Course Code:	**1304AFE**
Course Name:	**Business Statistics**
Trimester:	**Trimester 2, 2018**
Program:	Diploma of Social and Psychological Science
Credit Points:	10
Course Coordinator:	Tony Hurd
Document modified:	23/05/2018

Teaching Team

Your lecturer/tutor can be contacted via the email system on the portal.

Tony Hurd - tohu@portal.griffithcollege.edu.au

Staff Consultation

Your lecturer/tutor is available each week for consultation outside of normal class times. Times that your lecturer/tutor will be available for consultation will be given in the first week of lectures. A list of times and rooms will be published on the Griffith College Portal under the "myTimetable" link.

Prerequisites

There are no prerequisites for this course

Brief Course Description

Business Statistics is a 10 Credit Point course within the Diploma Social and Psychological Science.

The Diploma of Social and Psychological Science is designed to provide students with a pathway to:

- further university studies in Psychology and Counselling or
- direct employment.

Business Statistics introduces students to the core concepts of statistical analysis. It is introductory in nature, and provides materials across a broad range of statistical techniques and methods. The focus of this course is to provide students with the ability to recognise situations in which statistical analysis may be useful, and the relevant techniques and methods that apply in those situations.

Rationale

Statistical analysis is the most important tool used in decision-making in many areas. To make a good decision, the decision-maker must carefully analyse all alternatives in the light of all available information. Business Statistics provides an opportunity for the development of key skills in the recognition and analysis of real world problems. It also provides opportunities for the development of logical thinking, reasoning, and critical thinking.

Aims

This course is designed to provide students with the basic statistical techniques needed for the study of their discipline. It aims to provide recognition where statistical analysis may be of benefit and introduce the range of methods that may apply to a given situation using real world examples.

Learning Outcomes

Upon successful completion of this course you will be able to:

1. Understand the nature of data and critically analyse basic statistical information.
2. Present statistical information graphically or numerically.
3. Understand and apply basic concepts in statistics such as the normal distribution, probability, sampling and Central Limit Theorem. You will also be able to see how they relate to the area of inferential statistics.
4. Understand and apply statistical techniques in inference such as confidence intervals, hypothesis testing, correlation and regression. In addition, you will also learn to calculate and interpret index numbers.
5. Use SPSS to carry out statistical analysis and appreciate SPSS's strengths and weaknesses.
6. Communicate statistical findings to a non technical audience.

Texts and Supporting Materials

1. Selvanathan, E.A., Selvanathan, S., Keller, G., (2017). *Business Statistics, Abridged Australia New Zealand* (7th ed.). Cengage Learning.
2. A non-programmable scientific calculator (preferred model: CASIO fx series).

Organisation and Teaching Strategies

Class Contact Summary

Attendance

100% attendance is expected for all lectures, tutorials and workshops if you are seeking a pass in the course. This is because the topics and concepts in this subject are cumulative. This means that you must understand the materials from previous weeks, before you can attempt to complete work in subsequent weeks.

You are reminded that your attendance in class will be marked for all elements. To receive full attendance, you must be present in the classroom on all occasions.

Participation in Class

You are expected to actively participate in classes each week.

Consultation Times

Attendance during consultation times is optional but you are encouraged to use this extra help to improve your learning outcomes.

Course Materials

Lecture notes will be made available to you on the 1002PSY MyStudy course website on the Griffith College portal

You are expected to prepare in advance for lectures, tutorials and workshops every week. Before attending lectures, you should have a copy of the lecture notes and lecture examples. Before attending tutorials and workshops you should have attempted the questions and problems.

You are required to bring the textbook, a statistical calculator (non-graphics & non-programmable) and any work in progress to every lecture, tutorial and workshop.

Independent Learning

You are expected to reinforce your learning from class time by undertaking sufficient independent study (approximately 6 hours per week outside of class time) so that you can achieve the learning outcomes of the course.

Program Progression

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 with passing grades achieved in more than 50% of courses in any trimester [please see Griffith College Policy Library - Program Progression Policy - for more information].

Content Schedule

Business Statistics consists of a series of specific statistical concepts [see Weekly Teaching Schedule]. Each week's lecture focuses on a particular set of concepts. The course commences by providing you with a brief introduction to the field of statistics.

Lectures in weeks 1 and 2 provide you with the fundamental skills to describe a data set graphically and numerically. The lecture in week 3 covers basic probability theory and continuous normal probability distributions. Understanding the normal probability distribution is important as it sets foundations for statistical inference covered in the subsequent weeks of the course.

The concepts of statistical inference and sampling distributions will be introduced in week 4. In weeks 5 to 7 you will then learn to apply the knowledge of statistical inference to estimate confidence intervals and to test pre- determined hypotheses.

Weeks 8-10 focus on correlation and regression analysis. Regression analysis is a method that is useful to analyse the relationship between variables of interest.

In week 11, you will learn to calculate and interpret index numbers. Index numbers are measurements that are useful to summarise a large body of data with a single number.

Finally in week 12, a review of all materials studied in the previous weeks will be delivered to provide guidelines for the preparation of the final exam.

Weekly Teaching Schedule

Week	Topi	Activity	Rea
1	Introduction to Statistics & Graphical Descriptive	Lecture	BS: Chapter 1, Chapter 2-section 2.1 and 2.5 only, Chapter 3-omit
	Overview of course; basic overview of SPSS	Workshop	Week 1 SPSS Lab Manual and Data Files
2	Numerical Descriptive Measures	Lecture	BS: Chapter 5-omit "box plots" in section 5.3 and omit section 5.5
	BS Exercises: 1.1, 1.2, 2.4, 2.5, 3.3, 3.4, 4.5 (excluding part (a)), 4.26, 4.36	Tutorial	
	SPSS – Descriptive Statistics (Graphical Summaries)	Workshop	Week 2 SPSS Worksheet (LAB 1)
3	Continuous Probability Distributions, Normal and Standard Normal Distributions.	Lecture	BS: Chapter 8-section 8.3 only
	BS Exercises: 5.2, 5.6, 5.26, 5.34, 5.53, 5.54	Tutorial	
	SPSS – Descriptive Statistics (Numerical Summaries)	Workshop	Week 3 SPSS Worksheet (LAB 2)
4	Introduction to Statistical Inference and Sampling Distributions	Lecture	BS: Chapter 9
	BS Exercises: 8.9, 8.10, 8.12, 8.14, 8.16, 8.18(a only), 8.49	Tutorial	
	EXAM 1 during workshop	Workshop	
5	Confidence Interval Estimation (part 1)	Lecture	BS: Chapter 10
	BS Exercises: 9.2, 9.3, 9.4, 9.13(a and c only), 9.18	Tutorial	
	SPSS – Hypothesis Testing (Repeated Measures)	Workshop	Week 5 SPSS Worksheet (LAB 3)

6	Review of Confidence Intervals. Some examples from Mid Trimester Exam practice questions and then BS Exercises: 10.3, 10.6, 10.7, 10.8, 10.18, 10.49, 10.51, 10.59, 10.64, 10.73, 10.75, 10.76 time permitting.	Lecture	This provides more revision on Confidence Interval Estimation
	Revision for Mid Trimester Exam	Tutorial	
	Revision for Mid Trimester Exam	Workshop	
	Exam 2 (Mid Exam) to be conducted on Saturday at the end of this week	**Examination**	
7	Hypothesis Testing	Lecture	BS: Chapter - 12omit section 12.5
	Hypothesis Testing – complete lecture material	Tutorial	
	SPSS – Hypothesis Testing (Independent Samples)	Workshop	Week 6 SPSS Worksheet (LAB 4)
8	Correlation, Simple Linear Regression (Part 1)	Lecture	BS: Chapter - 15- omit section 15.7
	BS Exercises: 12.1, then, using critical value method, 12.4, 12.5, 12.6, 12.11, 12.14, 12.47, 12.48, , 12.73, 12.78	Tutorial	
	SPSS – Confidence Intervals	Workshop	Week 8 SPSS Worksheet (LAB 5)
	Exam 2 (Mid Exam) to be conducted on Monday evening this week	Examination	

9	Correlation, Simple Linear Regression (part 2)	Lecture	BS: Chapter 15-omit section 15.7; Notes published on portal
	BS Exercises: using p-value method 12.27, 12.11, 12.14, 12.73, 12.78	Tutorial	
	SPSS – Correlation	Workshop	Week 9 SPSS Worksheet (LAB 6)
10	Correlation Simple Linear Regression (Part 3)	Lecture	
	Lecture Exercise	Lecture	Example published on portal
	Revision for computer exam	Tutorial	SPSS – Practice Computer Exam
	Revision for computer exam	Workshop	
11	Index Numbers	Lecture	BS: Chapter - 18 omit sections 18.4 and 18.5
	BS Exercises: 15.12, 15.13, 15.34, 15.35	Tutorial	
	SPSS COMPUTING EXAM (During Workshop)	Workshop	
12	Revision for Final Exam	Lecture	Practice Questions for Final Exam
	BS Exercises: 18.3, 18.9	Tutorial	Practice Questions for Final Exam

Assessment

This section sets out the assessment requirements for this course.

Summary of Assessment

Item	Assessment Task	Weighting	Relevant Learning Outcomes	Due Date
1	Exam 1	10 %	1,2	4
2	Mid-trimester exam	25%	1,2,3	6
3	Computing Exam	20%	3,4,5,6	11
4	Final Examination	45%	3,4,6	Exam Period

Assessment Details

1. Exam 1
Rationale: This first assessment is designed to test basic mathematics skills and early conceptual understanding of important statistics concepts.
Assessment Details: The exam is held in week 4 during your scheduled computer workshop time. NOTE: Exam 1 is not a computing assessment. It consists of multiple choice and short answer questions that are to be solved manually using a calculator. Exam 1 is worth 10% of the assessment of the course and examines materials taught in lectures weeks 1 and 2.
Marking criteria: The written description will be marked against established criteria which will be published on the 1304AFE MyStudy course site.

2. Exam 2 (Mid- Trimester Exam)
Rationale: This second assessment is designed to test developing mathematics skills and deeper conceptual understanding of important statistics concepts.
Assessment Details: The exam will be held at the end of Week 6 (time and venue to be advised by your lecturer in week 5). It consists of both multiple-choice and short answer questions covering the materials taught in lectures from weeks 3 to 5 inclusively. The mid-trimester exam is worth 25% of the assessment of the subject. The exam involves both theoretical and calculation questions.
Marking criteria: The written description will be marked against established criteria which will be published on the 1304AFE MyStudy course site.

3. Computing Exam
Rationale: This assessment is designed to test your applied skills in conducting and interpreting statistical analysis using the data analysis software SPSS (Further details and workbook will be provided on the course website.
Assessment Details: The exam will be held in week 11 during your scheduled workshop

time. It consists of a number of short answer questions involving calculations and interpretations that are to be solved using SPSS. All materials covered during the computing workshops are examinable. The computing exam is worth 20% of the assessment of the course.
Marking criteria: The written description will be marked against established criteria which will be published on the 1304AFE MyStudy course site.

4. Final Exam
Rationale: This final assessment is designed to test conceptual understanding and applied knowledge in statistics by carrying out and interpreting key statistical analyses. To be successful in this exam, you need to have a solid understanding of all topics covered in the course
Assessment Details: The final exam consists of a number of multiple-choice and practical short answer questions.. The exam however will mainly examine lecture materials taught in weeks 6 to 11 inclusively. The final exam is worth 45% of the assessment of the course. The exam will involve theoretical, interpretation and calculation questions.
Marking criteria: The written description will be marked against established criteria which will be published on the 1304AFE MyStudy course site.

Requirements to pass the course:
In order to pass this course**,** students must:

1. attempt and submit ALL assessment items, AND
2. achieve a minimum cumulative total of 50% from all graded assessments.

Submission and Return of Assessment Items

Retention of Originals
You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

Extensions
To apply for an extension of time for an assignment, you must submit an Application for Extension of Assignment form to your teacher at least 24 hours before the date the assignment is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. Griffith College Medical Certificate]. Please refer to the Griffith College website - Policy Library - for guidelines regarding extensions and deferred assessment.

Penalties for late submission without an approved extension

Penalties apply to assignments that are submitted after the due date without an approved extension. Assessment submitted after the due date will be penalised 10% of the TOTAL marks available for assessment (not the mark awarded) for each day the assessment is late. Assessment submitted more than five days late will be awarded a mark of zero (0) For example:

- > 5 minutes and <= 24 hours 10%
- > 24 hours and <= 48 hours 20%
- > 48 hours and <= 72 hours 30%
- > 72 hours and <= 96 hours 40%
- > 96 hours and <= 120 hours 50%
- > 120 hours 100%

Note:

- Two day weekends will count as one day in the calculation of a penalty for late submission.
- When a public holiday falls immediately before or after a weekend, the three days will count as one day in the calculation of a penalty for late submission.
- When two public holidays (e.g. Easter), fall immediately before or after, or one day either side of a weekend, the four days will count as two days in calculating the penalty for late submission.
- When a single public holiday falls mid-week, the day will not be counted towards the calculation of a penalty.

Please refer to the Griffith College website - Policy Library > Assessment Policy for guidelines and penalties for late submission.

Assessment Feedback

Marks awarded for in-trimester assessment items, except those being moderated externally with Griffith University, will be available on the Student Portal within fourteen [14] days of the due date. This does not apply to the final assessment item in this course (marks for this item will be provided with the final course result).

Generic Skills

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills	**Taught**	**Practised**	**Assessed**
Written Communication		Yes	Yes
Oral Communication		Yes	
Information Literacy	Yes	Yes	Yes
Secondary Research	Yes	Yes	Yes
Critical and Innovative Thinking	Yes	Yes	Yes
Academic Integrity		Yes	Yes
Self Directed Learning		Yes	Yes
Team Work		Yes	
Cultural Intelligence		Yes	
English Language Proficiency		Yes	

Additional Course Generic Skills

Specific Skills	Taught	Practi	Assessed
Data Analysis	Yes	Yes	Yes
Spreadsheet Programming	Yes	Yes	Yes

Additional Course Information Teacher and Course Evaluations

Students generally find the topics on probability and inferential statistics to be fairly technical and rather challenging. They have however found that the extensive use of practical examples on the lecture summary notes and additional resources provided to be very useful to improve their learning.

Your feedback is respected and valued by your lecturers and tutors. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your lecturer and tutor or by completing course and lecturer evaluations on the Griffith College portal whenever these are available.

Academic Integrity

Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre- meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of any allegation of academic misconduct made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the **Griffith College Academic Integrity Policy**; this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Academic Integrity Policy on the Griffith College website – Policy Library.

Risk Assessment Statement

There are no out of the ordinary risks associated with this course.

Note: For all Diploma level programs, Griffith College acknowledges content derived from Griffith University.