



# BBA 315

## Business Forecasting

MQC2 Evening 2014

*Dept of Marketing and Management*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Unit Convenor

Ai Ling Zhou

[ai-ling.zhou@mq.edu.au](mailto:ai-ling.zhou@mq.edu.au)

Contact via [ai-ling.zhou@mq.edu.au](mailto:ai-ling.zhou@mq.edu.au)

To be advised

Moderator

Prof. Hume Winzar

[hume.winzar@mq.edu.au](mailto:hume.winzar@mq.edu.au)

Contact via 9850 6468

E4A 633

Credit points

3

Prerequisites

39cp including (STAT170 or STAT171 or MKTG216)

Corequisites

Co-badged status

Unit description

This unit explores business forecasting by considering the planning process of the organisation, the environment in which business forecasts are made, prediction of key variables using qualitative and quantitative information, and the practical considerations of forecast implementation. Quantitative predictions will generally make use of spreadsheets and simple statistical procedures that can be easily applied in the business environment.

## 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:

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of simple quantitative forecasting techniques used in business
- To gain an understanding of qualitative forecasting techniques in a business

environment

To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## Assessment Tasks

Name	Weighting	Due
<u>Quiz</u>	15%	Week 7
<u>Class Participation</u>	15%	Ongoing
<u>Final Examination</u>	40%	City Campus Examination Period
<u>Case Study/Report</u>	30%	Week 13

### Quiz

Due: **Week 7**

Weighting: **15%**

There will be one within-semester test to be held in lecture in week 7. The test will cover all material from weeks 1-6 inclusive and will consist of 30 multiple choice questions

**There is no provision for supplementary examinations for the within-semester test.**

On successful completion you will be able to:

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of simple quantitative forecasting techniques used in business

### Class Participation

Due: **Ongoing**

Weighting: **15%**

Your participation throughout the semester will be evaluated by the lecturers. Your evaluation in this respect will depend predominantly on:

§ Completion of tutorial tasks (activities such as exercises and questions)

- Attendance at tutorials

§ Meaningful contributions during tutorial time

§ Punctuality

§ Professional conduct and behaviour

**NB: No extension is permitted for each submission period.**

On successful completion you will be able to:

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- To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## Final Examination

Due: **City Campus Examination Period**

Weighting: **40%**

The final examination will be a three hour examination. **All material in the unit is examinable.** Further details about the final examination will be given later in the semester.

*In the examination components of the unit, most complex formulae will be provided however students will be expected to memorise simpler formulae. Statistical tables will be provided. All examinations are closed book. Students will also be required to perform calculations requiring a calculator so they should bring one to all examinations.*

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. The University's policy on special consideration process is available at [http://www.mq.edu.au/policy/docs/special\\_consideration/policy.html](http://www.mq.edu.au/policy/docs/special_consideration/policy.html)

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period. (Individual Faculties may wish to signal when the Faculties' Supplementary Exams are normally scheduled.)

The Macquarie university examination policy details the principles and conduct of examinations at the University. The policy is available at: <http://www.mq.edu.au/policy/docs/examination/policy.htm>

**No exemptions for Special Consideration or Supplementary Exams will be granted without a medical certificate given from a University approved hospital or medical centre.**

On successful completion you will be able to:

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of simple quantitative forecasting techniques used in business
- To gain an understanding of qualitative forecasting techniques in a business environment
- To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## Case Study/Report

Due: **Week 13**

Weighting: **30%**

This report is written document reporting on the comprehensive business forecasting project. The student need to provide and analyse empirical data and form argument based on the academic and business literature.

The assignment can be done in groups of no more than 3 or can be done individually. The number of people in the group will not be a consideration for the awarding of marks in the assignment.

**Late assignments will attract a 20% penalty of the assignment mark for each day late. All members of the group will receive the same raw mark unless an included peer review statement indicates otherwise.**

On successful completion you will be able to:

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- To gain an understanding of simple quantitative forecasting techniques used in business
- To gain an understanding of qualitative forecasting techniques in a business environment
- To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## Delivery and Resources

### Classes

Number and length of classes: 4 hours face-to-face teaching per week, consisting of 1 x 2 hour lecture and 1 x 2 hour tutorial. T

### Recommended Texts and/or Materials

Hanke, John E & Wichern, Dean W, 2009. Business Forecasting, (International Edition) Prentice Hall, (9th Edition)

#### Additional readings

You do *not* need to buy these books. Occasionally, handouts thereof might be distributed in class.

**Wilson J.H., Keating B.,** *Business Forecasting*, Irwin (5th edition)

### Technology Used and Required

Students are required to learn how to use spreadsheet and MNITAB 16.

## Unit Web Page

The web page for this unit can be found at: iLearn <http://ilearn.mq.edu.au>

## Teaching and Learning Strategy

This unit is lecture- and tutorial-based. Typically, the class-time structure will be like this:

§ During lectures, Business Forecasting theory and concepts will be discussed. We will establish links between theory and your personal knowledge in an business strategic planning setting during class discussions.

§ During tutorials, students are required to work on some tasks of business forecasting solutions using several models and techniques. Student participation and meaningful contributions are essential to understand business forecasting concepts and calculations.

§ The lecture notes will be posted on <http://ilearn.mq.edu.au/> on a weekly basis. For your own convenience it is recommended to print hardcopies of the respective notes *before* coming to class. The recording (video or tape) of lectures or tutorials is *not* permitted. If you miss a class/ tutorial, ask a colleague for their notes.

### Changes to the unit

There have been no changes since the last offering of this course.

## Unit Schedule

Week	Topics Covered	Chapter(s)	Other Information
1	<ul style="list-style-type: none"> <li>· Introduction Forecasting in management</li> <li>· The philosophy of forecasting</li> </ul>	1 and 11	Tutorial 1 - Introduction to Excel and Minitab
2	<ul style="list-style-type: none"> <li>· Exploring Data Patterns and Introduction to Forecasting Techniques</li> </ul>	3	Tutorial 2 - Introduction to the Data Environment
3	<ul style="list-style-type: none"> <li>· Moving Averages and Smoothing Methods: Naïve and Moving Average</li> <li>· Measuring Forecasting Error</li> </ul>	4	Tutorial 3 –Exploring data pattern
4	<ul style="list-style-type: none"> <li>· Moving Averages and Smoothing Methods: Simple Exponential Smoothing</li> </ul>	4	Tutorial 4 - Elementary smoothing
5	<ul style="list-style-type: none"> <li>· Exponential Smoothing Methods: Holt's and Winter's Method</li> </ul>	5	Tutorial 5 – Trend Models

6	· Time Series and Their Components	6	Tutorial 6 –Seasonality
7	· Simple Linear Regression	7	<b>Quiz in Tutorials</b> <b>(covers weeks 1-6 inclusive)</b>
8	· Multiple Regression Models · Dummy Variables	7	Tutorial 7 – Regression I
9	· Regression with Time Series Data	8	Tutorial 8 – Regression II
10	· The Box-Jenkins (ARIMA) Methodology: Non-seasonal ARIMA · The Box-Jenkins (ARIMA) Methodology: Seasonal ARIMA	9	Tutorial 9 - Leading Indicators
11	· Leading Indicators and Business Cycles		Project assignment review
12	· Judgmental Forecasting and Forecast Adjustments (1)	10	Project assignment review
13	· Judgmental Forecasting and Forecast Adjustments (2) · Course Review for Final Exam	10	<b>Group assignment Due in BESS</b>

## 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](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

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

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

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

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

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/](https://students.mq.edu.au/support/student_conduct/)

## 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](http://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 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.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.



This graduate capability is supported by:

## **Learning outcomes**

- To gain an understanding of simple quantitative forecasting techniques used in business
- To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## **Assessment tasks**

- Quiz
- Class Participation
- Final Examination
- Case Study/Report

## **Critical, Analytical and Integrative Thinking**

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## **Learning outcomes**

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of qualitative forecasting techniques in a business environment

## **Assessment tasks**

- Quiz
- Class Participation
- Final Examination
- Case Study/Report

## **Problem Solving and Research Capability**

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

## Learning outcomes

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of simple quantitative forecasting techniques used in business
- To gain an understanding of qualitative forecasting techniques in a business environment
- To learn the application of a number of forecasting techniques using EXCEL and other statistical programs such as Minitab

## Assessment tasks

- Quiz
- Class Participation
- Final Examination
- Case Study/Report

## Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

## Learning outcomes

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of simple quantitative forecasting techniques used in business
- To gain an understanding of qualitative forecasting techniques in a business environment
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## Assessment tasks

- Class Participation
- Final Examination
- Case Study/Report

## Research and Practice

- This unit may use research by Macquarie University researchers
- This unit may use research from external sources. This unit gives you opportunities to learn how to critique current research at the frontiers of your discipline as a prelude to later conducting your own

research.

Journal of Forecasting

Foresight: the international journal of applied forecasting

International Journal of Forecasting

Journal of International Business Studies

Journal of Marketing Research