



# MEDS21003 *Medical Science Research Project 1*

## Term 1 - 2019

Profile information current as at 26/04/2024 06:06 pm

All details in this unit profile for MEDS21003 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 is a postgraduate unit which aims to provide you with training in research. You will be taught the foundation skills and knowledge to independently undertake an investigation of a research question in an area of medical science. This research question will be fully researched and reported in written scholarly form in Medical Science Research Project 2. The research question will be of significance to an area of medical science related to your course of enrolment and your investigation will be undertaken with principal supervision from a member of that course's staff.

### Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

There are no requisites for this unit.

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 - 2019

- Online

### 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).

### 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 Postgraduate 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. **Written Assessment**

Weighting: 30%

#### 2. **Written Assessment**

Weighting: 70%

### 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 "Have your say" unit evaluation

**Feedback**

Students liked the regular prompt feedback via emails and the Q&A forum, and the zoom tutorials.

**Recommendation**

Continue to provide prompt feedback to students via emails and Q&A forum, and continue with zoom tutorials.

#### Feedback from "Have your say" unit evaluation

**Feedback**

While most students understood and appreciated the value of the assessment items, some failed to understand the reasoning behind doing an ethics application.

**Recommendation**

Provide reasoning behind the choice of an ethics application for the assessment in the introductory video. Impress upon students that the initial steps in doing and/or learning about research are finding a topic, reviewing the literature to find a gap in knowledge, writing a literature review and filling in an ethics application. Knowledge of the research process is a valuable tool for health professionals and will provide skills for life long learning. The CQU Low Risk Ethics application is an authentic assessment item that covers all these basic requirements and can be submitted for review if the student wishes to pursue the research.

#### Feedback from "Have your say" unit evaluation

**Feedback**

Some students did not appreciate that differences in opinion are part of science and research so there will always be differences in feedback when each assessment involves a unique proposal and different markers.

**Recommendation**

Continue with the practice of providing information via email and verbal conversations with the markers to try and standardise feedback. In the introductory video provide students with information on the process of discovery of new knowledge (research) and how that often results in differences of opinion and how that can be used as part of the learning process.

## Unit Learning Outcomes

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

1. Formulate a research question and specific hypotheses.
2. Search, analyse and critically appraise data or textual information.
3. Apply suitable bioethical principles to the proposal.

The purpose of Medical Science Research Projects 1 & 2 is to provide the student with training in developing, conducting, and communicating research across theoretical and applied domains. This requires students to undertake an investigation of a research question in an area of medical science aligned with their course of enrolment and to report the investigation in written scholarly form. The research question to be investigated may have either theoretical or applied significance but will add to the body of discipline-specific knowledge and meet the performance criteria for the engaged research element of the appropriate professional competency standards.



## Textbooks and Resources

### Textbooks

MEDS21003

#### Prescribed

#### Research Methodology, a step-by-step guide for beginners.

Edition: 4th Ed. (2014)

Authors: Ranjit Kumar

Sage Publications

London , UK

ISBN: 978-1-4462-6996-1

Binding: Paperback

#### Additional Textbook Information

Copies can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

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

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

## Referencing Style

All submissions for this unit must use the referencing style: [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Ann Quinton** Unit Coordinator

[a.quinton@cqu.edu.au](mailto:a.quinton@cqu.edu.au)

## Schedule

### Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
1. Review of research basics and ethics <ul style="list-style-type: none"><li>• Definition of research</li><li>• Research paradigms</li><li>• Research process</li><li>• Rationale for conducting research in the health sciences</li><li>• Bioethical issues</li><li>• Guidelines for ethical conduct in Aboriginal and Torres Strait Island Peoples health research</li></ul>	Chapters are from the textbook: Research Methodology, A step-by-step guide for beginners. 4th Ed. Kumar, R. Sage Publications: London. Chapter 1 and 14 Lecture/s Lecture notes	Tutorial Tuesday night 7.00-8.00pm AEST

### Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Finding a research topic and question

- Identify a relevant research topic/focus
- Formulating a research question/problem
- Planning the research
- Reviewing and writing a literature review

Chapters 2, 3 and 4  
Lecture/s  
Lecture notes

### Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Determining your study design and basic statistics 1 <ul style="list-style-type: none"><li>• Variables</li><li>• Measurement scales</li><li>• Constructing hypotheses</li><li>• Type 1 and 2 errors</li><li>• Sample size</li></ul>	Chapters 5, 6, 7 and 13 Lecture/s Lecture notes.	Tutorial Tuesday night 7.00-8.00pm AEST

### Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Selecting a study design <ul style="list-style-type: none"><li>• Quantitative research</li><li>• Qualitative research</li><li>• Mixed methods</li><li>• Sampling</li></ul>	Chapter 8 Lecture/s Lecture notes	

### Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Selecting a method of data collection. 1. Primary sources <ul style="list-style-type: none"><li>• observation</li><li>• interview</li><li>• questionnaires</li></ul> 2. Secondary sources 3. Collecting data using attitudinal scales	Chapters 9 and 10 Lecture/s Lecture notes	Tutorial Tuesday night 7.00-8.00pm AEST

### Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Break week		

### Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Selecting a sample <ul style="list-style-type: none"><li>• validity</li><li>• reliability</li><li>• bias</li><li>• time frame</li><li>• budget constraints</li></ul>	Chapters 11 and 12 Lecture/s Lecture notes	<b>Written Assessment 1-Draft of Research Proposal</b> Due: Week 6 Tuesday (23 Apr 2019) 4:00 pm AEST

### Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Basic statistics 2 for research proposals <ul style="list-style-type: none"><li>• parametric statistics</li><li>• non-parametric statistics</li><li>• sensitivity and specificity</li><li>• risk</li><li>• qualitative data analysis</li></ul>	Lecture/s Lecture notes.	Tutorial Tuesday night 7.00-8.00pm AEST

### Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
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## Ethics

- participant information sheet
- consent form
- risk appraisal
- recruitment
- information protection
- dissemination of results

Lecture/s  
Lecture notes.

### Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Communicating the results. <ul style="list-style-type: none"><li>• developing and using tables</li><li>• answering the clinical question</li></ul>	Chapter 17 Lecture/s Lecture notes.	Tutorial Tuesday night 7.00-8.00pm

### Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Writing a scientific paper Time to finish writing up your research proposal		

### Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Time to finish writing your research proposal		Tutorial Tuesday night 7.00-8.00pm

### Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Written Assessment 2-Course Work Ethics Application</b> Due: Week 12 Monday (3 June 2019) 4:00 pm AEST

### Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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### Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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## Term Specific Information

The unit coordinator is Dr Ann Quinton (Sydney). The best way to contact Ann is via email at:

[a.quinton@cqu.edu.au](mailto:a.quinton@cqu.edu.au)

It is important to check your student email regularly as updates about the unit will be sent from the unit coordinator by email.

Ann's phone number is 02 9324 5008 however she is often in the sonography labs so email is the best way to organise a time to speak.

This unit is a 6 credit point unit which requires you to allocate around 12 hours per week towards it. The unit is graded. There are two assessment items, a draft proposal worth 30% where feedback will be provided to enable you to produce the final research proposal which is worth 70%.

Tutorials will be offered in the evening to enable students on clinical placement or working to attend. You will be able to ask questions, gain feedback and join in discussions on how to best complete the assessment tasks.

You will be allocated an academic mentor early in the term who will guide you through the process of developing a research project and who will mark your assessments. You will be able to ask them specific questions about your project. It is intended that there is potential for an academic publication to be produced from your project.

This unit will make regular use of the required text: Research Methodology, a step-by-step guide for beginners (4th Ed.) by Ranjit Kumar. Sage Publications.

## Assessment Tasks

# 1 Written Assessment 1-Draft of Research Proposal

## Assessment Type

Written Assessment

## Task Description

The first written assessment is a draft of your final research proposal. As a draft the main aims are for you to learn how to search and review the literature, start thinking about your research topic, your research question, how you will go about answering your research question and start thinking about the risk level of your research project. The draft will also provide you with the opportunity to gain feedback so you can complete the Course Work Ethics Application (assessment 2). A research proposal is a detailed written outline of planned research that allows you, the researcher to clarify and organise your thoughts on your research. It includes the study aims (research question/s) and hypothesis, a brief literature review (as compared to a detailed literature review which would be required for the research paper or thesis) that critiques the literature and allows you to identify a gap in knowledge to research, project plan which considers research methodology, study design, selection criteria, data collection, statistical analysis and ethical considerations.

The content of the draft proposal is 1000 words  $\pm 10\%$  (excludes references, the Ethics Checklist and the full text articles (the full text articles will be uploaded separately)).

The content of the proposal will include:

1. Proposed title (15 words).
2. Keywords (3-5).
3. Background. You will write the draft proposal which will include an outline of the background to your research and how your reading of these articles has established the need for further research. The literature should also help inform your research question and methodology.
4. Research question/aim.
5. How you will go about answering your research question. This means writing an outline of the research design and plan (methodology).
6. Fill out and insert the Ethics Checklist (which can be found on the unit Moodle site) into your word document, and use this to decide the risk level of your application. Include a section in your research design and plan (one to three sentences) about whether the proposal is low or high risk and why.
7. Insert your reference list into the word document.
8. Upload at least 3-5 relevant full text articles (appendix).

Further detailed information on how to complete the task is provided to you under the assessment tab in Moodle.

## Assessment Due Date

Week 6 Tuesday (23 Apr 2019) 4:00 pm AEST

Online submission via the unit Moodle site.

## Return Date to Students

Week 8 Tuesday (7 May 2019)

## Weighting

30%

## Assessment Criteria

The criteria to receive a Pass are as follows:

- The title should be clear and concise, reflect the topic and engage the reader.
- Keywords should reflect the topic.
- The outline of the background to your research and need for further research are clearly discussed.
- The research question clearly identifies a population or problem or issue of interest and a proposed outcome or measure and relates to the title.
- An outline of the research design and plan is relevant to the title and aim, operational in nature and clearly explained, and establishes the need for research in the chosen area.
- Consideration of risk level is clearly stated in the research plan.



- Ethics Checklist is completed and document uploaded.
- 3-5 full-text up-to-date relevant PDF file articles are uploaded.
- In-text referencing is correctly and appropriately used and reference list supplied.
- Sustained academic voice and appropriate plain English research language used.
- Correct spelling and grammar.
- The word limit is adhered to.

A marking rubric is available to students on the unit Moodle site.

### Referencing Style

- [Vancouver](#)

### Submission

Online

### Submission Instructions

Please submit as a word document .doc or .docx

### Learning Outcomes Assessed

- Formulate a research question and specific hypotheses.
- Search, analyse and critically appraise data or textual information.
- Apply suitable bioethical principles to the proposal.

### Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility
- Leadership

## 2 Written Assessment 2-Course Work Ethics Application

### Assessment Type

Written Assessment

### Task Description

In this assessment you will complete the CQU Coursework Ethics Application Form (Version 3). This is an authentic form of assessment as you will be able to submit your research proposal to the CQU Office of Research for ethics approval if you wish to do the research project. Your project should be at a level where there is potential for an academic publication to be produced.

The length of your research proposal will be 1800 words  $\pm$  10% (some of these sections involve ticking a "Yes/No" box).

The word count excludes the reference list, Participant Information Sheet (PIS) and Consent Form, and any other necessary relevant attachments (eg online survey, interview questions, external approval).

The content of the proposal will include:

1. Project title (15 words) and key words (3-5)
2. Data collection dates
3. Lay person description (250 words)
4. Research aim/s and significance, includes background and literature review
5. Data collection methods
6. Methods
7. Justification of research design (includes data analysis, sample size and statistical power if appropriate)
8. Risks (ethical considerations)
9. Location of research
10. Funding and finance
11. Recruitment of participants
12. Consent

13. Information protection
14. Dissemination of results
15. References (Vancouver style)
16. Appendices (PIS and Consent Form-compulsory), any other relevant attachments if applicable (for example online survey, interview questions, external approval forms)

Further detailed information on how to complete this task is provided to you throughout this unit and under the assessment tab in the unit Moodle site.

If your research proposal is considered high risk, before you undertake your research you will need to complete a Human Research Ethics Application (HREA) <https://hrea.gov.au/> which then goes before a full Human Research Ethics Committee (HREC). This process will take considerably longer to gain ethics approval. The information you put together for the low risk research proposal assignment will be able to be used in the HREA high risk application, however the HREA asks for more information. I would suggest you speak to your discipline specific supervisor if you need to go down this path to complete your research.

**Assessment Due Date**

Week 12 Monday (3 June 2019) 4:00 pm AEST  
Online submission via the unit Moodle site

**Return Date to Students**

Exam Week Monday (17 June 2019)

**Weighting**

70%

**Minimum mark or grade**

50%

**Assessment Criteria**

The criteria to receive a pass are as follows:

- The research title should be clear, concise and reflect the topic. Keywords should reflect the topic.
- Lay person description is relevant, brief and avoids technical jargon.
- Research aim/s, significance, background to research, literature review and methodology are relevant with up-to-date literature from peer reviewed journals cited as evidence.
- Ethical considerations including risks, recruitment of participants, consent, information protection and dissemination of results are addressed and discussed.
- All sections of the Coursework Ethics Application are answered.
- Appropriate Participant Information Sheet, Consent Forms and other relevant documentation are included.
- In-text referencing is correctly and appropriately used and reference list supplied.
- Sustained academic voice and appropriate plain English research language used.
- Correct spelling and grammar.
- The word limit is adhered to.

A marking rubric is available to students on the unit Moodle site.

**Referencing Style**

- [Vancouver](#)

**Submission**

Online

**Submission Instructions**

Please submit as a word document .doc or .docx

**Learning Outcomes Assessed**

- Formulate a research question and specific hypotheses.
- Search, analyse and critically appraise data or textual information.
- Apply suitable bioethical principles to the proposal.

**Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility
- Leadership

## 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