AFCP812

Quantitative and Economic Analysis

AFC Term 1 Online 2017

Dept of Applied Finance and Actuarial Studies

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General Information

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Credit points
4

Prerequisites
Admission to MAppFin 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 microeconomic concepts, models and theories as required for applied finance issues.

Apply the key microeconomic concepts, models and theories to solve a range of finance based problems.

Explain and analyse the key theories, concepts, and models used in probability and statistics as required for applied finance.

Apply the key theories, concepts, and models used in probability and statistics to solve a range of finance based problems.

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

Assessment Tasks

Name	Weighting	Hurdle	Due
Assessed Coursework	30%	No	In iLearn
Online Participation	15%	No	In iLearn
Assignment	25%	No	In iLean
Final Examination	30%	No	Exam week

Assessed Coursework

Due: **In iLearn**
Weighting: **30%**

Summary of Assessment Task

Individual / Group: Individual

Description: You will be required to participate in three assessment tasks for Economic Analysis and three quizzes for Quantitative Analysis. 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:

- You are expected to complete assessments by the due date.
- If you have extenuating circumstances (such as illness or misadventure) that prevent you from participating, please make arrangements with your Lecturer prior to the due date.
- Unless prior arrangements have been made, a zero mark may apply.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key microeconomic concepts, models and theories as required for applied finance issues.
- Apply the key microeconomic concepts, models and theories to solve a range of finance based problems.
- Explain and analyse the key theories, concepts, and models used in probability and statistics as required for applied finance.
- Apply the key theories, concepts, and models used in probability and statistics to solve a range of finance based problems.
- 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 assessment summary in 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: See assessment summary in iLearn.

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

Extension Requests:

- You are expected to make yourself available for assessment.
- If you have extenuating circumstances (such as illness or misadventure) that prevent you from participating, please make arrangements with your Lecturer prior to the due date.
- Unless prior arrangements have been made, a zero mark may apply.

On successful completion you will be able to:

- Explain and analyse the key microeconomic concepts, models and theories as required for applied finance issues.
- Explain and analyse the key theories, concepts, and models used in probability and statistics as required for applied finance.

Assignment

Due: **In iLean**
Weighting: **25%**

Summary of Assessment Task

Individual / Group: Individual

Due Dates: The assignment is in two parts. See iLearn for the due dates for each part.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily'.

Submission Method: Via iLearn.

Extension Requests:

- If you have extenuating circumstances that prevent you from submitting your assignment by the due date, please make arrangements with your Lecturer prior to the due date.
- Unless prior arrangements have been made, any late submission of assignments may be penalised. In the absence of special circumstances, a zero mark will apply.

On successful completion you will be able to:

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

Final Examination

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

Summary of Assessment Task

Individual / Group: Individual

Due Date: The final exam will be held in the Applied Finance Centre exam week: 18-23 March 2017. Refer to iLearn for the exam window within this period.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily'.

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

Duration: 3 hours

Examination Conditions:

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

Extension Requests:

- Deferral of an examination is not permitted, unless special consideration has been approved by the Director of Studies under the University's Disruption to Studies Policy.
- Refer to MAFC Program Rules & Procedures at www.mafc.mq.edu.au for information on the University's Disruption to Studies Policy for non-attendance at an examination.

On successful completion you will be able to:

- Apply mathematical skills to finance based problems.
- Explain and analyse the key microeconomic concepts, models and theories as required for applied finance issues.
- Apply the key microeconomic concepts, models and theories to solve a range of finance based problems.
- Explain and analyse the key theories, concepts, and models used in probability and statistics as required for applied finance.
- Apply the key theories, concepts, and models used in probability and statistics to solve a range of finance based problems.
- 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

- **T**his 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 an Essential 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 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	Date when you should have started working on this topic
1	Topic 0: Essential pre-work	2 January 2017
2	Topic 1: Key concepts, supply & demand model	9 January 2017
3	Topic 2: Market analysis & elasticity	16 January 2017
4	Topic 3: Cost curves & the competitive market	23 January 2017
5	Topic 4: Market structures	30 January 2017
6	Topic 5: Descriptive statistics	6 February 2017
7	Topic 6: Probability & random variables	13 February 2017
8	Topic 7: Statistical estimation & inference	20 February 2017
9	Topic 8: Correlation, regression & indices	27 February 2017
10	Complete assessment tasks	6 March 2017

11	Exam preparation	13 March 2017
12	Exam week	19 – 23 March 2017

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 on-line activities; (c) Interacting in forums; and (d) Completing all assessment tasks and exams.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy_2016.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

In addition, a number of other policies can be found in the Learning and Teaching Category of 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/support/student_conduct/

Results

Results shown in *iLearn*, 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.

Students should also consult the MAFC Program Rules & Procedures 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 enquires, 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

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 - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

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

Assessment tasks

- Assessed Coursework
- Online Participation
- Assignment
- Final Examination

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 microeconomic concepts, models and theories as required for applied finance issues.

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

Assessment tasks

- Assessed Coursework
- Online Participation
- Assignment
- 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:

Assessment tasks

- Online Participation
- Assignment
- 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 the key microeconomic concepts, models and theories to solve a range of finance based problems.
- Apply the key theories, concepts, and models used in probability and statistics to solve a

range of finance based problems.

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

Assessment tasks

- Assessed Coursework
- Online Participation
- Assignment
- Final Examination

Important Notice

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

Standards Required to Complete the Unit Satisfactorily

University Policy on Grading:

- Macquarie University's Academic Senate has established a Grading Policy available at http://www.mq.edu.au/policy/docs/grading/policy.html. Your final result will include:
    - A Grade ranging from Fail to High Distinction; and
    - A numerical Mark which is a summation of the individual assessment components.
- It is important to note:
    - The Policy does not require that a minimum or maximum number of students are to be failed in any unit;
    - Grades will not be allocated to fit a predetermined distribution; and
    - Grades for all individual assessment items will be released to students, but Marks may not necessarily be released.

Specific Unit Grading:

- All final Marks and Grades in the Applied Finance Centre are determined by a grading committee and are not the sole responsibility of the unit convenor.
- The core criteria used to assess student work in this unit are:
    - Knowledge and understanding: Understanding key ideas, knowledge and use of concepts.
    - Application: Ability to apply theoretical ideas and frameworks in practice and in a

critically reflective way.
  - Reasoning and analysis: Ability to analyse, use critical reasoning and principles to formulate a position, balancing theory and personal reflection.
  - Professional literacy and research: Understanding of professional factors (language and landscape) and ability to undertake appropriate research.
  - Communication and presentation: Ability to communicate and present effectively (written and oral, as relevant).
  - Use of mathematical and statistical ideas: Ability to use mathematical and statistical ideas, methods and formulae appropriately.
- Performance in relation to each of these criteria are assessed against the University's grading descriptors:

Grade	Expectation
High Distinction	Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate to the discipline.
Distinction	Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.
Credit	Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the discipline.
Pass	Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.
Fail	Does not provide evidence of attainment of learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.

Review of Grade and final examination Script viewing:

- A student who has been awarded a final grade for a unit and who does not believe it is an accurate reflection of their performance, and has grounds for such a claim and can demonstrate those grounds, may apply to have their grade reviewed.
- For information on requesting a review of grade and/or viewing your final exam script, please refer to the University's Grade Appeal Policy at http://www.mq.edu.au/policy/docs/gradeappeal/policy.html and MAFC Program Rules & Procedures at http://www.mafc.mq.edu.au.

Changes since First Published

Date	Description
13/12/2016	Unit Schedule updated.