

HESC4561

Research Internship A

Course Outline
Term 2, 2024

School of Health Sciences
Faculty of Medicine & Health

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1. Staff

| Position | Name | Email | Consultation times and locations | Contact Details |
|-----------------|------------------|-----------------------|---------------------------------------|-----------------|
| Course Convenor | Martin R Lindley | m.lindley@unsw.edu.au | By appointment WWW Level 2, Rm 216 | By email |

2. Course information

Units of credit: 6 UOC

- Pre-requisite(s):
- MATH1041 - Statistics for Life and Social Sciences (UG)
- HESC4501 - Exercise Physiology Research Seminars (UG)
- WAM equal or above 65

Teaching times and locations:

- Introductory lecture: Week 1, Wednesday (10am – 12pm). Face to Face on campus in WWLG02
 - First hour intro
 - Second hour a chance to chat informally about your projects
- Oral Presentations seminar: Wed or Thurs Week 5 (2-hour sessions - Face to Face on campus in WWLG02).
- Regular meetings with research supervisor (times to be negotiated between yourself and supervisor)

Course information can be found at: [Class Details \(unsw.edu.au\)](http://unsw.edu.au)

2.1 Course summary

This course comprises the first half (10 weeks) of a 20 week (2 term) experimental research project, supervised by a suitable staff member of a research institution. The project may encompass a systematic review, project development, clinical or laboratory experiments, statistical analyses, and oral and written reporting. Projects may also involve 'placements', possibly outside UNSW, in the form of externally funded research programs, industrial placements or other programs either during the usual session or in the session breaks. In these cases, students will require an academic member of staff to supervise the internship. The course will develop the student's ability to formulate research questions, conduct in-depth studies, analyse and present data, and write reports.

2.2 Course aims

- To develop an understanding of integrity in research
- To develop critical thinking in relation to the scientific literature

- To foster independence in undertaking research projects, such as collecting and analysing scientific and clinical data or conducting a systematic review
- To provide skills in effective scientific communication (oral & written)

2.3 Course learning outcomes (CLO)

At the successful completion of this course you (the student) should be able to:

1. Develop a research question based on review of existing scientific or clinical research
2. Develop an understanding of current techniques used in biomedical research
3. Synthesise, organise and present data from critical review of the literature
4. Develop skills in scientific communication, including oral and written skills
5. Communicate and work effectively with peers, colleagues and stakeholders

2.4 Relationship between course and program learning outcomes and assessments

| Course Learning Outcome (CLO) | LO Statement | Related Tasks & Assessment |
|-------------------------------|---|--|
| CLO 1 | Develop a research question based on review of existing scientific or clinical research | Supervisor Report Oral Presentation Research Protocol |
| CLO 2 | Develop an understanding of current techniques used in biomedical research | Supervisor Report Oral Presentation Research Integrity Quiz Research Protocol |
| CLO 3 | Synthesise, organise and present data from critical review of the literature | Supervisor Report Oral Presentation Research Protocol |
| CLO 4 | Develop skills in scientific communication, including oral and written skills | Supervisor Report Oral Presentation Research Protocol |
| CLO 5 | Communicate and work effectively with peers, colleagues and stakeholders | Supervisor Report Oral Presentation |

3. Strategies and approaches to learning

3.1 Learning and teaching activities

1. Introductory lecture – delivered face to face
2. Research Integrity module (online)
3. Student oral presentations (face to face)
4. Regular meetings with research supervisor to plan research, set timelines, problem solve, analyse & synthesise data & discuss conclusions (face to face & online)

3.2 Expectations of students

Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150 hours of study and learning activities.

From these 150 hours, subtract the time required for course attendance (4 hours - i.e., 2 hour introductory lecture and 1 x 2 hour seminar) and the time needed to complete the research integrity modules, background reading and to prepare the presentation and written assessments (~ 66 hours or 6 – 7 hours per week). The difference equates to regular meetings with research supervisor, assisting with data collection and analysis, and other relevant tasks (e.g. learning experimental procedures), for up to 8 hours per week across 10 weeks (i.e., 80 hours total).

Attendance is compulsory at:

- Oral Presentation seminar: Wednesday or Thursday (2-hour session). Students are expected to be actively involved in critiquing their colleagues' presentations and asking questions in Q & A session at end of each presentation

An introductory lecture will be delivered face to face in Week 1. This will give an overview of the course and students are encouraged to reflect on their proposed projects and seek feedback. Please make an effort to attend this class face to face as it is one of the only few opportunities to interact with your course convenor throughout the term.

4. Course schedule and structure

This course has minimal contact hours (2 hours introductory lecture and 2 hr oral presentation workshop). You are expected to spend an additional 14 hours per week of non-class contact hours to complete online modules, meet with supervisors, collect data, undertake readings & prepare oral and written assessments.

| Week [Date/Session] | Topic | Activity | Related CLO |
|--------------------------------|-------------------------------------|----------------------------------|---|
| Week 1 | Introduction to Research Internship | Introductory Lecture | |
| Week 3 | Research Integrity | Research Integrity Quiz | CLO 2 - Develop an understanding of current techniques used in biomedical research |
| Week 5 | Presenting scientific findings | Oral Presentation | CLO 4 - Develop skills in scientific communication, including oral and written skills |
| Week 9 | Research protocol submission due | Research Protocol | CLO1-5 |
| Week 10 | Research Supervision | Submission: Supervisor Report | CLO 5- Communicate and work effectively with peers, colleagues and stakeholders |

5. Assessment

5.1 Assessment tasks

| Assessment task | Length | Weight | Mark | Due date and time |
|--|------------------|--------|------|--|
| Assessment 1: Research Integrity Quiz - This assessment consists of 2 online research integrity modules and quizzes designed to help prepare students to undertake a research project. | | 20% | 30 | 5pm Friday 14 th June 2024 |
| Assessment 2: Oral presentation - This will include background information, research project aims, hypothesis and methods to be used or developed. The presentation will be of 10 minutes duration, with 3 minutes question time and 2 minutes verbal feedback provided after the presentation. The feedback provided will guide your research direction and subsequent completion of the Research Protocol assignment. | 10 mins duration | 30% | 20 | Submit PowerPoint presentation by 5pm Monday 24 th June 2024. Oral presentation Wed or Thurs 26 th /27 th June 2024 |
| Assessment 3: Research Protocol - A written assignment of 2000 words, detailing the intended research protocol. This includes background information, relevance and importance to exercise physiology, project aims, hypothesis and methods to be used or developed. It will also include a statistical analysis plan and a conclusion. | 2,000 words | 40% | 50 | 5pm Monday 22nd July 2024 (Week 9) |
| Assessment 4: Supervisor Report - A report by the internship supervisor commenting on the student's performance throughout the term. A rubric will form the basis for the Supervisor Report. | N/A | 10% | 10 | 5pm Friday 29 th July 2024 (Week 10) |

Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

5.2 Assessment criteria and standards

ASSESSMENT TASKS

Assessment Criteria

Assessment Task 2 – ORAL PRESENTATION

The following marking scheme will be used to grade your presentation

| Background | Max. Marks = 4 | Unsatisfactory (mark = 0) | Below average (0.25) | Satisfactory (0.5) | Good (0.75) | Excellent (1.0) | Mark |
|---|------------------------|----------------------------------|-----------------------------|---------------------------|--------------------|------------------------|-------------|
| Adequate justification for internship | 1 | | | | | | |
| Aims of internship adequately explained | 1 | | | | | | |
| Scope of internship explained | 1 | | | | | | |
| Able to be understood by an educated but non-expert audience | 1 | | | | | | |
| Content | Max. Marks = 4 | Unsatisfactory (mark = 0) | Below average (0.5) | Satisfactory (1.0) | Good (1.5) | Excellent (2.0) | Mark |
| Information is relevant to topic | 2 | | | | | | |
| Relevant background information included | 2 | | | | | | |
| Slides appearance & Presentation Style | Max. Marks = 10 | Unsatisfactory (mark = 0) | Below average (0.5) | Satisfactory (1.0) | Good (1.5) | Excellent (2.0) | Mark |
| Slides attractive | 2 | | | | | | |
| Font size & colour easy to read | 2 | | | | | | |
| Use of pictures, diagrams & tables | 2 | | | | | | |
| Structure is logical & easy to follow | 2 | | | | | | |
| Confident voice, audience engagement & timing (not too short or long) | 2 | | | | | | |

| Conclusions | Max. Marks = 2 | Unsatisfactory (mark = 0) | Below average (0.25) | Satisfactory (0.5) | Good (0.75) | Excellent (1.0) | Mark |
|---|-----------------------|----------------------------------|-----------------------------|---------------------------|--------------------|------------------------|-------------|
| Summary of potential challenges | 1 | | | | | | |
| Ability to interpret & answer questions | 1 | | | | | | |

Assessment Task 3 – RESEARCH PROTOCOL

The Research Protocol is to be a concise overview of the research topic, any hypotheses and the methods and procedures being used, with a discussion on outcome measures and statistical analysis

| Background | Max Marks = 10 | Unsatisfactory (mark = 0) | Below average (0.5) | Satisfactory (1.0) | Good (1.5) | Excellent (2.0) | Mark |
|---|-----------------------|----------------------------------|----------------------------|---------------------------|-------------------|------------------------|-------------|
| Concise & relevant | 2 | | | | | | |
| Clinical relevance of the research project / systematic review adequately explained | 2 | | | | | | |
| Scope of the research project / systematic review adequately explained | 2 | | | | | | |
| Coverage of appropriate research to date in this area | 2 | | | | | | |
| Explanation of gaps in the literature | 2 | | | | | | |
| Content | Max Marks = 20 | Unsatisfactory (mark = 0) | Below average (1.0) | Satisfactory (2.0) | Good (3.0) | Excellent (4.0) | Mark |
| Accurate description of study design | 4 | | | | | | |
| Accurate description of methods & procedures | 4 | | | | | | |
| Description of outcome measures – primary and secondary | 4 | | | | | | |
| Accurate description of power & sample size calculations (if appropriate) | 4 | | | | | | |
| Accurate description of how data will be analysed | 4 | | | | | | |
| Quality of the writing | Max Marks = 20 | Unsatisfactory (mark = 0) | Below average (1.0) | Satisfactory (2.0) | Good (3.0) | Excellent (4.0) | Mark |

| | | | | | | |
|--|---|--|--|--|--|--|
| Clear, fluent writing | 4 | | | | | |
| Grammar & spelling | 4 | | | | | |
| Adherence to prescribed format | 4 | | | | | |
| Written for educated but non-expert reader | 4 | | | | | |
| Referencing (accuracy & format) | 4 | | | | | |

Assessment Task 4 – SUPERVISOR REPORT

(To be completed by the supervisor)

The supervisor is encouraged to discuss this evaluation with the student before sending the evaluation to the course convenor.

Student Name: _____

Supervisor Name: _____

This internship started on (date) _____ and was completed on (date) _____

At (location) _____

Please give a brief summary of the internship:

| Student attribute | Excellent (1.0) | Good (0.75) | Average (0.5) | Poor (0.25) | Not applicable (N/A) |
|---|----------------------------|------------------------|--------------------------|------------------------|---------------------------------|
| <i>Enthusiasm for the experience</i> | | | | | |
| <i>Accuracy and precision in experiments</i> | | | | | |
| <i>Decision-making, judgments, setting priorities</i> | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| <i>Attention to detail</i> | | | | | |
| <i>Willingness to ask for guidance</i> | | | | | |
| <i>Persistence to complete tasks</i> | | | | | |
| <i>Data analysis skills</i> | | | | | |
| <i>Ability to synthesize information and communicate it effectively</i> | | | | | |
| <i>Ability to work cooperatively with others</i> | | | | | |
| <i>Ability to create and communicate possible solutions to problems</i> | | | | | |

Additional comments:

Grade: /10 (scores will be averaged across number of applicable attributes)

Signature of Supervisor and date of evaluation:

AI Permission Level: DRAFTING ASSISTANCE

As these course assessment tasks involves some planning or creative processes, you are permitted to use software to generate initial drafts. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the software should not be a part of your final submission. It is a good idea to keep copies of your initial drafts to show your lecturer if there is any uncertainty about the originality of your work. Please note that your submission will be passed through an AI-text detection tool. If your marker has concerns that your answer contains passages of AI-generated text that have not been sufficiently modified you may be asked to explain your work, but we recognise that you are permitted to use AI generated text as a starting point and some traces may remain. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

5.3 Submission of assessment tasks

Late Submission

Late submissions will be penalized at 5% per day capped at five days (120 hours). Students will not be permitted to submit their assessments after this date.

Short Extension

No short extensions are available in this course.

Special Consideration

If you experience a short-term event beyond your control (exceptional circumstances) that impacts your performance in a particular assessment task, you can apply for Special Considerations.

You must apply for Special Consideration **before** the start of your exam or due date for your assessment, except where your circumstances of illness or misadventure stop you from doing so.

If your circumstances stop you from applying before your exam or assessment due date, you must **apply within 3 working days** of the assessment, or the period covered by your supporting documentation.

More information can be found on the [Special Consideration website](#)

5.4 Feedback on assessment

Feedback to students will be delivered via a number of methods. Following written assignments submitted through Turnitin, scoring will be given in the form of an assessment rubric with comments attached. Following oral presentations, feedback will be delivered in 2 ways; generic feedback to the whole group about strengths and weaknesses & individual feedback (summary of examiners comments) online with grade.

Additional feedback can also be provided via email or face to face when requested. This can be following assessments or as a tool to enable students to adapt and adjust their research direction when challenges arise.

6. Academic integrity, referencing and plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism. Please use Vancouver referencing style for this course.

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage.¹ At UNSW, this means that your work must be your own, and others' ideas

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and **plagiarism** can be located at:

- The Current Students site <https://student.unsw.edu.au/plagiarism>, and
- The ELISE training site <https://subjectguides.library.unsw.edu.au/elise>

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

7. Readings and resources

Useful resources can be found on the Moodle site for this course under the section "Course Resources"

8. Administrative matters

Student enquiries should be submitted via student portal <https://portal.insight.unsw.edu.au/web-forms/>

9. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing and Health <https://www.student.unsw.edu.au/wellbeing>
- UNSW IT Service Centre: <https://www.myit.unsw.edu.au/services/students>
- UNSW Student Life Hub: <https://student.unsw.edu.au/hub#main-content>
- Student Support and Development: <https://student.unsw.edu.au/support>
- IT, eLearning and Apps: <https://student.unsw.edu.au/elearning>
- Student Support and Success Advisors: <https://student.unsw.edu.au/advisors>
- Equitable Learning Services (Formerly Disability Support Unit): <https://student.unsw.edu.au/els>
- Transitioning to Online Learning <https://www.covid19studyonline.unsw.edu.au/>
- Guide to Online Study <https://student.unsw.edu.au/online-study>