



The University of Southern Queensland

## Course specification

The current and official versions of the course specifications are available on the web at  
<<http://www.usq.edu.au/coursespecification/current>>.  
Please consult the web for updates that may occur during the year.

### Description: Business Forecasting

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
MGT	2101	74108	1, 2008	EXT	1.00	Toowoomba

<b>Academic group:</b>	FOBUS
<b>Academic org:</b>	FOB004
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	010103

### STAFFING

Examiner: Mehryar Nooriafshar  
Moderator: Glenda Adkins

### REQUISITES

Pre-requisite: STA2300

### OTHER REQUISITES

Students are required to have access to a personal computer, e-mail capabilities and Internet access to USQConnect. Current details of computer requirements can be found at  
<http://www.usq.edu.au/business/aboutfob.htm>

### RATIONALE

All organisations and business managers operate in a climate of uncertainty. Forecasting is an integral part of managerial decision making and seeks to reduce the level of uncertainty through a series of quantitative and qualitative forecasting techniques. All organisations set goals and objectives and subsequently pursue courses of action which will ultimately help them attain those specified goals and objectives. Forecasting can assist in this process by seeking to predict factors which will affect the stated outcomes.

### SYNOPSIS

This course aims primarily to introduce students to a wide variety of forecasting methodologies and the situations in which they are applicable. The course concentrates predominantly on short-term, quantitative forecasting techniques which seek to identify patterns from historical data and to extrapolate those patterns into the future. We also discuss causal methods of forecasting through an analysis of simple and multiple regression analysis. In the final module of the course, we make mention of the many qualitative techniques available to the forecaster.

## OBJECTIVES

The course objectives define the student learning outcomes for a course. The assessment item/s that may be used to assess student achievement of an objective is/are shown in parentheses after each objective. On successful completion of this course, students should be able to:

1. Apply smoothing and averaging methods to appropriate data. Carry out calculation on data sets, by calculation and with use of computer package to process data, evaluate forecasting results from such package and determine adequacy of methods. (Assignment 1, Assignment 2, Examination)
2. Apply decomposition models, by calculation and with the assistance of computer package. Evaluate and discuss results, with reference to model adequacy and adjustments. (Assignment 1, Assignment 2, Examination)
3. Apply single and multiple regression models using computer package. Interpret and comment on analysis of results. Use computer package to refine such models. (Assignment 1, Assignment 2, Examination)
4. Describe and identify Box-Jenkins forecasting models, stating the assumptions and conditions necessary for their application. (Assignment 1, Assignment 2, Examination)
5. Discuss the place of judgemental forecasting in business, identify the weaknesses of such techniques, along with methods used to overcome some of these weaknesses. Define the concepts of leading indicators and business cycles, identify some of the methods of incorporating these ideas into forecasting. (Assignment 1, Assignment 2, Examination)

## TOPICS

Description	Weighting (%)
1. Introduction to methodology of forecasting	10.00
2. Averaging vs exponential methods	15.00
3. Simple regression analysis	15.00
4. Decomposition methods	15.00
5. Multiple regression analysis	25.00
6. Box Jenkins ARIMA modelling	10.00
7. Long term and judgemental forecasting techniques	10.00

## TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Wilson, JH & Keating, B 2002, *Business forecasting with accompanying Excel-based ForecastX software*, 4th edn, McGraw Hill, Boston, Massachusetts.

(Includes CD rom)

## REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Bowerman, BL, O'Connell, RT & Koehler, AB 2005, *Forecasting and time series - an applied approach*, 4th edn, Thomson Brooks/Cole, Belmont, California.

Box, GEP, Jenkins, GM & Reinsel, GC 1994, *Time series analysis - forecasting and control*, 3rd edn, Prentice Hall, Englewood Cliffs, New Jersey.

Diebold, FX 2007, *Elements of forecasting*, 4th edn, Thomson South-Western, Mason, Ohio.

Hanke, JE & Wichern, DW 2005, *Business forecasting*, 8th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Makridakis, S, Wheelwright, SC & Hyndman, RJ 1998, *Forecasting: methods and applications*, 3rd edn, John Wiley & Sons, New York.

Sherman, HJ & Kolk, DX 1996, *Business cycles and forecasting*, Harper Collins College Publishers, New York.

Su, V 1996, *Economic fluctuations and forecasting*, Harper Collins College Publishing, New York.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	15.00
Directed Study	25.00
Lectures	30.00
Others	3.00
Private Study	60.00
Tutorials	30.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	15.00	15.00	14 Apr 2008
ASSIGNMENT 2	25.00	25.00	02 Jun 2008
2 HOUR EXAMINATION	60.00	60.00	END S1 (see note 1)

### NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date after the timetable has been finalised.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:

If you are an international student in Australia, you are advised to attend all classes at your campus. For all other students, there are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

- 2 Requirements for students to complete each assessment item satisfactorily:  
To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)
- 3 Penalties for late submission of required work:  
If students submit assignments after the due date without prior approval of the examiner, then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:  
To be assured of receiving a passing grade a student must submit all of the assessment items, achieve at least 50% for the examination and at least 50% of the total weighted marks available for the course.
- 6 Examination information:  
This is a restricted examination. Candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination).
- 7 Examination period when Deferred/Supplementary examinations will be held:  
Any Deferred or Supplementary examinations for this course will be held during the next examination period.
- 8 University Regulations:  
Students should read USQ Regulations 5.1 Definitions, 5.6 Assessment, and 5.10 Student Academic Misconduct for further information and to avoid actions which might contravene university regulations. These regulations can be found at <http://www.usq.edu.au/corporateservices/calendar/part5.htm>. Students should also read the Faculty of Business Policies and Procedures which can be found at <http://www.usq.edu.au/business/aboutfob.htm>.

## **ASSESSMENT NOTES**

- 1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the examiner. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the examiner. (iii) In accordance with university policy, the examiner may grant an extension of the due date of an assignment in extenuating circumstances. (iv) The examiner will not accept submission of assignments by facsimile.

- 2 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper. The examination may test material already tested in assignments.
- 3 Deferred work: Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded: IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).