



# PSYC14047 *Advanced Data Analysis*

## Term 1 - 2017

Profile information current as at 01/05/2024 07:47 am

All details in this unit profile for PSYC14047 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

### General Information

#### Overview

This module develops the analytic skills necessary for implementing applied psychological research and analysis. As such, the module provides for both theoretical input and a heavy component of computer based experiential exercises using the SPSS statistics package.

#### Details

Career Level: *Undergraduate*

Unit Level: *Level 4*

Credit Points: 6

Student Contribution Band: 10

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

Academic Course = CU77 or CA44 or CC42

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

#### Offerings For Term 1 - 2017

- Brisbane
- Bundaberg
- Distance

#### Attendance Requirements

All on-campus students are expected to attend scheduled classes - in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

#### Residential Schools

This unit has a Optional Residential School for distance mode students and the details are:

Click here to see your [Residential School Timetable](#).

#### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Online Quiz(zes)**

Weighting: 20%

#### 2. **Practical Assessment**

Weighting: 60%

#### 3. **Examination**

Weighting: 20%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Course evaluation comments

**Feedback**

Some students suggested that they would have liked more detailed feedback regarding weekly quiz answers.

**Recommendation**

Consider reviewing SPSS Practical feedback documents and providing extra details and look into creating a feedback system for eFIL quizzes.

**Action**

SPSS practical feedback documents were revised and updated. Each SPSS practical test is accompanied by a detailed sheet explaining all the steps and rationale for achieving the correct answer.

#### Feedback from Course evaluation comments

**Feedback**

Some students found long technical lectures hard to follow, particularly during the explanation of examples.

**Recommendation**

Consider recording multiple shorter and more scripted lecture videos.

**Action**

We are partially through the process of 'atomising' content, in the form of recorded videos on specific topics. However, the course this term still retained a standard 2 hour lecture slot.

#### Feedback from Course evaluation comments

**Feedback**

Students consistently reported that they found the iterative assessment approach involving weekly quizzes beneficial for their learning as they kept them up to date with content and provided immediate feedback on their progress

**Recommendation**

Retain this aspect for future offerings

**Action**

Retained.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Employ statistical writing skills to the level required for fourth-year psychology
2. Implement applied psychological research analysis
3. Demonstrate an in-depth knowledge of a variety of advanced analytic techniques
4. Choose appropriate analyses relevant to specific research designs
5. Write and present findings in a scientific format

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Online Quiz(zes) - 20%			•	•	
2 - Practical Assessment - 60%	•	•		•	•
3 - Examination - 20%			•	•	

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•	•		
2 - Problem Solving	•	•	•	•	•
3 - Critical Thinking		•	•	•	•
4 - Information Literacy		•	•	•	•
5 - Team Work					
6 - Information Technology Competence	•	•	•	•	•
7 - Cross Cultural Competence					
8 - Ethical practice				•	
9 - Social Innovation					
10 - Aboriginal and Torres Strait Islander Cultures					

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Online Quiz(zes) - 20%	•	•	•		•	•		•		
2 - Practical Assessment - 60%	•	•	•	•		•				
3 - Examination - 20%	•	•	•	•		•				

## Textbooks and Resources

### Textbooks

PSYC14047

#### Prescribed

##### **Discovering Statistics using IBM SPSS Statistics**

4th Edition (2013)

Authors: Andy Field

Sage

London , UK

ISBN: 9781446249185

Binding: Paperback

PSYC14047

#### Prescribed

##### **SPSS Statistics Standard GradPack**

Edition: 2017 valid license (2017)

Authors: IBM

IBM

Not applicable

Binding: Hardcover

#### Additional Textbook Information

A valid license (for the entire term) of IBM SPSS is required to complete this unit. The software may be purchased from the bookshop or online from the Australian distributor - Hearne Software (<http://www.hearne.software>). If you currently have a license of SPSS, please check when the license will expire and renew if necessary.

Previous editions of the Field text are not suitable as the 4th edition contains new chapters that are covered in this unit.

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

#### You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- IBM SPSS Statistics GradPack

## Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 6th Edition \(APA 6th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Matthew Browne** Unit Coordinator

[m.browne@cqu.edu.au](mailto:m.browne@cqu.edu.au)

## Schedule

### Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Elements of advanced statistics	1,2	eFIL Quiz (Not graded) SPSS Practical (Not graded)

<b>Week 2 - 13 Mar 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Model bias	5	eFIL Quiz SPSS Practical
<b>Week 3 - 20 Mar 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Correlation	7	eFIL Quiz SPSS Practical
<b>Week 4 - 27 Mar 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Regression	8	eFIL Quiz SPSS Practical
<b>Week 5 - 03 Apr 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Comparing means (GLM1)	9,11	eFIL Quiz SPSS Practical Residential school (recommended, but non-compulsory) (Thurs/Fri, 6-7 April)
<b>Vacation Week - 10 Apr 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
<b>Week 6 - 17 Apr 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Moderation and mediation	10	eFIL Quiz (Not graded) SPSS Practical (Not graded)
<b>Week 7 - 24 Apr 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Analysis of covariance (GLM2)	12	eFIL Quiz SPSS Practical
<b>Week 8 - 01 May 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Factorial ANOVA (GLM3)	13	eFIL Quiz SPSS Practical
<b>Week 9 - 08 May 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Repeated measures designs (GLM4)	14	eFIL Quiz SPSS Practical
<b>Week 10 - 15 May 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Mixed design ANOVA (GLM5)	15	eFIL Quiz SPSS Practical
<b>Week 11 - 22 May 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Exploratory factor analysis	17	eFIL Quiz SPSS Practical
<b>Week 12 - 29 May 2017</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Logistic regression	19	eFIL Quiz SPSS Practical

## Review/Exam Week - 05 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

## Exam Week - 12 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

## Term Specific Information

This course includes a non-compulsory residential school scheduled to occur at Brisbane campus on 6-7th April.

## Assessment Tasks

### 1 eFIL Exercises (10 assessed + 2 non-assessed)

#### Assessment Type

Online Quiz(zes)

#### Task Description

eFIL (electronic Focused Interactive Learning) is an innovative method of assessment that encourages active learning and communication among students, irrespective of location. eFIL activities are incorporated into modules 2-5 and 7-12. Each eFIL exercise will comprise a weighted 2% of the unit grade. eFIL exercises also occur in weeks 1 and 6 but these do not contribute to your final unit grade.

#### What's Involved?

Each week students will complete a multiple choice quiz containing 5 'complex-reasoning' and content-knowledge questions. The quiz will be open from Monday morning 9:00 until the following Monday night 23:59 and questions will be based on that week's unit content. Students need to attempt the quiz twice, with the second attempt being graded. After the first attempt you will have access to an eFIL Discussion forum for that week, which allows you to discuss the quiz with a small group of other students, before taking your second (and graded) attempt at the quiz. Each quiz is open for 20 minutes.

#### How is eFIL different from a normal quiz?

eFIL assessment provides students with the opportunity to discuss their answers with a small group of students online, just as if they were in a classroom tutorial session. Every week, after the first quiz attempt has been made, students will be able to enter a forum as part of a small group of students, where they will have the opportunity to discuss their answers and the reasons for these answers. All students will then take the quiz a second time; open until a following Monday night deadline; with the benefits of knowing the views of other students. Only the second quiz attempt is graded.

**IMPORTANT:** Students MUST attempt the quizzes for each week's content to accumulate credit. Each week, students must complete the 1st attempt at the quiz before being able to view and contribute to the discussion posts of their group. Due to the interactive nature of eFIL, there is NO opportunity to make-up eFIL exercises or receive extensions. However, with an approved application\*, you are able to miss an eFIL quiz and still receive a grade of 50% (ie., a Pass) for the quiz for that week. Approvals to miss a quiz are limited to THREE per student throughout the semester; after this, students who miss a quiz will receive no marks for the missed quiz.

\* supporting evidence is to be submitted to the unit co-ordinator via e-mail before the assessment is due (as per CQU extension requests)

#### Number of Quizzes

10

#### Frequency of Quizzes

Weekly

#### Assessment Due Date

Each weekly eFIL activity closes at 11:59pm on the Monday of the following calendar week (e.g. Week 1 eFIL closes on the Monday of Week 2)

#### Return Date to Students

Marked answers with solutions are available when the quiz closes and further feedback is provided via forums and weekly consultation sessions

**Weighting**

20%

**Assessment Criteria**

Each quiz question is in multiple choice format and are weighted equally. Each individual eFIL activity is worth 2%. There are five (5) questions in each activity, and each question is weighted equally.

**Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

**Submission**

Online

**Submission Instructions**

Quiz is completed via the Moodle site

**Learning Outcomes Assessed**

- Demonstrate an in-depth knowledge of a variety of advanced analytic techniques
- Choose appropriate analyses relevant to specific research designs

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Team Work
- Information Technology Competence
- Ethical practice

## 2 SPSS Practical Exercises (10 assessed + 2 non-assessed)

**Assessment Type**

Practical Assessment

**Task Description**

Practical proficiency in analysing data will be assessed via the completion of data analysis exercises in SPSS. Due to the unit being offered by distance, data-sets and questions will be provided for analysis via Moodle in weeks 2, 3, 4, 5, 7, 8, 9, 10, 11 and 12. As in the case of the eFIL exercises, SPSS practicals also occur in weeks 1 and 6 but these do not contribute to your final unit grade.

**Content Covered**

Each SPSS practical exercise will cover material for that teaching week: i.e. SPSS practical 1 will cover material from teaching week 1. Importantly, the SPSS practical exercises will be based heavily on the 'Smart Alex's tasks' at the end of each chapter in the text. Therefore, students should ensure they complete and then read the feedback (available as supporting content from the publisher's website) for the relevant Smart Alex's tasks before attempting the practical exercise. For example, students should complete all the Smart Alex's tasks for chapters 1 and 2 in week 1 before attempting the quiz. Student should also complete their review of the chapter content for that week before attempting the SPSS practical.

**Timing**

Each SPSS practical will open in the morning on the Monday of the current teaching week, and close at 11:59 on the following Monday. Note that the window for completing each assessment is the same as the eFIL quizzes. In contrast to eFIL, the SPSS practicals are not intended as group discussion exercises and are rather focused on developing your confidence to independently conduct and interpret statistical analysis. A time-limit of 2 hours is enforced for entering the answers of each SPSS practical. Therefore, students should ensure they take steps to avoid technical issues, are fully prepared, and have sufficient time to complete the questions before beginning the assessment.

**Missing assessment**

Due to the iterative nature of the SPSS practical assessment, and the need to maintain the integrity of the question bank, there is NO opportunity to make-up eFIL exercises or receive extensions. However, with an approved application\*, you are able to miss an eFIL quiz and still receive a grade of 50% (i.e., a Pass) for the quiz for that week. Approvals to miss a quiz are limited to THREE per student throughout the semester; after this, student's who miss a quiz will receive no marks for the missed quiz.

Further notes and advice for completing the SPSS practicals will be provided on the Moodle site.

\*supporting evidence is to be submitted to the unit co-ordinator via e-mail before the assessment is due (as per CQU extension requests)

**Assessment Due Date**



Each weekly SPSS practical activity closes at 11:59pm on the Monday of the following calendar week (e.g. Week 1 eFIL closes on the Monday of Week 2)

### **Return Date to Students**

Fully detailed feedback and walkthroughs of each data analysis task will be made available immediately after the activity closes

### **Weighting**

60%

### **Assessment Criteria**

Each SPSS practical exercise is worth 6% of your unit grade, and will involve analysing data using SPSS. Grades are determined by answering 6 specific questions regarding the data, analysis and results via Moodle. Questions will be in a variety of formats. Some questions will be quite concrete (e.g. stating an item of SPSS output) whilst others will be require interpretation and judgement. Answers will be entered by students in a variety of formats, including entering a numeric value and selecting one or more statements from a list. Most questions are marked either correct (full marks for that item) or incorrect (no marks for that item). However questions that involve selecting one or more correct statements from a list will provide credit for partially correct answers. See document Guidelines for the eFIL & SPSS Practicals on Moodle website for further details.

### **Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

### **Submission**

Online

### **Submission Instructions**

Answers submitted via Moodle website

### **Learning Outcomes Assessed**

- Employ statistical writing skills to the level required for fourth-year psychology
- Implement applied psychological research analysis
- Choose appropriate analyses relevant to specific research designs
- Write and present findings in a scientific format

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

## **Examination**

### **Outline**

Complete an invigilated examination.

### **Date**

During the examination period at a CQUniversity examination centre.

### **Weighting**

20%

### **Length**

150 minutes

### **Exam Conditions**

Closed Book.

### **Materials**

Calculator - non-programmable, no text retrieval, silent only

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?



#### Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem