



# MEDS21006 Medical Science Research Project 2

## Term 1 - 2024

Profile information current as at 29/04/2024 08:11 am

All details in this unit profile for MEDS21006 have been officially approved by CQU University 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

The purpose of the Medical Science Research Project 2 unit is to provide you with further training in research as you continue projects begun in Medical Science Research Project 1. This unit requires you to independently report on the investigation of the research question proposed. The final journal paper will typically contain the data analyses, results, and discussion in addition to a cogent literature review and hypotheses. It is anticipated that some journal papers may be suitable for eventual publication in an appropriate journal with the academic involved named as co-author. In all stages of the project you must adhere to appropriate ethical and professional standards.

### 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

Prerequisite - MEDS21003 Medical Science Research Project 1

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 - 2024

- 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 SUTE Data

**Feedback**

Students did not find feedback useful coming from various mentors

**Recommendation**

Consider having fewer mentors and the UC mentoring a larger number of students.

#### Feedback from SUTE Data

**Feedback**

Students struggled to see the relevance of the unit to their degree or how the skills gained in the unit can be utilised once qualified.

**Recommendation**

Consider intergrading into the tutorials examples of how research skills gained in this unit relate to their profession.

## Unit Learning Outcomes

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

1. Collect and use data ethically
2. Critically analyse and interpret research data
3. Interpret research data and discuss findings professionally
4. Prepare and present a journal paper within the required style and format of an appropriate journal in the field of course enrolment.

The purpose of Medical Science Research Project's 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

**There are no required textbooks.**

### 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

**Matt Gildersleeve** Unit Coordinator  
[m.gildersleeve@cqu.edu.au](mailto:m.gildersleeve@cqu.edu.au)

## Schedule

### Week 1 - 04 Mar 2024

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Welcome, goal of a literature review and PICO

- Selecting a topic
- Patient/Population/Problem, Intervention, Comparison, Outcome (PICO)
- Clarifying the purpose of your literature review

Familiarise yourself with the assessment task in Moodle and think about a topic choice.  
Start conducting a literature search to determine if the topic is suitable and if there is enough literature to allow progression of your topic.  
You will need ethics approval to complete the research paper for assessment 2.

### Week 2 - 11 Mar 2024

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

The research topic, searching the literature and developing the methodology

- Choosing databases
- Developing a search strategy: key terms and concepts
- Presenting a methodology associated with a literature search

You will need to have developed a research question and aim using PICO.

If you want feedback on your research question and aim, you will need to submit your PICO, research question and aim to your unit coordinator/mentor by 4pm Friday of week 2.

### Week 3 - 18 Mar 2024

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

## Writing an annotated bibliography

- Summary
- Evaluation
- Reflection

Start work on writing the annotated bibliography due on Friday of week 5.

### Week 4 - 25 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
The critical summary for the annotated bibliographies <ul style="list-style-type: none"><li>• Writing a critical summary which has been developed from the annotated bibliographies</li></ul>		You should have finished writing your annotated bibliographies and are now working on your critical summary.

### Week 5 - 01 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Presentation of data <ul style="list-style-type: none"><li>• Method</li><li>• Method for narrative review: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)</li><li>• Critical appraisal tools (CATs)</li><li>• Risk of Bias (RoBs)</li><li>• Statistics</li><li>• Figures and tables</li></ul>		Submit annotated bibliography to Moodle by 5pm Friday 5 April 2024.  <b>Written Assessment 1 - Annotated bibliographies and critical summary</b> Due: Week 5 Friday (5 Apr 2024) 5:00 pm AEST

### Vacation Week - 08 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Break week		

### Week 6 - 15 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Analysing the literature <ul style="list-style-type: none"><li>• Selection of information</li><li>• Argument</li><li>• Structure</li><li>• Process</li></ul>		Build on the literature review you started with assessment 1. Gather more research articles for your assessment 2. No tutorial this week.

### Week 7 - 22 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Writing the Introduction <ul style="list-style-type: none"><li>• The introduction - background to the topic</li><li>• Outlining importance of topic</li><li>• Finding the gaps in the literature</li><li>• Aim (reflecting the research question)</li></ul>		Start drafting an introduction for your research paper or review for assessment 2.

### Week 8 - 29 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
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Writing the body

- Writing the methods section
- Writing the results section

By now, you should have the first draft of your introduction, methodology, results and outline of the discussion for Assessment 2.

You can start the write-up of Assessment 2 (whilst continuing to search for literature).

You will need to develop original table/s and /or figures.

Drafts for assessment 2 can be submitted to your mentor for feedback from week 8.

### Week 9 - 06 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Writing a discussion and conclusion <ul style="list-style-type: none"><li>• Critique of literature</li><li>• Areas for further research</li><li>• Limitations</li><li>• Concluding statements</li><li>• Statement of findings</li><li>• Areas for future research</li></ul>		You should be close to having a completed first draft of your research paper or review to allow time for editing.

### Week 10 - 13 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Writing the abstract <ul style="list-style-type: none"><li>• How to write a concise summary of your work.</li></ul>		The last opportunity to obtain feedback on your draft, is 4pm Friday of week 10. While waiting for feedback, you need to be working on your abstract.

### Week 11 - 20 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Bringing it all together <ul style="list-style-type: none"><li>• Time to work on pre-submission draft including editing and corrections: check grammar, punctuation and referencing.</li></ul>		Proofread and edit your research paper or review for assessment 2.

### Week 12 - 27 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"><li>• Final editing of paper</li></ul>		Submit assessment 2 to Moodle by 5pm Friday 31 May 2024. No tutorial this week.  <b>Written Assessment 2 - Systematic / Narrative Review OR Research Paper</b> Due: Week 12 Friday (31 May 2024) 5:00 pm AEST

### Review/Exam Week - 03 Jun 2024

Module/Topic	Chapter	Events and Submissions/Topic
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### Exam Week - 10 Jun 2024

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

The best way to contact the unit coordinator (Matthew Gildersleeve) is by email [m.gildersleeve@cqu.edu.au](mailto:m.gildersleeve@cqu.edu.au). Emails will be responded to the same day as received but a reply might not occur until the evening as Matthew has other teaching commitments during the day. Phone or Zoom meetings for questions or feedback are available at request and can be organised over email. Each week tutorials and lectures are recorded and placed on Moodle. These will provide important tips to complete the assessment tasks for this unit.

## Assessment Tasks

### 1 Written Assessment 1 - Annotated bibliographies and critical summary

#### Assessment Type

Written Assessment

#### Task Description

A key component of research, and the production of a narrative review or research paper involves searching peer reviewed published literature and collecting and organising information to determine current knowledge and identify gaps in knowledge.

For this written assessment task, you are required to develop a research question and aim, search current literature with a systematic methodology, and document annotated bibliographies for five peer reviewed journal articles related to your selected topic. You will discuss the synergy of the selected articles and produce a document (word limit 2000 +/- 200 words) with the following headings:

#### Research question

- Develop a research question and aim using PICO (Participant/Problem, Intervention, Comparator, Outcome)

#### Aim

- Clearly state the aim and how it addresses the research question

#### Keywords

- Provide four (4) keywords/key terms which were used for your literature search that reflect the research question

#### Methodology

- Describe the methodology you used to perform your literature search to find journal articles relevant to your topic
- Outline the databases searched, inclusion and exclusion criteria, Boolean/MeSH search terms

#### Annotated bibliographies of five (5) peer reviewed scientific journal articles

An annotated bibliography is a concise written evaluation (annotation) of an article relevant to your research question. You will search and collect five journal articles (not more than 10 years old) and discuss them individually in five annotated bibliographies (one annotated bibliography for each journal article). The journal articles need to include a minimum of four original research articles and no more than one review article (or one guideline). Your selection can include five original research articles. You will present them in alphabetical order (in order of first author). For each journal article you will provide one annotated bibliography which will:

- Present the reference of the journal article in Vancouver referencing (as the title of a single annotated bibliography)
- Justify the reason for inclusion of the article based on journal quality or impact factor (IF), citations, +/- background of the author/s
- Discuss the relevance of the article to the overarching research question/aim and any components which are not relevant should also be clearly stated
- Discuss the relevance to your discipline
- Discuss the method of research used within the article and its relevance to the aim of your research
- Discuss the main scope/purpose of the article and findings and its relevance to your research question
- State clearly the conclusions of the article and how these are relevant to your research question
- Outline any strengths and limitations of the article and the relevance of these to your topic
- The impact of figures (including charts and graphs) and tables used in the article and the impact on the reader interpretation of the findings

#### Critical Summary

This will summarise the findings from the five (5) selected articles, and discuss how collectively they address (or do not address) your research question and aim

- Correctly state insights gained from the articles collectively which relate to the aim of your research



- Critically discuss the important findings and synergy (or lack of synergy) between articles and their findings as well as strengths and limitations of the articles provided
- Identify areas of consensus or lack of consensus between the articles to aid identification of current knowledge gaps and reason for selection of your research topic
- Critical summary is correctly and accurately referenced

### Reference List

Five (5) references, presented in Vancouver style

#### Font, size, and line spacing:

Arial or Calibri in size 12 with 1.5 line spacing and double line spacing between paragraphs and sections.

#### PDF copies of five selected articles:

You are required to upload PDF copies of the five articles you have selected along with the written document as part of the assessment submission. The PDFs are to be saved by naming them with the name of the first author and the year of publication (e.g. Orlic 2019) and uploaded separately.

### You will be provided the opportunity to gain feedback prior to submission from your supervisor on one occasion to ensure your research question/aim is appropriate and PICO compliant.

As with all university assessments, colluding with other students on non-group work tasks is considered academic misconduct and will be dealt with in adherence with the CQU student academic integrity policy and procedure.

### Assessment Due Date

Week 5 Friday (5 Apr 2024) 5:00 pm AEST

Submission via Moodle site

### Return Date to Students

Week 7 Tuesday (23 Apr 2024)

Return will be at or after 23/04/2024 due to only one marker

### Weighting

30%

### Assessment Criteria

A high level of communication skills are required to convey a clear and concise summary of your research question, aim, methodology, outline of each article in an annotated bibliography and critical summary of the articles selected.

You will need to ensure that your submission demonstrates:

- A refined, feasible answerable research question and aim where PICO has been utilised
- Four appropriate keywords or key terms
- A clear outline of methodology to allow reproducibility of the literature search, clearly outlining inclusion/exclusion criteria
- A selection of relevant and appropriate peer reviewed journal articles which are relevant to your research question/aim
- Articles selected discuss most recent and up-to-date findings related to the topic
- Annotated bibliographies presented correctly and addresses aim/question and are appropriate for discipline, describes main content, methodology, findings, conclusion, strengths, limitations, and describes features to enhance reader interpretation
- Critical summary demonstrates correct synthesis of information into a unified and coherent whole document, demonstrating internal consistency and logical flow
- Adherence to academic writing in a scholarly style that is culturally and ethically aware
- Five (5) PDFs of the individual articles selected included, correctly uploaded and named
- **This assessment must be a different body of work to that which was previously submitted into the unit MEDS21003 to ensure there is no evidence of self-plagiarism. The same topic may be used however the research question and aim must be different.**
- A copy of the detailed marking rubric for this assessment task is available on the MEDS21006 unit Moodle site.

### Referencing Style

- [Vancouver](#)

### Submission

Online

### Submission Instructions

Submission via Moodle site

### Learning Outcomes Assessed

- Collect and use data ethically
- Critically analyse and interpret research data
- Interpret research data and discuss findings professionally

- Prepare and present a journal paper within the required style and format of an appropriate journal in the field of course enrolment.

### Graduate Attributes

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

## 2 Written Assessment 2 - Systematic / Narrative Review OR Research Paper

### Assessment Type

Written Assessment

### Task Description

In this assessment, you will continue to develop and apply your research skills to enable you to write a research paper **OR** review paper. CQU Ethics approval is required to complete the research paper.

The research paper **OR** review paper should be **2500 +/- 10% (2250 to 2750)** words long with the word count excluding the structured abstract, figures, tables and reference. The research paper **OR** narrative review should be suitable for your discipline and will either be:

1. The write-up of the CQU ethically approved research project you commenced in MEDS21003 and have collected data for, **OR**
2. A systematic review on a topic related to the one you commenced in MEDS21003, the topic you chose in Assessment 1 for MEDS21006, or a new topic.

The skills you will develop include the ability to critically analyse reading material, to articulate an academic argument and to reflect on your own bias and assumptions. You will use these skills throughout your career as a healthcare professional.

The research paper **OR** review paper will include the following:

### Structured Abstract

- The structured abstract is written as a short, robust, stand-alone summary
- Includes the headings: introduction, methods, results and conclusion
- Length (**200 words**)

### Introduction

- Leads the reader from a general area of research to a specific area of research
- Describes the motivation for the study
- Discusses the importance of the findings
- Includes and makes clear the research question to be addressed
- Demonstrates originality and creativity of topic and contribution to the field

### The body of the paper (method, results and discussion as sub-headings)

- The **methodology** is well explained in text, unambiguously, logically and practically, and may be presented as a figure which is referred to in the text.
- **Results** are well presented either as narrative and/or tabulated
- **Discussion** is written comprehensively and critiques the literature

### Conclusion

- Written in a way that draws conclusions from the study and relates to major points arising from research
- And answers or addresses the research question/aim and reflects the title

At least 20 journal articles will need to be cited throughout the paper with referencing in Vancouver style.

**You will be given one opportunity to obtain feedback from your mentor prior to submission.**

As with all university assessments, colluding with other students on non-group work tasks is considered academic misconduct and will be dealt with in adherence with the CQU student academic integrity policy and procedure.

### Assessment Due Date

Week 12 Friday (31 May 2024) 5:00 pm AEST

Submission via Moodle site

## **Return Date to Students**

Exam Week Friday (14 June 2024)

Return will be on or after 14/06/2024 due to only one marker.

## **Weighting**

70%

## **Minimum mark or grade**

50%

## **Assessment Criteria**

A high level of communication skills are required for this assessment task and you will be marked on the following:

### **Written style, presentation and communication**

- Synthesis of information into a unified and coherent manuscript demonstrating internal consistency and logical flow
- There is a clear progression from the research question through to the conclusion
- Written in a style that is culturally and ethically aware
- Data and findings are presented astutely, correctly, creatively and effectively as table/s and/or figure/s
- Critically analyses own work in an objective and reflective manner
- Written and presented in a correct, objective and scholarly style
- Findings are communicated in a style that incorporates specialist and non-specialist audiences and is very clearly articulated but demonstrate critical judgement
- Independently written and can foster intellectual debate
- Contributes information that is relevant and of value to the field concerned
- Demonstrates creativity and originality
- Appropriate in-text referencing (citation)
- Accurate and complete reference list
- Appropriate language, clear, accurate and used to maximum effect
- Outstanding command of grammar and spelling with thorough editing

### **Contribution to the field**

- Relative to the limited time available for a research project - meticulous, substantial exploration of limits and strengths
- Contribution of novel or new knowledge to the development of current theory, research or practice

## **Assessment Criteria for research paper**

The assessment criteria are the same as for narrative review, with the addition of:

### **Materials and Methods**

- The description of the data collection methodology is detailed. correct and flawless
- The steps in data collection are defined in appropriate detail allowing the reader to be able to reproduce the study
- The population/sampling, location, restriction/limiting conditions, sampling techniques, procedures, materials and variables are discussed unambiguously
- Any lab equipment, specific instruments, subjects, computer or mathematical models are explained
- Any bias in data collection is clearly explained

### **Results**

- Results are presented and described ethically and in an orderly fashion using text and illustrative methods
- Summaries of statistical analysis are described
- Tables and figures appropriately used in support of the text
- Negative results are also reported

Copies of the detailed marking rubrics for this assessment task, relevant to either narrative review or research paper are available on the Moodle site.

## **Referencing Style**

- [Vancouver](#)

## **Submission**

Online

## **Submission Instructions**

Submission via Moodle site

## Learning Outcomes Assessed

- Collect and use data ethically
- Critically analyse and interpret research data
- Interpret research data and discuss findings professionally
- Prepare and present a journal paper within the required style and format of an appropriate journal in the field of course enrolment.

## 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