



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 Data Forensics

| Subject | Cat-nbr | Class | Term    | Mode | Units | Campus    |
|---------|---------|-------|---------|------|-------|-----------|
| FIN     | 2103    | 86100 | 1, 2009 | EXT  | 1.00  | Toowoomba |

|                                   |        |
|-----------------------------------|--------|
| <b>Academic group:</b>            | FOBUS  |
| <b>Academic org:</b>              | FOB008 |
| <b>Student contribution band:</b> | 3A     |
| <b>ASCED code:</b>                | 081101 |

### STAFFING

Examiner: Glenda Adkins  
Moderator: Peter Best

### 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/ict/students/standards/default.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. Formerly MGT2101.

## 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. analyse appropriate data using statistical tools and graphics; apply tools and techniques, including data collection and preparation with the use of the SAS programme; write simple programmes, evaluate results from such programmes and determine adequacy of methods (Assignment 1, Assignment 2, Assignment 3)
2. apply decision tree analysis with the assistance of the SAS computer package; evaluate and discuss results, with reference to model adequacy and adjustments (Assignment 2, Assignment 3)
3. describe and apply single and/or multiple regression models using the SAS computer package; interpret and comment on analysis of results; use the SAS computer package to refine such models (Assignment 3)
4. describe and apply a neural networks model using the SAS computer package to appropriate data; interpret and comment on the analysis of results; use the SAS computer package to refine the model (Assignment 3)
5. apply assessment techniques to compare the outcomes of models; make judgements on the type of analysis that should be used and the accuracy of the analysis; draw conclusions as to the adequacy of predictive models, that are relevant and important to a variety of business problems (Assignment 1, Assignment 2, Assignment 3).

## TOPICS

|    | Description   | Weighting (%) |
|----|---|---------------|
| 1. | Introduction to business data forensics, the SAS system and software installation | 15.00         |
| 2. | SAS enterprise guide and SAS enterprise miner                                     | 15.00         |
| 3. | Data mining processes   | 10.00         |
| 4. | Analytical tools and techniques   | 35.00         |
| 5. | Business applications using SAS   | 25.00         |

## 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   | 27 Mar 2009 |
| ASSIGNMENT 2 | 25.00        | 25.00   | 08 May 2009 |
| ASSIGNMENT 3 | 60.00        | 60.00   | 12 Jun 2009 |

## 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:  
There is no examination in this course.
- 7 Examination period when Deferred/Supplementary examinations will be held:  
Not applicable.
- 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 Referencing in assignments: Harvard (AGPS) is the referencing system required in this course. Students should use Harvard (AGPS) style in their assignments to format details of the information sources they have cited in their work. The USQ library provides advice on how to format information sources using this system. Details can be found at [http://www.usq.edu.au/library/help/ehelp/ref\\_guides/harvard.htm](http://www.usq.edu.au/library/help/ehelp/ref_guides/harvard.htm) and [http://www.usq.edu.au/library/help/ehelp/ref\\_guides/harvardonline.htm](http://www.usq.edu.au/library/help/ehelp/ref_guides/harvardonline.htm).
- 3 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.
- 4 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).

### **OTHER REQUIREMENTS**

- 1 Computer, e-mail and Internet access: 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/ict/students/standards/default.htm>.
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