (FH). **You need to pass all five Hurdle Quizzes to be able to pass this unit.**

**Class Tests and Final Exam:** You require Excel with the Data Analysis add-on to enable completion of these assessments. You will not be able to answer questions for these assessment tasks without it.

See the schedule in iLearn for detailed of assessment dates and additional information.

**ASSESSMENT SUBMISSION DEADLINES AND LATE SUBMISSIONS:** Hurdle quizzes and Class tests must be undertaken at the time indicated in the unit guide (See iLearn for individual due dates).

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. 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 be accepted as follows:

Hurdle Quizzes – YES, see iLearn for details · Class Tests - NO, unless Special Consideration is Granted.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Hurdle Quizzes</a>	10%	Yes	5 of them, See iLearn for individual due dates
<a href="#">Class Test 1</a>	15%	No	03/01/23
<a href="#">Class Test 2</a>	25%	No	12/01/23
<a href="#">Final Exam</a>	50%	No	During University Examination Period

Name	Weighting	Hurdle	Due
<a href="#">Practical Participation</a>	0%	Yes	Daily, from 2 to 13. Please ignore "weekly" in description.
<a href="#">SGTA Participation</a>	0%	Yes	Daily, from 2 to 13. Please ignore "weekly" in description.

## Hurdle Quizzes

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

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **5 of them, See iLearn for individual due dates**

Weighting: **10%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

The Hurdle Quizzes are online quizzes that will be made available on iLearn.

On successful completion you will be able to:

- use appropriate techniques to analyse data
- use Excel to manipulate and analyse data
- draw conclusions from the results of data analysis
- apply statistical techniques to problems arising from diverse fields of research including examples on sustainability
- demonstrate foundational learning skills including active engagement in your learning process

## Class Test 1

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

Indicative Time on Task <sup>2</sup>: 3 hours

Due: **03/01/23**

Weighting: **15%**

Class Test 1 will be held in the first half of the session.

On successful completion you will be able to:

- organise and summarise data graphically and numerically
- use appropriate techniques to analyse data
- use Excel to manipulate and analyse data
- draw conclusions from the results of data analysis

## Class Test 2

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

Indicative Time on Task <sup>2</sup>: 3 hours

Due: **12/01/23**

Weighting: **25%**

Class Test 2 will be held in the second half of the session.

On successful completion you will be able to:

- organise and summarise data graphically and numerically
- use appropriate techniques to analyse data
- use Excel to manipulate and analyse data
- draw conclusions from the results of data analysis

## Final Exam

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

Indicative Time on Task <sup>2</sup>: 21 hours

Due: **During University Examination Period**

Weighting: **50%**

Formal invigilated examination testing the learning outcomes of the unit. Students are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, i.e. the final day of the official examination period.

On successful completion you will be able to:

- organise and summarise data graphically and numerically
- use appropriate techniques to analyse data
- use Excel to manipulate and analyse data
- draw conclusions from the results of data analysis

- apply statistical techniques to problems arising from diverse fields of research including examples on sustainability

## Practical Participation

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Daily, from 2 to 13. Please ignore "weekly" in description.**

Weighting: **0%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Students must attend and participate in at least 10 of the weekly practical classes to pass this unit. This is a hurdle requirement. They must attend the class that they are registered into.

On successful completion you will be able to:

- organise and summarise data graphically and numerically
- use appropriate techniques to analyse data
- use Excel to manipulate and analyse data
- apply statistical techniques to problems arising from diverse fields of research including examples on sustainability

## SGTA Participation

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Daily, from 2 to 13. Please ignore "weekly" in description.**

Weighting: **0%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Students must attend and participate in at least 10 of the weekly SGTA classes to pass this unit. This is a hurdle requirement. They must attend the class that they are registered into.

On successful completion you will be able to:

- organise and summarise data graphically and numerically
- use appropriate techniques to analyse data
- draw conclusions from the results of data analysis

- apply statistical techniques to problems arising from diverse fields of research including examples on sustainability

<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

**Lecture** notes, **SGTA** worksheets and **Practical** worksheets will be available to download within iLearn. Recommended text books will be listed in iLearn, you only need one of the recommended text books.

**Technology Used and Required:** All course material is delivered through iLearn (which is a version of Moodle). The link may be found at <http://ilearn.mq.edu.au>

## Unit Schedule

Date	Lecture Topic	Assessment Due
13/12/ 22	Introduction to statistics	
15/12/ 22	Summarising and displaying data	
16/12/ 22	Summarising and displaying data (continued)	Hurdle Quiz 1
20/12/ 22	Introduction to distributions: the normal distribution	
22/12/ 22	Sampling distributions and confidence intervals for proportions	Hurdle Quiz 2
23/12/ 22	Sampling distributions and confidence intervals for means	
<i>Break</i>		
03/01/ 23	One sample hypothesis tests for a population mean	Class Test 1; Hurdle Quiz 3
05/01/ 23	Hypothesis tests for comparing population means	
06/01/ 23	Simple linear regression (Part 1)	

10/01/ 23	Simple linear regression (Part 2)	
12/01/ 23	Hypothesis tests for population proportions: z-test of a proportion and chi-squared goodness-of fit test	Class Test 2; Hurdle Quiz 4
13/01/ 23	Chi-squared test of independence	
17/01/ 23	Revision	Hurdle Quiz 5

## 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](https://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.