



# AFCX6018

## Quantitative and Economic Analysis

Term 1, Online-flexible 2023

*Department of Applied Finance*

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## General Information

Unit convenor and teaching staff Yin Liao <a href="mailto:yin.liao@mq.edu.au">yin.liao@mq.edu.au</a>
Credit points 10
Prerequisites Admission to GradCertFin (OUA)
Corequisites
Co-badged status
Unit description This unit provides the important building blocks in microeconomic and quantitative analysis required for advanced study in applied finance. Microeconomic analysis develops tools in demand and supply and critically applies these to the consumer and the firm. It concludes with an analysis of market structure. The second part of the unit develops quantitative skills that are used in finance, including descriptive statistics, probability, statistical inference, correlation and regression analysis. Spreadsheets are extensively used in statistical modelling.

## 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:** Apply mathematical skills to finance based problems.

**ULO2:** Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.

**ULO3:** Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.

**ULO4:** Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.

**ULO5:** Analyse data using the key concepts, models and theories used in probability and statistics.

## General Assessment Information

### Late submissions of assessments

Unless a Special Consideration request has been submitted and approved, no extensions will be granted. There will be a deduction of 10% of the total available assessment-task marks made from the total awarded mark for each 24-hour period or part thereof that the submission is late. Late submissions will only be accepted up to 96 hours after the due date and time.

No late submissions will be accepted for timed assessments – e.g., quizzes, online tests.

**Table 1: Penalty calculation based on submission time**

Submission time after the due date (including weekends)	Penalty (% of available assessment task mark)	Example: for a non-timed assessment task marked out of 30
< 24 hours	10%	10% x 30 marks = 3-mark deduction
24-48 hours	20%	20% x 30 marks = 6-mark deduction
48-72 hours	30%	30% x 30 marks = 9-mark deduction
72-96 hours	40%	40% x 30 marks = 12-mark deduction
> 96 hours	100%	Assignment won't be accepted

### Special Consideration

To request an extension on the due date/time for a timed or non-timed assessment task, you must submit a [Special Consideration application](#). An application for Special Consideration does not guarantee approval.

The approved extension date for a student becomes the new due date for that student. The late submission penalties above then apply as of the new due date.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Online Participation</a>	15%	No	Refer to iLearn
<a href="#">Assessed Coursework</a>	55%	No	Refer to iLearn
<a href="#">Final Exam</a>	30%	No	Exam Week

### Online Participation

Assessment Type <sup>1</sup>: Participatory task Indicative Time on Task <sup>2</sup>: 30.00 hours Due: **Refer to iLearn** Weighting: **15%**

Participation in online discussion forums. Online discussions and tasks will be conducted during the term. You are required to participate actively in these forums, and your contributions will be assessed.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.

## Assessed Coursework

Assessment Type <sup>1</sup>: Case study/analysis Indicative Time on Task <sup>2</sup>: 40.00 hours Due: **Refer to iLearn** Weighting: **55%**

You will be required to participate in a variety of assessment tasks for Economic Analysis and Quantitative Analysis. These will include written activities, online quizzes and project based learning.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.

## Final Exam

Assessment Type <sup>1</sup>: Examination Indicative Time on Task <sup>2</sup>: 12.00 hours Due: **Exam Week** Weighting: **30%**

Online Exam via iLearn on all Topics

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.

<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

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Assessed Coursework</a>	55%	No	Refer to iLearn
<a href="#">Final Exam</a>	30%	No	Exam Week
<a href="#">Online Participation</a>	15%	No	Refer to iLearn

### Assessed Coursework

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 40 hours

Due: **Refer to iLearn**

Weighting: **55%**

A variety of assessment tasks will be assessed, and will include written activities, online quizzes and project based learning.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.

- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.

## Final Exam

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

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

Due: **Exam Week**

Weighting: **30%**

Online Exam via iLearn on all topics covered during the session.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.

## Online Participation

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

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **Refer to iLearn**

Weighting: **15%**

Active participation in online discussion forums.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.
- Analyse data using the key concepts, models and theories used in probability and statistics.

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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

### **REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS**

#### **Required Text:**

The required textbooks for this unit are:

- *Microeconomics: Principles and Practice*, 2<sup>nd</sup> edition (2017) by Frost, Taylor, Weerapana, Schuwalow, Cengage Learning. This textbook, only available as an e-text, can be found at: <https://www.vitalsource.com/en-au/products/microeconomics-principles-and-practice-lionel-frost-john-taylor-v9780170278973>
- *Basic Business Statistics*, 5th edition (2018) by Berenson, Levine, Szabat, O'Brien, Watson and Jayne, Pearson Australia (ISBN 9781488617249). Details on the textbook can be found at <https://pearson.com.au/9781488617249>. The textbook is available from the publisher's website as a paperback or as a VitalSource eText. The textbook is also available as a paperback from Booktopia.

#### **Additional Readings:**

- Additional readings are included in iLearn.

- Students should assume these readings are examinable unless otherwise advised.

**Assumed Knowledge:** Mathematical content

- This unit has a high level of numerical content. Consequently, this unit is mathematical and arithmetical. The applied nature of this unit means that the focus is on application of knowledge rather than complex mathematical derivations. To help prepare students for the numerical content in this unit, students will find a Fundamental Maths Quiz in iLearn. This will allow students to test their existing mathematics knowledge. Details on the quiz can be found in iLearn.

**Assumed Access:** Access to a computer with word processing and spreadsheet capability is assumed, as is general student computer literacy. In particular, students need access to a version of Microsoft Excel which includes regression analysis.

**TECHNOLOGY USED AND REQUIRED**

This is an online unit which will make use of the University's iLearn system.

Unit's iLearn Site:

- Found by logging on to iLearn [ilearn.mq.edu.au](http://ilearn.mq.edu.au), then clicking on **AFCP6018 Quantitative and Economic Analysis**.
- This is where you will find forums, downloadable resources and links to important pages.
- The forum allows you to communicate with other students and lecturer(s) and may provide supplementary material.
- You are requested to post your questions on the forums at least 24 hours prior to the assessment submission date or the examination date. Questions posted after that time may not be answered. **Please ensure that you do not leave your questions to the last few days.**

**Important Notice:**

- It is important that you familiarise yourself with the unit's iLearn site.
- All students should check iLearn regularly and look for updates and distribution of materials related to the unit or assessments and participate in forum discussions.

## Unit Schedule

The following schedule is a guide to the timing of each topic. Details of the required readings are provided in iLearn.

Week	Topic
0	Topic 0: Essential pre-work



1	Key concepts, supply & demand model	
2	<b>Topic 2:</b> Market analysis & elasticity	
3	<b>Topic 3:</b> Cost curves & the competitive market	
4	<b>Topic 4:</b> Market structures	
5	<i>Complete Economic assessment tasks</i>	
5	<b>Topic 5:</b> Descriptive statistics	
6	<b>Topic 6:</b> Probability & random variables	
	<b>Topic 7:</b> Statistical estimation & inference	
9	<b>Topic 8:</b> Correlation, regression & indices	
11	<i>Complete quantitative assessment tasks</i> <i>Exam preparation start</i>	
12	<b>Online exam period</b>	

## 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 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/](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.