BBA 315
Business Forecasting
D2 2012
Marketing and Management

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General Information

Unit convenor and teaching staff
Unit Convenor
Hamin Hamin
hamin.hamin@mq.edu.au
Contact via hamin.hamin@mq.edu.au

Credit points
3

Prerequisites
36cp and (STAT170 or STAT171)

Corequisites

Co-badged status

Unit description
This unit introduces students to forecasting techniques with practical applications to business situations. The emphasis is on identifying appropriate forecasting methods to resolve specific problems. This unit also considers the analysis and interpretation of real data using a simple computer statistical package. Qualitative aspects of forecasting are introduced and techniques such as the Delphi forecasting method and scenario planning are reviewed. Students who complete the unit successfully should be able to use their forecasting skills in a business environment to make a useful contribution to an organisation's activities.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://students.mq.edu.au/important-dates

Learning Outcomes

1. To gain an understanding of the need for, and uses of, forecasting in a business context.
2. To gain an understanding of simple quantitative forecasting techniques used in business.
3. To learn the application of a number of forecasting techniques using EXCEL and other statistical programs.
4. To gain an understanding of qualitative forecasting techniques in a business environment.
Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Due</th>
</tr>
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<tbody>
<tr>
<td>Case study/Report</td>
<td>30%</td>
<td>Week 13</td>
</tr>
<tr>
<td>Quiz</td>
<td>15%</td>
<td>Week 8</td>
</tr>
<tr>
<td>Class Participation</td>
<td>15%</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Final Examination</td>
<td>40%</td>
<td>University Examination Period</td>
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</tbody>
</table>

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.

This Assessment Task relates to the following Learning Outcomes:
- To gain an understanding of simple quantitative forecasting techniques used in business.
- To gain an understanding of qualitative forecasting techniques in a business environment.

Quiz

Due: **Week 8**
Weighting: 15%

This quiz is designed to test students’ knowledge on topics of time series methods. It will cover all material from weeks 1-7 inclusive and will consist of multiple choice questions.

There is no provision for supplementary quiz for the within-semester assessment.
This Assessment Task relates to the following 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.

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:

- Attendance at tutorials
- Meaningful contributions during tutorial time
- Punctuality
- Professional conduct and behaviour

This Assessment Task relates to the following 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 learn the application of a number of forecasting techniques using EXCEL and other statistical programs.

Final Examination

Due: University 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
This Assessment Task relates to the following 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 learn the application of a number of forecasting techniques using EXCEL and other statistical programs.
- To gain an understanding of qualitative forecasting techniques in a business environment.

Delivery and Resources

Classes

Number and length of classes: 3 hours face-to-face teaching per week, consisting of 1 x 2 hour lecture and 1 x 1 hour tutorial. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/

Prizes

Prizes for this unit (if applicable). http://www.businessandeconomics.mq.edu.au/undergraduate_degrees/prizes_scholarships

Recommended Texts and/or Materials


Additional readings

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


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.

Unit Schedule

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<thead>
<tr>
<th>Week</th>
<th>Topics Covered</th>
<th>Chapter(s)</th>
<th>Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction Forecasting in management</td>
<td>1 and 11</td>
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<tr>
<td></td>
<td>The philosophy of forecasting</td>
<td></td>
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<tr>
<td>2</td>
<td>Exploring Data Patterns and Introduction to Forecasting Techniques</td>
<td>3</td>
<td>Tutorial 1 - Introduction to the Data Environment</td>
</tr>
<tr>
<td>3</td>
<td>Moving Averages and Smoothing Methods: Naïve and Moving Average Measuring Forecasting Error</td>
<td>4</td>
<td>Tutorial 2 – Exploring data pattern</td>
</tr>
<tr>
<td>4</td>
<td>Moving Averages and Smoothing Methods: Simple Exponential Smoothing</td>
<td>4</td>
<td>Tutorial 3 - Elementary smoothing</td>
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<tr>
<td>5</td>
<td>Exponential Smoothing Methods: Holt's and Winter's Method</td>
<td>5</td>
<td>Tutorial 4 – Trend Models</td>
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<tr>
<td>6</td>
<td>Time Series and Their Components</td>
<td>6</td>
<td>Tutorial 5 – Seasonality</td>
</tr>
<tr>
<td>7</td>
<td>Simple Linear Regression</td>
<td>7</td>
<td>Tutorial 6 – Regression I</td>
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<td>RECESS</td>
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<tr>
<td>8</td>
<td>Multiple Regression Models Dummy Variables</td>
<td>7</td>
<td>Within Semester Test 1 in Tutorials (covers weeks 1 - 7 inclusive)</td>
</tr>
<tr>
<td>9</td>
<td>Regression with Time Series Data</td>
<td>8</td>
<td>Tutorial 7 – Regression II</td>
</tr>
<tr>
<td>10</td>
<td>The Box-Jenkins (ARIMA) Methodology: Non-seasonal ARIMA The Box-Jenkins (ARIMA) Methodology: Seasonal ARIMA</td>
<td>9</td>
<td>Tutorial 7 - Leading Indicators</td>
</tr>
</tbody>
</table>
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:

- **Special Consideration Policy** [http://www.mq.edu.au/policy/docs/special_consideration/policy.html](http://www.mq.edu.au/policy/docs/special_consideration/policy.html)

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

**Academic Honesty**

The nature of scholarly endeavour, dependent as it is on the work of others, binds all members of the University community to abide by the principles of academic honesty. Its fundamental principle is that all staff and students act with integrity in the creation, development, application and use of ideas and information. This means that:

- all academic work claimed as original is the work of the author making the claim
- all academic collaborations are acknowledged
- academic work is not falsified in any way
- when the ideas of others are used, these ideas are acknowledged appropriately.

Further information on the academic honesty can be found in the Macquarie University Academic Honesty Policy at [http://www.mq.edu.au/policy/docs/academic_honesty/policy.html](http://www.mq.edu.au/policy/docs/academic_honesty/policy.html)

**Grades**

Macquarie University uses the following grades in coursework units of study:

- HD - High Distinction
- D - Distinction
- CR - Credit
- P - Pass
Grade descriptors and other information concerning grading are contained in the Macquarie University Grading Policy which is available at:


Grading Appeals and Final Examination Script Viewing

If, at the conclusion of the unit, you have performed below expectations, and are considering lodging an appeal of grade and/or viewing your final exam script please refer to the following website which provides information about these processes and the cut off dates in the first instance. Please read the instructions provided concerning what constitutes a valid grounds for appeal before appealing your grade.

http://www.businessandeconomics.mq.edu.au/new_and_current_students/undergraduate_current_students/how_do_i/grade_appeals/

Special Consideration Policy

The University is committed to equity and fairness in all aspects of its learning and teaching. In stating this commitment, the University recognises that there may be circumstances where a student is prevented by unavoidable disruption from performing in accordance with their ability. A special consideration policy exists to support students who experience serious and unavoidable disruption such that they do not reach their usual demonstrated performance level. The policy is available at:

http://www.mq.edu.au/policy/docs/special_consideration/policy.html

Student Support

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at: http://students.mq.edu.au/support/.

UniWISE provides:

- Online learning resources and academic skills workshops http://www.mq.edu.au/learning_skills/
- Personal assistance with your learning & study related questions.
- The Learning Help Desk is located in the Library foyer (level 2).
- Online and on-campus orientation events run by Mentors@Macquarie.

Student Enquiry Service

Details of these services can be accessed at http://www.student.mq.edu.au/ses/.

Equity Support

Students with a disability are encouraged to contact the Disability Support Unit who can provide appropriate help with any issues that arise during their studies.
IT Help
If you wish to receive IT help, we would be glad to assist you at 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 and it outlines what can be done.

Graduate Capabilities

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.

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 learn the application of a number of forecasting techniques using EXCEL and other statistical programs.
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Assessment task

• Case study/Report
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.

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**

- Case study/Report
- Quiz
- Class Participation

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

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.

Assessment task

• Case study/Report

Research and Practice

• This unit also uses research from the following journals:


Journal of Business Forecasting

• This unit gives you practice in applying research findings in your assignments.
• This unit gives you opportunities to conduct your own research.