



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: Decision Support Tools

| Subject | Cat-nbr | Class | Term | Mode | Units | Campus |
|---------|---------|-------|---------|------|-------|-----------|
| FIN | 5003 | 86168 | 1, 2009 | WEB | 1.00 | Toowoomba |

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

STAFFING

Examiner: Dom Pensiero
Moderator: Glenda Adkins

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

Managers receive vast quantities of data, translate it to information, disseminate this within the organisation, analyse it, and interpret the outcomes in order to make informed and balanced decisions. This course is designed to improve the quality of management decision-making by the introduction of relevant statistical, operations research and operations management techniques. These techniques aim to bridge the gap between the theory and practical application of quantitative techniques as decision support tools.

SYNOPSIS

The course aims to enhance the ability of managers to make decisions by formulating real world problems, often featuring ambiguity, in a manner which allows the application of quantitative management tools. The generalised approach of problem formulation, modelling, solution, interpretation and implementation will be addressed. The course will deal with the issues of data reduction, inference testing, forecasting, decision analysis, scheduling, location and layout decisions, Just-In-Time, project management and quality management. Formerly MGT5001.

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. assess, organise, summarise, present and interpret data for decision-making purposes (Assignment, Examination)
2. demonstrate a systematic approach to decision-making by applying decision theory to business situations, determining how much additional data is required, and assessing whether it is cost effective to do so (Assignment, Examination)
3. determine the relevant simple regression and correlation coefficients for a data set reflecting a given business situation and interpret the validity of the results obtained models (Assignment, Examination)
4. select the forecasting tools applicable to a given situation, choose the most relevant, apply, and then assess the validity and limitations of the outcomes (Assignment, Examination)
5. analyse and apply appropriate confidence interval and hypothesis testing procedures for given data sets, and then assess applications to business problems (Assignment, Examination)
6. understand and describe the relevant tools available in establishing and managing a quality management system; apply these tools to the analysis of organisational systems seeking to control quality (Examination)
7. understand and describe the importance of project management in a wider managerial context, apply project principles to given cases and interpret the outcomes (Examination)
8. apply selected qualitative and quantitative managerial tools to linear programming, scheduling, location, layout problems and simulations (Examination).

TOPICS

| | Description | Weighting (%) |
|----|------------------------------------|---------------|
| 1. | Data reduction | 10.00 |
| 2. | Use of continuous distributions | 15.00 |
| 3. | Regression and correlation | 15.00 |
| 4. | Decision theory | 10.00 |
| 5. | Business forecasting | 15.00 |
| 6. | Selected management decision tools | 35.00 |

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).

Student solutions manual to statistics for managers using Microsoft Excel, 5th edn, Prentice Hall, Upper Saddle River, New Jersey.

The three recommended texts will be available as a shrink-wrap package from the USQ Bookshop at a substantially discounted price for students. Please note that the Heizer & Render text listed is a custom publication which has been made available by the publisher at a substantially reduced price as part of the shrink-wrap package. Students should note that if they choose not to purchase the shrink-wrap package, they may subsequently find they cannot purchase individual texts from their local supplier/bookstore OR they may find that they will have to purchase the FULL version

of each text rather than the substantially cheaper and smaller custom published version. Further, as texts can be released in differing eds in different countries, to avoid confusion, the study material is specifically written to the eds as shown in the shrink-wrap package. In sum, the shrink-wrap package option is strongly recommended for all students.

Heizer, J & Render B *Operations management*, 7th edn, Pearson Education, Upper Saddle River, New Jersey.

(custom publication - various chapters)

Levine, DM, Berenson, ML, Stephan, D & Kriehbiel, TC 2008, *Statistics for managers using Microsoft Excel*, 5th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

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.

Brightman, HJ 1999, *Data analysis in plain English with Microsoft Excel*, Duxbury Press, Pacific Grove, California.

Evans, JR & Lindsay, WM 2005, *The management and control of quality*, 6th edn, South-Western, Mason, Ohio.

Groebner, DF, Shannon, PW, Fry, PC & Smith, KD 2008, *Business statistics: a decision-making approach*, 7th edn, Prentice Hall, Harlow, England.

Harnett, DL & Horrell, JF 1998, *Data statistics and decision models with Excel*, Wiley, New York.

Heizer, J & Render, B 2007, *Principles of operations management*, 7th edn, Prentice Hall, Upper Saddle River, New Jersey.

Keller, G 2007, *Statistics for management and economics*, 7th edn, Thomson/South-Western, Mason, Ohio.

(abbreviated edition)

Krajewski, LJ & Ritzman, LP 2002, *Operations management: strategy and analysis*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

(Good companion website at <http://myphlip.pearsoncmg.com/cw/mpbookhome.cfm?vbookid=281>)

Lawrence, JA & Pasternack, BA 2002, *Applied management science: modeling spreadsheet analysis and communication for decision making*, 2nd edn, John Wiley & Sons, New York.

Ledolter, J & Burrill, CW 1999, *Statistical quality control: strategies and tools for continual improvement*, John Wiley & Sons, New York.

Lehmann, M & Zeitz, P 1998, *Statistical explorations with Microsoft Excel*, Duxbury Press, Pacific Grove, California.

Levin, RI & Rubin, DS 1998, *Statistics for management*, 7th edn, Prentice Hall, Upper Saddle River, New Jersey.

Levine, DM, Krehbiel, TC & Berenson, ML 2006, *Business statistics: a first course*, 4th 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.

Moore, JH & Weatherford, LR 2001, *Decision modeling with Microsoft Excel*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

Pigford, DV & Baur, G 1995, *Expert systems for business: concepts and applications*, 2nd edn, Boyd & Fraser, Danvers, Massachusetts.

STUDENT WORKLOAD REQUIREMENTS

| ACTIVITY | HOURS |
|----------------|-------|
| Assessments | 20.00 |
| Directed Study | 52.00 |
| Private Study | 93.00 |

ASSESSMENT DETAILS

| Description | Marks out of | Wtg (%) | Due date |
|--------------------|--------------|---------|------------------------|
| CMA ASSIGNMENT | 40.00 | 40.00 | 18 May 2009 |
| 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:
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:
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
- 6 Examination information:

- This will be an open examination. Candidates may have access to any printed or written material and a calculator during the examination. In line with regulation 5.6.4.2 'Use of Electronic Devices during Examinations', laptop and notebook computers are not permitted.
- 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 submit the assignment to the USQ. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the examiner. As a general rule an extension of time will be granted if appropriate documentary evidence is attached with the assessment when submitted eg medical certificate, letter from employer etc. Students are requested to not apply for extensions in advance but to submit the assessment when available attaching a brief statement or letter together with any documentary evidence. Note that no extensions can be granted once model answers are available. This is generally 2-3 weeks after the due date. (iii) In the event that a due date for an assignment falls on a local public holiday in their area, such as a show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the examiner's convenience.
- 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 and 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.
- 4 Makeup work: (i) Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Makeup). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study, for example, a makeup assignment may be awarded to students who have passed the final examination (that is, achieved at least 50% in the final examination) but who have not achieved a composite score of 50% or more in the course.
- 5 Supplementary work: Supplementary examinations may be awarded to students who have achieved at least 45% - 49% in aggregate but who are otherwise not eligible for the grade of LP (Low Pass), and who have demonstrated sufficient understanding in the examination to warrant consideration for a supplementary examination (normally a minimum of 45% achievement in the examination is required).

- 6 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>.
-