Description: Business Forecasting

Subject | Cat-Nbr | Class | Term | Mode | Units | Campus
--------|---------|-------|------|------|-------|-------
MGT 2101 | 20162 | 1, 2003 | ONC | 1.00 | TW MBA

Academic Group: FOBUS
Academic Org: FOB002
HECS Band: 2
ASCED Code: 010103

STAFFING
Examiner: Tom Rafferty
Moderator: Dom Pensiero

PRE-REQUISITES
Pre-requisite: STA2300

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
Completion of this course will enable students to:
• 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.
• Apply decomposition models, by calculation and with the assistance of computer package. Evaluate and discuss results, with reference to model adequacy and adjustments.
• Apply single and multiple regression models using computer package. Interpret and comment on analysis of results. Use Computer package to refine such models.
• Describe and identify Box-Jenkins forecasting models, stating the assumptions and conditions necessary for their application.
• 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.

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction to methodology of forecasting</td>
<td>5.00</td>
</tr>
<tr>
<td>2. Averaging vs Exponential methods</td>
<td>15.00</td>
</tr>
<tr>
<td>3. Simple regression analysis</td>
<td>15.00</td>
</tr>
<tr>
<td>4. Decomposition methods</td>
<td>15.00</td>
</tr>
<tr>
<td>5. Multiple regression analysis</td>
<td>15.00</td>
</tr>
<tr>
<td>6. Box Jenkins ARIMA modelling</td>
<td>20.00</td>
</tr>
<tr>
<td>7. Long term and judgemental forecasting techniques</td>
<td>15.00</td>
</tr>
</tbody>
</table>

**TEXT and MATERIALS required to be PURCHASED or ACCESSED:**

Books can be ordered by fax or telephone. For costs and further details use the 'Book Search' facility at http://bookshop.usq.edu.au by entering the author or title of the text.

Students must obtain a licensed copy of WinQSB, this is available from the USQ Bookshop, shrink-wrapped with the text.

Students intending to study MGT2100 Optimisation Application 1 may wish to save costs by purchasing the text set for that course 'Applied Management Science' by Lawrence and Pasternack, as this text comes with the WinQSB program enclosed as a CD Rom.

MGT2101 study package available from the USQ Bookshop.

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.


STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>15</td>
</tr>
<tr>
<td>Directed Study</td>
<td>25</td>
</tr>
<tr>
<td>Lectures</td>
<td>30</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
</tr>
<tr>
<td>Private Study</td>
<td>60</td>
</tr>
<tr>
<td>Tutorial</td>
<td>30</td>
</tr>
</tbody>
</table>

ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>20.00</td>
<td>20.00</td>
<td>Y</td>
<td>05 May 2003</td>
</tr>
<tr>
<td>ASSIGNMENT 2</td>
<td>20.00</td>
<td>20.00</td>
<td>Y</td>
<td>06 Jun 2003</td>
</tr>
<tr>
<td>2 HOUR EXAMINATION</td>
<td>60.00</td>
<td>60.00</td>
<td>Y</td>
<td>END S1 (see note )</td>
</tr>
</tbody>
</table>

NOTES:

- 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:
   It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and 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. If you are an International student in Australia it is a requirement of your student visa that you attend all classes at your campus.

2 Requirements for students to complete each assessment item satisfactorily:
   To complete each of the assignments satisfactorily, students must obtain at least 50% of the marks available for each assignment. To complete the examination satisfactorily, students must obtain at least 50% of the marks available for the examination.

3 Penalties for late submission of required work:
   If students submit assignments after the due date without prior approval then a penalty of 20% of the total marks available for the assignment will apply for each working day late.

4 Requirements for student to be awarded a passing grade in the course:
   To be assured of a passing grade, students must demonstrate, via the summative assessment items, that they have achieved the required minimum standards in relation to the objectives of the course by: (i) satisfactorily completing the examination and assignments; and (ii) obtaining at least 50% of the total weighted marks available for all summative assessment items.

5 Method used to combine assessment results to attain final grade:
   The final grades for students will be assigned on the basis of the weighted aggregate of the marks (or grades) obtained for each of the summative assessment items in 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 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL: http://www.usq.edu.au/SECARIAT/calendar/Part5/ or in the printed version of the current USQ Handbook. Students should also read The Guide to Policies and
Procedures of the Faculty which can be found at the URL:
version of the current USQ Handbook.

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) The Examiner may grant an extension of
the due date of an assignment in extenuating circumstances. Students may apply
for an extension before the due date or include an application with the submitted
assignment after the due date. Such applications should be in writing and include
supporting documentary evidence. The authority for granting extensions rests with
the relevant Examiner.

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).