AFCP812

Quantitative and Economic Analysis

AFC Term 1 Online 2019

Department of Applied Finance

Contents

General Information

Unit convenor and teaching staff
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Credit points
4

Prerequisites
Admission to MAppFin or MAppFin(Adv) or GradCertFin

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:

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.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assessed Coursework	55%	No	In iLearn
Online Participation	15%	No	In iLearn
Final Examination	30%	No	Exam week

Assessed Coursework

Due: **In iLearn**
Weighting: **55%**

Summary of Assessment Task

Individual / Group: Individual.

Description: 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. Details of the assessments can be found in iLearn.

Due Dates: See iLearn for due dates.

Grading Method: Refer to Assessment Summary in iLearn.

Submission Method: Online via iLearn.

Extension Requests: No extensions will be granted. Students who have not submitted the task prior to the due date will be awarded a mark of zero for the task, except for cases in which an application for Special Consideration is made and approved. If you have serious and unavoidable circumstances that prevent you from submitting an assessment task by the due date, you must apply for Special Consideration no later than five (5) working days after the assessment due date. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.

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.

Online Participation

Due: **In iLearn**
Weighting: **15%**

Summary of Assessment Task

Individual / Group: Individual.

Due Dates: See iLearn for due dates.

Timing: 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.

Grading Method: Refer to Assessment Summary in iLearn.

Submission Method: Online via the unit's iLearn site.

Extension Requests: No extensions will be granted. Students who have not submitted the task prior to the due date will be awarded a mark of zero for the task, except for cases in which an application for Special Consideration is made and approved. If you have serious and unavoidable circumstances that prevent you from submitting an assessment task by the due date, you must apply for Special Consideration no later than five (5) working days after the assessment due date. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.

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.

Final Examination

Due: **Exam week**
Weighting: **30%**

Summary of Assessment Task

Individual / Group: Individual.

Due Date: See iLearn for due dates.

Grading Method: Refer to Assessment Summary in iLearn.

Submission Method: The final exam will be an open book online exam submitted in iLearn.

Duration: 3 hours.

Examination Conditions:

- The final exam is an open book online exam.
- Refer to MAFC Program Rules at www.mafc.mq.edu.au.

Extension Requests: No extensions will be granted. Students who have not sat the final examination prior to the due date will be awarded a mark of zero for the task, except for cases in which an application for Special Consideration is made and approved. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.

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

Delivery and Resources

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Required Text:

The required textbooks for this unit are:

- *Microeconomics: Principles and Practice*, 2nd edition (2017) by Frost, Taylor, Weerapana, Schuwalow, Cengage Learning. This textbook is available as either a print book - (ISBN-10: 0170380096 ISBN-13: 9780170380096) or eBook. See links below:

  - https://cengage.com.au/product/division/university/title/microeconomics-principles-and-practice-with-s/isbn/9780170380096

Details on the eBook (a VitalSource eText) can be found at: https://www.cengagebrain.com.au/shop/isbn/9780170380096

It is recommended that students purchase the text with the Coursemate option.

- *Basic Business Statistics,* 4th edition (2015) by Berenson, Levine, Szabat, O'Brien, Watson and Jayne, Pearson Australia (ISBN 9781486018956). Details on the textbook can be found at http://www.pearson.com.au/9781486018956. 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 the Co-op Bookshop.

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, then clicking on *AFCP812 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 <u>not</u> 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	Date when you should have started working on this topic
1	Topic 0: Essential pre-work	1 January 2019
2	Topic 1: Key concepts, supply & demand model	7 January 2019
3	Topic 2: Market analysis & elasticity	14 January 2019
4	Topic 3: Cost curves & the competitive market	21 January 2019
5	Topic 4: Market structures	28 January 2019
6	Topic 5: Descriptive statistics	8 February 2019
7	Topic 6: Probability & random variables	18 February 2019
8	Topic 7: Statistical estimation & inference	25 February 2019
9	Topic 8: Correlation, regression & indices	4 March 2019
10	Complete assessment tasks	11 March 2019
11	Exam preparation	11 March 2019
12	Exam week (16 March - 21 March)	Sunday 17 March - Monday 18 March

Learning and Teaching Activities

Strategy

Programs in the Applied Finance Centre adopt a deep teaching and learning strategy. Students acquire and retain knowledge and also are able to make sense of the issues and concepts and apply them in the "real world". The program relies heavily on student engagement and participation by: (a) Continuous learning throughout the term. This is encouraged through a

combination of students undertaking prescribed reading throughout the units and/or completion of practice problems, online activities, case studies, assignments, class discussions, etc and interaction via forums; and (b) Assessments, which enable the student to demonstrate his/her understanding of the learning objectives achieved through the continuous learning.

Student Participation

This is an online unit. Students participate in this unit by: (a) Actively engaging with the required readings of this unit; (b) Working systematically through suggested practice quizzes and by completing online activities; (c) Interacting in forums; and (d) Completing all assessment tasks and exams. See Assessment rubrics for more detail.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/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

Students should also consult the MAFC Program Rules found at http://www.mafc.mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student enquiry service (MAFC-specific)

For all student enquiries, please contact studentsupport@mafc.mq.edu.au

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Learning Skills

Learning Skills (http://www.students.mq.edu.au/support/learning_skills/) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

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.

Graduate Capabilities

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Apply mathematical skills to finance based problems.
- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
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- 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.

Assessment tasks

- Assessed Coursework
- Online Participation
- Final Examination

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Explain and analyse the key concepts, models and theories used in microeconomics as required for applied finance.
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Assessment tasks

- Assessed Coursework
- Online Participation
- Final Examination

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Apply mathematical skills to finance based problems.
- Apply the key concepts, models and theories used in microeconomics to solve a range of finance based problems.
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- Demonstrate proficiency in using spreadsheet based statistical modelling to solve a range of finance based problems.

Assessment tasks

- Assessed Coursework
- Online Participation
- Final Examination

Important Notice

This Unit Guide contains important information about the unit. If anything is unclear, please consult one of the unit lecturers.