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The published on-line version of the Course Profile is the authoritative version and by the publication of the Course Profile on-line the University deems the student has been notified of and read the course requirements.

1. General Course Information

1.1 Course Details

COURSE CODE	1014SCG
COURSE TITLE	Statistics
ACADEMIC ORGANISATION	ESC School of Environment and Science
TRIMESTER	Trimester 2 2019
MODE	In Person
LEVEL	Undergraduate
LOCATION	Gold Coast, On Campus
CREDIT POINT VALUE	10

Course Description:

This course provides an introduction to the basic concepts and practices of data analysis and inferential statistics. It will provide and understanding of several techniques including testing one or more means from sampled populations (t-Tests and ANOVAs), relationships between scale variables (correlations and regressions), and contingency table analysis (Chi-square tests). The course places emphasis on understanding the use of appropriate data for these tests, the use of exploratory data analysis and the underlying distributions and assumptions associated with these tests. Students will learn how to carry out these tests by hand, via the use of statistical software (SAS or SPSS), check assumptions, interpret results and report findings in plain English. Assumed prior knowledge: Grade 12 Maths A or B or equivalent. Incompatible: 1003ENV Statistics, 1203EAS Data Analysis, 1003EAS Statistics, 1003AES Statistics, 1171AES Statistics for the Environment, 1212SCE Statistics and Computing, 2012MSC Biostatistics, 2012HSC Bioinformatics.

Assumed Background:

Grade 12 Maths A or B or equivalent

1.2 Course Introduction

In modern scientific practice an appropriate knowledge of the concepts and principles of statistical techniques and the application of these techniques to the analysis of data is essential . These concepts and principles provide the basis for the analysis of all scientific experimentation and the investigation of the natural and technological worlds. The course provides students with knowledge and skills that will equip them to perform analysis of experimental results, which will be utilized in most of their higher-level courses. The use of statistical packages that will interrogate large data sets is a fundamental requirement of modern data analysis. This course will provide an introduction to the use of a statistical computer package to explore patterns based on realistic data.

The course is taught on two campuses (Nathan and Gold Coast). Note that although, in general, the courses on each campus have a similar structure, there will be some campus specific requirements. More detailed information on lecture/tutorial content will be given in the first lecture for this course and on the Learning@Griffithsite for the course.

Previous Student Feedback

- Students requested that lecture notes be provided both online and in hard-copy. In response to this the lecture notes were combined into a lecture manual.
- Student feedback has been used in past years to evaluate the effectiveness of the prescribed text book.

1.3 Course Staff

Primary Convenor **Mr James McBroom**

PHONE	37356677
EMAIL	j.mcbroom@griffith.edu.au
CAMPUS	Nathan Campus
BUILDING	Environment 2 (N13)
ROOM	2.22
CONSULTATION	See information in the campus convenor section below.

Campus Convenor **Mr Jason Hay**

PHONE	55528497
EMAIL	jason.hay@griffith.edu.au
CAMPUS	Gold Coast Campus
BUILDING	Health Science (G05)
ROOM	1.35
CONSULTATION	Consultation times will be advised in Week 1 lectures.

Campus Convenor **Mr James McBroom**

PHONE	37356677
EMAIL	j.mcbroom@griffith.edu.au
CAMPUS	Nathan Campus
BUILDING	Environment 2 (N13)
ROOM	2.22
CONSULTATION	To be advised in week 1 lectures. Students are advised to contact the relevant tutor about any concerns they have in regard to course content and the relevant campus convenors in regard to course administration and/or course content. Students can make an appointment with their campus convenors for consultation.

1.4 Timetable

Timetables are available on *the Programs and Courses website*.

NB: Details contained in this Section of the course profile and Section 4.1 Learning Activities are to be read in conjunction with the official class timetable. The published class timetable which is the authoritative source for timetabling information for all campuses can be located by clicking on the above link.

Additional Timetable Information

This is a 10 credit point course with 5 hours formal contact per week and an expected minimum 5 hours personal study each week for students to effectively understand the content and concepts within this course

- Lectures: 3 hours of lectures per week for 12 weeks - 36 hours total for trimester
- Computer Workshops: one 2-hour computer workshop each week for 11 weeks - 22 hours total for trimester
- Preparation for project work - suggested 35 hours trimester total expected to be undertaken outside dedicated teaching times
- Within-trimester assessment - approximately 6 hours trimester total including student preparation outside dedicated teaching times

- End of Trimester exam preparation - suggested 25 hours study expected to be undertaken outside dedicated teaching times

1.5 Lecture Capture

It is standard practice at Griffith University that lectures timetabled in lecture capture-enabled venues are recorded and made available to students on the relevant course site, in accordance with the University's Lecture Capture Policy.

The lecture series delivered as part of this course will be recorded and accessible via the Learning@Griffith course site.

2. Aims, Outcomes & Graduate Attributes

2.1 Course Aims

This course aims to equip students with an understanding of the appropriate application of various statistical techniques at an introductory level. This course focuses on the analysis on 'real' data sets from relevant fields of study.

This course also aims to develop generic skills in written communication, problem solving, analysis and statistical methodologies. These skills are developed within a framework of a research project (statistical report on a selected research topic). Problem solving and quantitative skills are developed using multiple within-trimester tasks. These tasks are an aid in providing feedback to students about their understanding of the fundamental concepts in the course.

2.2 Learning Outcomes

After successfully completing this course you should be able to:

1 Produce, evaluate and interpret summary statistics and graphics appropriate to a specific research question and the characteristics of a given data set.

2 Be familiar with various population probability distributions and be able to recognise the appropriate underlying distribution for particular methods of analyses and hypothesis testing

3 Apply the appropriate statistical test for a given experimental design (e.g. t-test, ANOVA, regression, etc.)

4 Apply the appropriate statistical test for categorical data sets (e.g. chi-squared test)

5 Demonstrate a working knowledge of the basics of The Research Method and its relationship to statistical inference

6 Understand the framework of statistical inference (estimation and hypothesis testing) based on random samples

7 Understand experimental design concepts, as they relate to the statistical models and hypotheses;

8 Demonstrate an ability to effectively interpret and communicate statistical output from commonly used statistical software

9 Determine appropriate statistical summaries and analytical methods and apply these to a given research problem; perform analyses using statistical software; interpret results of the analyses.

10 Students will be able to synthesise and communicate the aims, methods, results and interpretation in the format of a statistical report.

2.3. Graduate Attributes

For further details on the Griffith Graduate please click here

Griffith University prepares influential graduates to be:

- Knowledgeable and skilled, with critical judgement
- Effective communicators and collaborators
- Innovative, creative and entrepreneurial
- Socially responsible and engaged in their communities
- Culturally capable when working with First Australians
- Effective in culturally diverse and international environments

This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.

For further details on the Griffith Graduate Attributes please refer to The Griffith Graduate policy.

University wide attributes

GRADUATE ATTRIBUTE	TAUGHT	PRACTISED	ASSESSED
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators		•	•
Innovative, creative and entrepreneurial		•	•
Socially responsible and engaged in their communities		•	
Culturally capable when working with First Australians		•	
Effective in culturally diverse and international environments		•	

ALTC Threshold Learning Outcomes (Science) Upon completion of a Bachelor of Science, graduates will:

GRADUATE ATTRIBUTE	LEARNING OUTCOMES
1.DEMONSTRATE A COHERENT UNDERSTANDING OF SCIENCE BY:	
1.1. articulating the methods of science and explaining why current scientific knowledge is both contestable and testable by further inquiry	**5, 9, 10**
1.2. explaining the role and relevance of science in society	**5, 9, 10**
2.EXHIBIT DEPTH AND BREADTH OF SCIENTIFIC KNOWLEDGE BY:	
2.1. demonstrating well-developed knowledge in at least one disciplinary area	**10**
2.2. demonstrating knowledge in at least one other disciplinary area	**1, 2, 3, 4, 5, 7, 8, 9, 10**
3.INQUIRY & PROBLEM SOLVING SKILLS ALIGNED WITH CRITICAL ANALYSIS & SOLVING SCIENTIFIC PROBLEMS BY:	
3.1. gathering, synthesising and critically evaluating information from a range of sources	**1, 9, 10**
3.2. designing and planning an investigation	**10**
3.3. selecting and applying practical and/or theoretical techniques or tools in order to conduct an investigation	**1, 2, 5, 6, 7, 8, 9, 10**
3.4. collecting, accurately recording, intepreting and drawing conclusions from scientific data	**1, 3, 4, 5, 6, 7, 8, 9, 10**
4.BE EFFECTIVE COMMUNICATORS OF SCIENCE BY:	
4.1. communicating scientific results, information, or arguments, to a range of audiences, for a range of purposes, and using a variety of modes	**1, 5, 8, 9, 10**
5.EXHIBIT PERSONAL & PROFESSIONAL RESPONSIBILITY FOR LEARNING & SCIENTIFIC WORK THROUGH:	
5.1. being independent and self-directed learners	**5, 8, 9, 10**
5.2. working effectively, responsibly and safely in an individual or team context	**5, 8, 9, 10**
5.3. demonstrating knowledge of the regulatory frameworks relevant to their displinary area and personally practising ethical conduct.	

3. Learning Resources

3.1 Required Resources

Details of your Required Learning Resources are available from the Reading List.

3.2 Recommended Resources

Details of your Recommended Learning Resources are available from the Reading List.

3.3 University Learning Resources

The University provides many facilities and support services to assist students in their studies. Links to information about University support resources that are available to students are included below for easy reference.

Readings - New online service enabling students to access Required and Recommended Learning resources. It connects to the library catalogue to assist with quickly locating material held in Griffith libraries and enables students to manage and prioritise their readings, add personal study notes and export citations.

Learning@Griffith - there is a dedicated website for this course via the Learning@Griffith at myGriffith.

Academic Integrity Tutorial - this tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of academic misconduct, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

Student Services provides a range of services to support students throughout their studies including personal support such as Counselling and Health Services; Academic support; and Financial and Welfare support.

Careers and Employment Service can assist all enrolled students and recent graduates with career direction, course uncertainty, interview preparation, job search tips, LinkedIn reviews and much more. Our Unitemps Recruitment Service can assist you with finding paid casual work while you study.

Library and Learning Services: Library and Learning Services provides a wide range of quality client-focused services and programs to students, researchers and staff of the University. Library and Learning Services works in collaboration with the academic community to achieve academic and research outcomes.

Support for learning - the University provides access to common use computing facilities for educational purposes.

Code of Practice - Griffith Information Technology Resources.

4. Teaching & Learning Activities

4.1 Learning Activities

Week Commencing	Activity	Learning Outcomes
8 Jul 19	**Topic 1 (Lecture):** Statistical thinking and an introduction to the statistical software Basic skills: data summary and presentation - Exploratory data analysis Probability, random variables and statistical inference	1, 5
22 Jul 19	**Topic 2 (Lecture):** Statistical distributions - Discrete and continuous probability distribution functions. For example, application using the Chi-Squared distribution	2, 4
5 Aug 19	**Topic 3 (Lecture):** Hypothesis testing - Sampling distributions (e.g. t, F) Estimation of confidence intervals t-tests (independent and paired samples)	2, 3, 5, 6, 8, 9, 10
26 Aug 19	**Topic 4 (Lecture):** Comparing means - Analysis of Variance (ANOVA) designs	2, 3, 5, 6, 7, 8, 9, 10
9 Sep 19	**Topic 5 (Lecture):** Comparing means - post hoc testing and assumptions	2, 3, 5, 6, 7, 8, 9, 10
30 Sep 19	**Topic 6 (Lecture):** Correlation and Regression techniques. Course summary and review.	2, 3, 5, 6, 7, 8, 9, 10

5. Assessment Plan

5.1 Assessment Summary

This is a summary of the assessment in the course. For detailed information on each assessment, see **5.2 Assessment Detail** below.

ASSESSMENT TASK	DUE DATE	WEIGHTING	MARKED OUT OF	LEARNING OUTCOMES	MAXIMUM EXTENSION PERIOD
Assignment - Problem Solving Assignment Multiple within-semester assessment items	8 Jul 19 - 4 Oct 19 Tasks are assessed on a weekly basis. Specific information will be provided in Week 1	20%	20 marks	1, 2, 3, 4, 5, 6, 7, 8	
Assignment - Problem Solving Assignment Project assessment items	8 Jul 19 - 4 Oct 19 Specific information will be provided in Week 1	30%	30 marks	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
Exam - constructed response Final Exam	Examination Period	50%	50 marks	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	

5.2 Assessment Detail

Title: Multiple within-semester assessment items
Type: Assignment - Problem Solving Assignment
Learning Outcomes Assessed: 1, 2, 3, 4, 5, 6, 7, 8
Due Date:
8 Jul 19 - 4 Oct 19 Tasks are assessed on a weekly basis. Specific information will be provided in Week 1
Weight: 20%
Marked out of: 20
Task Description:

These multiple assessment items aim to develop an applied understanding of the basic statistical concepts, quantitative skills and problem solving techniques . These tasks are designed to inform students of their mastering of the course content and concepts progressively throughout the semester .

Weekly tasks will vary and will involve students applying the techniques learned in lectures and will aid the application of techniques to their particular project dataset. The form of this assessment may vary slightly between campuses. A detailed description and its associated marking scheme will be available to students in the first week and/or on Learning@Griffith web site.

Criteria & Marking:

The marking criteria for these tasks will be based not only on the correct solution to the problem set, but also on the use of appropriate techniques to obtain this solution (justification). Where applicable, marks are also allocated to the interpretation of the solution in terms of the original problem definition.

The nature of these multiple tasks will vary from week to week, and a detailed schema of the marking criteria will be provided to students in Week 1 and on learning@griffith

Submission: submission requirements will be provided during Week 1

This assessment item:
- is a school based activity
- is an individual activity
- does not include a self assessment activity
- does not have a resubmission provision

Title: Project assessment items
Type: Assignment - Problem Solving Assignment
Learning Outcomes Assessed: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Due Date:
8 Jul 19 - 4 Oct 19 Specific information will be provided in Week 1
Weight: 30%
Marked out of: 30
Task Description:
The project assessments are intended to demonstrate the development of the student's skills: e.g. generic skills such as written communication, problem solving, and quantitative/qualitative analysis.

The form of these assessments may vary slightly between campuses. A detail description of the project and its associated marking scheme will be available to students in Week 1 and on Learning@Griffith.

Criteria & Marking:
The marking criteria will be based not only on the correct solution to the problem set but also on the use of appropriate techniques to obtain this solution (justification). Marks are also allocated to the interpretation of the solution in terms of the original problem definition. Appropriate presentation and scientific communication skills will be assessed. Assessment submissions will be subject to the standard late submission penalties and rules.

Resubmission:
Resubmission in the form of SUP is available on this item. All rules and regulations surrounding SUPs apply.

Submission: submission requirements will be provided during Week 1

This assessment item:
- is a school based activity
- is an individual activity
- does not include a self assessment activity
- may be available for resubmission (see conditions outlined in Resubmission)

Title: Final Exam
Type: Exam - constructed response
Learning Outcomes Assessed: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Due Date:
Examination Period
Weight: 50%
Marked out of: 50
Perusal: 10 minutes
Duration: 120 minutes
Format: Closed Book with Notes
Task Description:
The final exam will consist of various questions relating to the lecture material, workshop activities and skills developed during the project activities. The form of this assessment may vary slightly between campuses. Details of the requirements and specifications of the end of semester exam, as well as example questions will be provided to students before the end of semester and/or on Learning@Griffith.

Criteria & Marking:
A detailed marking scheme will be developed for each question. The marking criteria will be based not only on the correct solution to the problem set but also on the use of appropriate techniques to obtain this solution (justification). Where applicable, marks are also allocated to the interpretation of the solution in terms of the original problem definition.

This assessment item:
- is a centrally organised activity
- is an individual activity
- does not include a self assessment activity

5.3 Late Submission

An assessment item submitted after the due date, without an approved extension, will be penalised. The standard penalty is the reduction of the mark allocated to the assessment item by 5% of the total weighted mark for the assessment item, for each working day that the item is late. A working day will be defined as Monday to Friday. Assessment items submitted more than five working days after the due date will be awarded zero marks. To understand how the mark is reduced please refer to Assessment Submission and Return Procedures

5.4 Other Assessment Information

Griffith University Disclosure Statement

The University shall provide reasonable adjustments to assessment for students with disabilities consistent with the Disabilities Standards for Education 2005, while maintaining the academic integrity of its programs. Adjustments shall be made on an individual basis. Please refer to this policy as it sets out the principles and processes that guide the University Reasonable Adjustments for Assessment - Students with Disabilities

Supplementary Assessment is available in this course in accordance with Section 8 of the University Assessment Policy. To achieve a Pass grade for the course a pass mark for the supplementary assessment item must be achieved.

Final Grades

A student's final grade for this course will be based on the aggregation and weighting of marks across assessment, any mandatory pass components and grade cut-offs. Grade cut-offs can vary, so you will need to wait for the official release of grades to be sure of your grade for this course.

- This course is a graded course (i.e 7, 6, 5, 4, 3, 2, 1).

Minimum Achievement to Pass this Course

To be eligible to pass the course, students are required to complete all forms of assessment and must demonstrate a reasonable degree of competence in the required course objectives as examined in each form of assessment.

To obtain a pass the student must:
1) achieve a score of at least 50% in the aggregate score for all assessment items (weighted according to the Summary Assessment table in this Course Profile), and
2) achieve a score of at least 40% in the Final Examination.

Non-submission of any one of the three major assessment items (project, final examination, and a majority of the within-semester assessment items) will incur a fail (F) grade for this course.

Students who fail Project-related items may be offered a supplemental excercise for a maximum grade of PASS at the discretion of the campus convenor.

Feedback on Assessment

Written feedback on assessment items will be given generally within two weeks of the date of submission of the assessment item.

Dishonest Assignments or Conduct in Assessment

The Griffith School of Environment and Science views dishonesty in any assessment item, including plagiarism, to be serious academic misconduct. The school supervises student activity in various assessment and audits assignments from selected courses in 1st, 2nd and 3rd year each trimester.
Dishonesty in assessment items including plagiarism will be dealt with according to the University Policy on Academic Misconduct (full details on the web - www.griffith.edu.au/ua/aa/sta/policies/).
The following penalties typically apply:
1) where a student has been found for the first time to have been dishonest (e.g. plagiarised) in an assignment they will normally be given a Fail grade for the course in which the academic misconduct occurred.
2) for a second occasion, the penalty will be exclusion from the program: readmission to the program is at the discretion of the Dean based on consideration of the student's case for readmission.
Dishonest activity in assessment items includes
- deliberate copying, or attempting to copy, the work of other students.
- use of, or attempting to use, information prohibited in that form of assessment.
- submitting the work of another as your own.
- plagiarism: taking and using as your own, the thoughts and writing of another with - the intent to claim the work as your own.

Please note that any use of material word-for-word from another source in material submitted for publication should be given in quotation marks with appropriate referencing to the source.

Acknowledgments and Referencing

Full and detailed acknowledgment (i.e. referencing) must be provided if contributions are drawn from the literature or other sources in preparation of reports and assignments.

Preparation of Assignment Submissions

All assignment submissions should be word-processed. Tables and figures are to be drawn by and appropriate statistical or graphical package. Students seeking dispensation from this requirement MUST make arrangements with their tutor PRIOR to the submission of the assignment.

Duplicate Copies of Submitted Work

Students must be able to produce a copy of all work submitted, including disk files and computer printout results, if so required. There is no exemption allowed from this requirement.

Submission of Computer-Based Assignments

Where work is to be submitted on computer disk, the disk must contain only the files required for the assignment. The files must be named as specified by the course convenor. Disks containing irrelevant files, or files incorrectly named will not be assessed.

Assignments to Bear Clear Details

Assignments without clear student name, course, tutorial group, tutor name and assignment name will not be assessed.

Submission by FAX or e-mail

Assignments will not be accepted by FAX or e-mail.

Submission Deadlines

Assignments MUST be submitted by the due date and time. Extensions may be granted in exceptional circumstances and must be applied for BEFORE the due date. Requests for extension must be made in writing to the Course Convenor. Where the request is made on medical grounds, an appropriate medical certificate must be submitted (see Examinations Timetabling Policy and Procedures). A copy of the extension request

should be attached to the assessment item when it is submitted. No extension will be allowed without approval of the Head of School, and submission of an application for extension does not imply approval.

Supplementary Assessment

Supplementary assessment is available in this course in accordance with Section 7 of the University Assessment Policy. A Pass mark (50% or greater) must be achieved in the supplementary assessment item or exam to achieve the grade of 4. Supplementary assessment is limited to 3 courses per student in a 240CP program and 4 courses per student in a 320CP program, and is only granted to students who have submitted all the assessment requirements of the course and meet the criteria outlined under the University's Assessment Policy.

Disclosure of disability or health condition

If any student has a disability and/or health condition that may impact on their ability to successfully undertake required learning activities in this course, they are encouraged to complete the Griffith University Disclosure Statement and advise their Course Convenor.

Resubmisssion of Assessment Items from Previous Course Attempts

Students retaking the course (having, for example, withdrawn or failed in a previous attempt) cannot resubmit any assessment items from those previous attempts. Credit will not be applied to current assessment items based on assessment items submitted in previous course attempts.

6. Policies & Guidelines

This section contains the details of and links to the most relevant policies and course guidelines. For further details on University Policies please visit the Policy Library

6.1 Assessment Related Policies and Guidelines

University Policies & Guidelines

The University's assessment-related policies can be found in the Griffith Policy Library.

The Assessment policy covers topics including: assessment requirements; award of grades; supplementary assessment; special consideration; extensions and deferred assessment; conduct of students in examinations; cheating; plagiarism; notification of results; appeals against the award of grades.

Academic Integrity

Student academic misconduct encompasses all behaviour:

- involving the misrepresentation of academic achievement; or
- undermining the core values (honesty, trust, fairness, respect and responsibility) of academic integrity; or
- breaching academic integrity;

whether intentional or unintentional. Student academic misconduct includes doing as well as attempting to do any of the acts, omissions or things that constitute academic misconduct.

Student academic misconduct is defined in the Institutional Framework for Promoting Academic Integrity among Students.

Please also refer to the Student Academic Misconduct Policy.

Reasonable Adjustments for Assessment - Students with Disabilities Policy

The Reasonable Adjustments for Assessment - Students with Disabilities Policy sets out the principles and processes that guide the University in making reasonable adjustments to assessment for students with disabilities while maintaining the academic integrity of its programs.

Griffith University Disclosure Statement

The Griffith University Disclosure Statement has been developed to identify and negotiate whether necessary and reasonable accommodations and adjustments can be made, wherever possible, to enable students with disabilities and/or health conditions to undertake required learning activities. Course Convenors are encouraged to reference the Griffith University Disclosure Statement in the Learning Activities and Assessment Plan sections of their course profiles.

Assessment, how to submit an assignment and exams, viewing your grades

All you need to know about assessment, exams and grades

Text Matching Software

The University uses text matching software. Students should be aware that your Course Convenor may use software to check submitted assessment tasks. If this is the case, your Course Convenor will provide more detailed information about how the software will be used for individual assessment items.

Related links:

- Academic Integrity website
- Academic Standing, Progression and Exclusion Policy
- Assessment Policy
- Assessment Submission and Return Procedures
- End of Trimester Centrally Administered Examinations Policy and Procedures
- Governance of Assessment and Academic Achievement Standards
- Standards for First Year Assessment
- Institutional Framework for Promoting Academic Integrity among Students
- Student Academic Misconduct Policy

6.2 Other Policies and Guidelines

University Policies and Guidelines

Students are responsible for ensuring that they have read all sections of the Course Profile for the course/s in which they are enrolled in any enrolment period. The published online version of the Course Profile is the authoritative version and by the publication of the Course Profile online, the University deems the student has been notified of and read the course requirements. Variations to the Course Profile during the trimester of

offer are not permitted except in exceptional circumstances and will be advised in writing to all enrolled students and via the *Learning@Griffith* website. Additional information regarding the content of this course may be published on the *Learning@Griffith* website.

Copyright matters

Copyright applies to all teaching materials and materials generated by students which substantially relate to Griffith University courses. *Students are warned against selling Griffith University teaching materials and their student notes online through commercial websites during and after their studies*. You will almost certainly be in breach of copyright law and Griffith's IT Code of Practice if you post these materials on the internet and commercial websites. Please refer to the Copyright Guide for Students for further information.

Health and Safety

Griffith University is committed to providing a safe work and study environment. However, all students, staff and visitors have an obligation to ensure the safety of themselves and those whose safety may be affected by their actions. Staff in control of learning activities will ensure as far as reasonably practical, that those activities are safe and that all safety obligations are being met. Students are required to comply with all safety instructions and are requested to report safety concerns to the University.

General health and safety information is available on the Health, Safety and Wellbeing website.

Other Key Student-Related Policies

All University policy documents are accessible to students via the Griffith Policy Library and links to key policy documents, in addition to those listed in 6.1 above, are included below for easy reference:

- Student Communications Policy
- Health and Safety Policy
- Student Administration Policy
- Student Charter
- Student Review and Appeals Policy
- Student Review and Appeals Procedures
- Student Complaints Policy

Learning Summary

Below is a table showing the relationship between the learning outcomes for this course, the learning activities used to develop each outcome and the assessment task used to assess each outcome.

Learning Outcomes

After successfully completing this course you should be able to:

1 Produce, evaluate and interpret summary statistics and graphics appropriate to a specific research question and the characteristics of a given data set.
2 Be familiar with various population probability distributions and be able to recognise the appropriate underlying distribution for particular methods of analyses and hypothesis testing
3 Apply the appropriate statistical test for a given experimental design (e.g. t-test, ANOVA, regression, etc.)
4 Apply the appropriate statistical test for categorical data sets (e.g. chi-squared test)
5 Demonstrate a working knowledge of the basics of The Research Method and its relationship to statistical inference
6 Understand the framework of statistical inference (estimation and hypothesis testing) based on random samples
7 Understand experimental design concepts, as they relate to the statistical models and hypotheses;
8 Demonstrate an ability to effectively interpret and communicate statistical output from commonly used statistical software
9 Determine appropriate statistical summaries and analytical methods and apply these to a given research problem; perform analyses using statistical software; interpret results of the analyses.
10 Students will be able to synthesise and communicate the aims, methods, results and interpretation in the format of a statistical report.

Assessment & Learning Activities

LEARNING ACTIVITIES	LEARNING OUTCOMES									
	1	2	3	4	5	6	7	8	9	10
Topic 1 (Lecture)	●				●					
Topic 2 (Lecture)		●		●						
Topic 3 (Lecture)		●	●		●	●		●	●	●
Topic 4 (Lecture)		●	●		●	●	●	●	●	●
Topic 5 (Lecture)		●	●		●	●	●	●	●	●

LEARNING ACTIVITIES	LEARNING OUTCOMES 1	2	3	4	5	6	7	8	9	10
Topic 6 (Lecture)		●	●		●	●	●	●	●	●
ASSESSMENT TASKS										
Multiple within-semester assessment items	●	●	●	●	●	●	●	●		
Project assessment items	●	●	●	●	●	●	●	●	●	●
Final Exam	●	●	●	●	●	●	●	●	●	●

Graduate Attributes

For further details on the Griffith Graduate please click here

Griffith University prepares influential graduates to be:

- Knowledgeable and skilled, with critical judgement
- Effective communicators and collaborators
- Innovative, creative and entrepreneurial
- Socially responsible and engaged in their communities
- Culturally capable when working with First Australians
- Effective in culturally diverse and international environments

This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.

University wide attributes

GRADUATE ATTRIBUTE	TAUGHT	PRACTISED	ASSESSED
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators		•	•
Innovative, creative and entrepreneurial		•	•
Socially responsible and engaged in their communities		•	
Culturally capable when working with First Australians		•	
Effective in culturally diverse and international environments		•	

ALTC Threshold Learning Outcomes (Science) Upon completion of a Bachelor of Science, graduates will:

GRADUATE ATTRIBUTES	LEARNING OUTCOMES 1	2	3	4	5	6	7	8	9	10
1 DEMONSTRATE A COHERENT UNDERSTANDING OF SCIENCE BY:										
1.1. articulating the methods of science and explaining why current scientific knowledge is both contestable and testable by further inquiry					●				●	●
1.2. explaining the role and relevance of science in society					●				●	●
2 EXHIBIT DEPTH AND BREADTH OF SCIENTIFIC KNOWLEDGE BY:										
2.1. demonstrating well-developed knowledge in at least one disciplinary area										●
2.2. demonstrating knowledge in at least one other disciplinary area	●	●	●	●	●		●	●	●	●
3 INQUIRY & PROBLEM SOLVING SKILLS ALIGNED WITH CRITICAL ANALYSIS & SOLVING SCIENTIFIC PROBLEMS BY:										
3.1. gathering, synthesising and critically evaluating information from a range of sources	●								●	●
3.2. designing and planning an investigation										●
3.3. selecting and applying practical and/or theoretical techniques or tools in order to conduct an investigation	●	●			●	●	●	●	●	●

3.4. collecting, accurately recording, intepreting and drawing conclusions from scientific data	●		●	●	●	●	●	●	●	●
4 BE EFFECTIVE COMMUNICATORS OF SCIENCE BY:										
4.1. communicating scientific results, information, or arguments, to a range of audiences, for a range of purposes, and using a variety of modes	●				●			●	●	●
5 EXHIBIT PERSONAL & PROFESSIONAL RESPONSIBILITY FOR LEARNING & SCIENTIFIC WORK THROUGH:										
5.1. being independent and self-directed learners					●			●	●	●
5.2. working effectively, responsibly and safely in an individual or team context					●			●	●	●
5.3. demonstrating knowledge of the regulatory frameworks relevant to their displinary area and personally practising ethical conduct.										