Description: Multivariate Statistics A

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
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<td>PSY</td>
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<td>30457</td>
<td>1, 2004</td>
<td>ONC</td>
<td>0.50</td>
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Academic group: FOSCI
Academic org: FOS005
Student contribution band: 1
ASCED code: 090701

STAFFING
Examiner: Jeff Patrick
Moderator: Gerry Fogarty

OTHER-REQUISITES
Only available to students enrolled in the BSc (Hons) in Psychology major.

RATIONALE
Students undertaking fourth year study in Psychology need to be able to evaluate a variety of statistical designs in published research. A large portion of published studies in Psychology use statistics from the General Linear Model family of techniques including the multivariate Linear Model. This course encourages students to develop both a practical and theoretical understanding of these statistical techniques, which will allow them to evaluate existing research and apply these insights to their own research. This course also forms a major foundation for student research at Masters and PhD level, and for the data analytic aspects of professional elective courses.

SYNOPSIS
The course reviews key aspects of research methodology and elementary statistics covered in undergraduate methodology courses, and uses this as a basis for exploring common multivariate statistical techniques. The techniques are covered in readings and learning activities. Students are also required to carry out analyses (including the evaluation of parametric assumptions) using statistical software. Students are required to demonstrate their practical competence in assignments and are encouraged to participate in ongoing email discussion forums designed to assist their learning. This course is also supported by two residential workshops during the semester where students can gain a further understanding of multivariate statistics and its role in contemporary research.
OBJECTIVES

On successful completion of this course students will be able to:

- identify appropriate statistical techniques to address various kinds of research questions;
- demonstrate a working knowledge of a range of common multivariate statistical techniques;
- use SPSS to explore, visualise and evaluate typical univariate and multivariate research data and draw appropriate conclusions from the program output;
- demonstrate competence in the reporting of multivariate findings;
- engage in scholarly dialogue about the similarities, differences and applications of the multivariate statistical techniques covered in this course;
- apply their knowledge of multivariate statistics to the critical evaluation of reported research findings.

TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. A Guide to Statistical Techniques</td>
<td>10.00</td>
</tr>
<tr>
<td>2. Review of Bivariate and Nonparametric Statistics</td>
<td>20.00</td>
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<tr>
<td>3. Data Screening &amp; Reliability</td>
<td>20.00</td>
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<td>4. Multiple Regression.</td>
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<td>5. Path Analysis.</td>
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<tr>
<td>6. Discriminant Function Analysis</td>
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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).


(version 11 for Windows)

REFERENCES 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.

SPSS Student Version or Licence. For Toowoomba students this is an optional purchase. However, for non-Toowoomba students this is a mandatory purchase.

STUDENT WORKLOAD REQUIREMENTS:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Directed Study</td>
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<tr>
<td>Examinations</td>
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<td>Laboratory or Practical Classes</td>
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<tr>
<td>Others</td>
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<tr>
<td>Private Study</td>
<td>24.00</td>
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<tr>
<td>Tutorial</td>
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ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
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</thead>
<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>30.00</td>
<td>30.00</td>
<td>08 Apr 2004</td>
</tr>
<tr>
<td>ASSIGNMENT 2</td>
<td>30.00</td>
<td>30.00</td>
<td>04 Jun 2004</td>
</tr>
<tr>
<td>2 HOUR CLOSED EXAMINATION</td>
<td>40.00</td>
<td>40.00</td>
<td>END S1</td>
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NOTES:

1. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

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.

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 satisfactorily completing all summative assessment items (the examination and assignments).

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 obtained for each of the summative assessment items in the course.

6 Examination information:
   In a Closed Examination, candidates are allowed to bring only writing and drawing instruments into the examination.

7 Examination period when Deferred/Supplementary examinations will be held:
   There will be no Deferred or Supplementary examinations in this course.

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/corporateservices/calendar/part5.htm or in the current USQ Handbook.

ASSESSMENT NOTES

9 Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the Examiner.

10 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.

11 The Faculty will normally only accept assessments that have been written, typed or printed on paper-based media.

12 The Faculty will NOT accept submission of assignments by facsimile.

13 Students will require access to email and internet access to USQConnect for this course.