Description: Multivariate Statistics A

Subject   Cat-nbr   Class   Term   Mode   Units   Campus
PSY       4010      62339   1, 2007 ONC     0.50    Toowoomba

Academic group: FOSCI
Academic org: FOS005
Student contribution band: 1
ASCED code: 090701

STAFFING
Examiner: Jeff Patrick
Moderator: Nola Passmore

REQUISITES
Pre-requisite: Students must be enrolled in Program BSCH in Psychology major (12302)

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 multivariate statistics. 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:
1. identify appropriate statistical techniques to address various kinds of research questions (assessed in both assignments);
2. use SPSS to explore, visualise and evaluate typical univariate and multivariate research data and draw appropriate conclusions from the program output (assessed in both assignments);
3. demonstrate competence in the reporting of multivariate findings (assessed in both assignments);

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Review of Bivariate and Nonparametric Statistics.</td>
<td>5.00</td>
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<tr>
<td>2. Data Screening &amp; Reliability</td>
<td>5.00</td>
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<td>3. Exploratory Factor Analysis - understanding the model - basic applications - factorability of a matrix - factor rotation</td>
<td>45.00</td>
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<td>4. 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).


(ISBN 1412904129)

**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.

SPSS Student Version 13 of higher. For Toowoomba students this is an optional purchase. However, for non-Toowoomba students this is a mandatory purchase.

**STUDENT WORKLOAD REQUIREMENTS**

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<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Private Study</td>
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<tr>
<td>Residential Schools</td>
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ASSESSMENT DETAILS

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<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
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<tbody>
<tr>
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<td>50.00</td>
<td>50.00</td>
<td>06 Mar 2007</td>
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<td>(see note 1)</td>
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<tr>
<td>ASSIGNMENT 2</td>
<td>50.00</td>
<td>50.00</td>
<td>06 Mar 2007</td>
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NOTES
1. All Due dates to be advised.

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
   Attendance at the two on-campus workshops is compulsory. 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 satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks or a grade of at least C-. (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 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 a student must achieve at least 50% of the total weighted marks available for the course. Students who have undertaken all of the required assessments in a course but who have failed to meet the minimum requirements for a passing grade within the normally prescribed time may be awarded the temporary grade: IM(Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to meet the minimum requirements for a passing grade after a period on non-directed personal study.

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:
   There are no examinations in this course

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

9 Students may be required to provide a copy of assignments submitted for assessment purposes. Such copies should be dispatched to the USQ within 24 hours of receipt of a request to do so.

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 In accordance with University Policy, the Examiner may grant an extension of the due date of an assignment in extenuating circumstances.

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.