



Faculty of Medicine
School of Medical Sciences

Exercise Physiology Program

HESC4551

Research project (Internship or Literature review)

Course Outline Summer Session 2019

CRICOS Provider Code 00098G

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Please read this outline in conjunction with the following pages on the [School of Medical Sciences website](#):

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at medicalsciences.med.unsw.edu.au)

Staff Contact Details

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Students are to submit all enquiries via a web form at the [UNSW Student Portal Web Forms](#):

<https://unswinsight.microsoftcrmportals.com/web-forms/>

Students to log on with your zID and zPASS

Ph: 9385-2557

Course details

Credit Points: 6 UOC

Course Prerequisites / Assumed Knowledge

MATH1041 – Statistics for Life & Social Sciences

HESC4501 – Exercise Physiology Research Seminars

Course Contact Hours:

- Introductory lecture: Week 1, Wednesday (2 hours session)
- Oral Presentations seminar: Week 3, Wednesday (2 hours session)
- Poster presentations seminar: Week 8 Wednesday (2 hours session)

Course Description

Short theoretical or experimental research project, supervised by a suitable staff member of an institution. The project may encompass 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.

Aims of the Course

- To provide skills in effective scientific communication
- To develop critical thinking in relation to the scientific literature
- To foster independence in undertaking small scale research projects, such as reviews of the literature or collecting and analysing scientific and clinical data

Student Learning Outcomes

This term is used to describe what it is that you should be able to do, explain or understand if you have learned effectively in the course. The assessment in the course will be matched as closely as possible to the stated learning outcomes. That is, the assessment will test how well you have achieved the learning outcomes of the course. The general learning outcomes for the course are as follows:

At the end of the course you should be able to:

- Synthesize and present data from critical review of the literature
- Be aware of current techniques used in biomedical research
- Be able to write a literature review
- Write an article of an imposed format and style
- Generate original scientific illustrations
- Be able to organize, present and discuss research data

Graduate Attributes

- Engage in independent and reflective learning for the betterment of professional clinical practice, following an evidence-based approach
- Communicate effectively with patients, colleagues and other health professionals

Rationale for the inclusion of content and teaching approach

How the course relates to the Exercise Physiology profession – The information and ideas presented in this course will enable development of the critical thinking and good communication skills necessary to professionals. Good communication skills are necessary to build an effective relationship between the patient and the practitioners. Along with the base knowledge of techniques used in experimental research, understanding how science is published and ranked is a prerequisite to appreciate scientific output quality. A solid understanding of research in the field of Exercise Sciences is essential to appreciate the progress and evolution of techniques and knowledge in the course of a professional carrier.

How the course relates to other courses in the Exercise Physiology program – Together with Research Seminar (HESC4501), this fourth year course builds upon the knowledge accumulated throughout the whole program. It uses previously understood fundamental concepts to build the necessary critical thinking towards professional independence.

Teaching strategies

Lectures and seminars – These are the only classroom contact hours in Research Projects and are quite minimal. Nonetheless, these activities provide a valuable opportunity to get direction on course requirements and assessment tasks as well as to see and learn from what your colleagues have completed for their projects.

Independent study – Independent study will make up a major portion of the course.

Assessments – These tasks have been chosen as tools to enhance and guide your learning as well as a way of measuring performance, and are therefore a central teaching strategy in this course. The assessments have been designed as authentic tasks that replicate the processes a scientist or research-active clinician would undertake to conduct and present research. It is commonplace for practicing clinicians to see the end-product of this process when attending conferences run by professional associations as part of ongoing education as a healthcare professional.

Internship FAQ

Should I do an internship or a literature review?

The assessment requirements for both options are detailed in the course outline(s). With regard to an internship, the short duration and the credit point value for the course does not typically make it feasible to conduct an independent and separate project. Rather, your learning would be facilitated by participating in ongoing research projects being run by postgraduate students or staff.

A focussed sub-component of the project will need to be identified in order to prepare a report. In completing an internship you will participate in various aspects of the research process (e.g. meetings with supervisors, learning techniques, collecting data, analysing data, interpreting data) as well as background reading, preparation of the written report and oral presentation. Students who have completed internships tend to report very positive learning experiences from getting to work hands on and from one-on-one contact with supervisors.

How much time is required to complete an internship?

A 6 UOC course at UNSW requires approximately 150 hours of student work in total. From these 150 hours, subtract the time required for course attendance (6 hours - i.e., 2 hour introductory lecture and 2x 2 hour seminars) and the time needed to complete background reading and to prepare the presentation and written report assessments (~ 72 hours or 6 – 9 hours per week).

The difference equates to assisting with data collection and analysis, and other relevant tasks (e.g. learning experimental procedures), for up to 6 hours per week across 12 weeks (i.e., 72 hours total). Six hours per week is also the typical contact hours for a 6 UOC course.

If an internship is completed over summer then it would be necessary to complete up to 9 hours per week across the shorter 8 week teaching session (i.e., 72 hours).

Structure of internships

The actual distribution of internship hours across the teaching period will depend on the project and is negotiated with the supervisor. For example, a full-time block of 2 weeks, or several hours per week for 8 weeks, or some other combination that is suitable for the supervisor and student. To facilitate scheduling, it is permissible to commence internships prior to week 1 of the teaching semester so long as you: 1) are enrolled in the course, and 2) have gained approval from the course convenor.

Expectations of Students completing internships

If you have committed to an internship then it is important that you fulfil the commitments negotiated with your supervisor. In negotiating these expectations, please do take note of the text above regarding expected hours. Of course, you are free to commit to additional effort of your own accord, but be sure to balance any such commitments with your other courses, such as the clinical practicum. Should any issues arise, contact the course convenor by email or arrange a meeting.

At the completion of an internship your supervisor is asked to complete an assessment form and to indicate if your performance was satisfactory or unsatisfactory. Should your performance be rated as unsatisfactory then this does represent a failure to complete course requirements and it will be necessary to discuss this with the course convenor to determine whether supplementary assessments or activities are warranted. The assessment form completed by your supervisor prompts ratings of your performance in several domains and you are encouraged to discuss these with your supervisor.

Expectations of Supervisors for internships

The primary expectations of a supervisor are that they will guide and support you to: 1) complete practical research activities, and 2) identify a specific component of the research question that is suitable for the written report and presentation assessment activities. Secondly, the supervisor and/or their assistants should ensure that you receive adequate training to be able to undertake the planned activities, with due attention to safety and ethical requirements. While a supervisor need not necessarily have a research higher degree, it will be important to ensure that sufficient guidance is available. For example, it is advisable to seek course convenor guidance in planning projects completed in a clinical setting and outside of UNSW.

How to negotiate an internship

You should contact potential supervisors some weeks prior to enrolling in and commencing the research project course. Often this is best done much sooner than later. Unlike the clinical practicum courses, you are free to contact potential internship supervisors of your own accord. If the potential supervisor has not previously supervised exercise physiology research students then you might need to explain some of the requirements to your supervisor by summarising elements of the course outline.

Attendance requirements

See also [Advice for Students](#)

Attendance is expected at all lectures and presentations for this course. Attendance at all classes will be recorded. Students who do not participate in these sessions for any reason other than medical or misadventure, will be marked absent and will be awarded a grade of FAIL for the entire course. If absent for medical reasons, a medical certificate must be lodged with the lecturer within 7 days of the time period of the certificate's expiry. No consideration will be given after this time. Although lectures will be available on Moodle/EchoServer, student participation is encouraged in the lectures and these are important to attend.

Deferred Exams

If you miss an exam for medical reasons you must supply adequate documentation (including a medical certificate). Your request for consideration will then be assessed and a deferred exam may be granted. You cannot assume you will be granted supplementary assessment. The deferred exam may include a significant oral element.

Health and Safety

See also [Advice for Students](#)

Class activities must comply with the NSW Health & Safety Act 2011 and the Health & Safety (HS) Regulations 2011. For students completing lab-based projects, it is mandatory to complete minimal HS training. The training courses that you have to undertake also depend of the nature of the techniques you will be using or the environment itself.

To get a list of your specific mandatory training, contact your supervisor at least one month before the commencement of your internship.

Health and safety training

Some internships will be completed in a laboratory environment, which will have particular health and safety requirements that your supervisor and/or a lab manager will convey. When undertaking internships in a laboratory the UNSW Health and Safety Awareness course will typically be required at a minimum and is completed online following the instructions below. The course convenor or your supervisor can arrange for you to have access to the online course.

1. Go to MyUNSW and use the new single sign on button to access MyUNSW
2. Look at the top right of the screen and click on the Moodle logo
3. On the right hand side will be a box labelled "My Courses" with the UNSW OHS Awareness course listed there
4. Click on the course and you will be taken to the home page of the course containing the introduction to the course, the module and the assessment
5. Click on Part One to access the course – please note that it may take a few moments to load on your computer – please be patient during this time and don't click anything on the screen
6. Once you have finished with the course, click on Part Two and complete the assessment

Insurance Cover

UNSW students undertaking external placements as a component of their degree program are covered by the University's insurance policy for public liability, professional indemnity and personal accident. The University has liability insurance in excess of \$10 million for any one claim in the event of such an occurrence.

If requested, the employer hosting a placement can be provided with a Letter of Indemnity issued by the Program Officer or Authority prior to commencement of the placement confirming insurance coverage.

The university, employers and students should undertake all reasonable measures to ensure the safety of students, employers and the general public is maintained at all times. In the situation that such an event occurs, the Program Officer, Course Convenor or Program Authority should be immediately informed.

Assessment

Internship option

Assessment will consist of an oral presentation, an abstract, a written report and a poster presentation. A satisfactory supervisor evaluation is also a requirement of the course.

Summary of Assessment tasks for the Internship	Weight	Due Date
<p>ASSESSMENT TASK 1 – ORAL PRESENTATION An oral presentation introducing the topic of the literature review its importance to exercise physiology or the topic of the research project its aims, hypothesis and methods to be used or developed.</p>	20%	Week 3
<p>ASSESSMENT TASK 2 – ABSTRACT (300 WORDS) A concise summary of the background, introduction to previous literature, rationale for the review/experiment and any hypotheses/aims of the review/experiment</p>	10%	Week 5
<p>ASSESSMENT TASK 3 – POSTER PRESENTATION A summary of the research undertaken in a format that could be presented at a conference/workshop or at a public information session.</p>	20%	Week 8
<p>ASSESSMENT TASK 4 – WRITTEN REPORT A detailed scientific description of the study containing an introduction, the aims, hypothesis (if appropriate), methods, results (if available), discussion and conclusions/ recommendations</p>	50%	Week 8
<p>ASSESSMENT TASK 5 – SUPERVISOR EVALUATION</p>	Satisfactory/ Unsatisfactory	Week 8

Literature review option

Assessment will consist of an oral presentation, an abstract, a written report and a poster presentation.

Summary of Assessment tasks for the Internship	Weight	Due Date
<p>ASSESSMENT TASK 1 – ORAL PRESENTATION An oral presentation introducing the topic of the literature review its importance to exercise physiology, its aims, hypothesis and methods to be used</p>	20%	Week 3
<p>ASSESSMENT TASK 2 – ABSTRACT (300 WORDS) A concise summary of the background, introduction to previous literature, rationale for the review and any hypotheses/aims of the review</p>	10%	Week 5
<p>ASSESSMENT TASK 3 – POSTER PRESENTATION A summary of the review undertaken in a format that could be presented at a conference/workshop or at a public information session.</p>	20%	Week 8
<p>ASSESSMENT TASK 4 – WRITTEN REPORT A review of the literature detailing its importance and relevance to exercise physiology, the current understanding and the future of this area of research.</p>	50%	Week 8

Submission of Assessment Tasks

Assignments are to be submitted electronically through Turnitin via Moodle.

Penalties for late submission of assignments

In cases where an extension has NOT been granted, the following penalties will apply:

- For assignments submitted after **the advised time** on the due date, a penalty of 50% of the maximum marks available for that assignment will be incurred.
- A further 25% of the maximum possible allocated marks (i.e., a total of 75%) will be deducted from assignments which are two (2) days late.
 - Assignments received more than two (2) days after the due date **will not be allocated a mark**, however, these assignments **must** still be submitted to pass the unit.

Course schedule

Internship and Literature review

Week	Date	Item	Details
1	Wed 28 th November 2018	Introductory Lecture	
2			
3	Wed 12 th December 2018	Oral Presentation	Assessment task 1 to be submitted no later than 9 AM Monday of WEEK 3 (i.e., the PowerPoint presentation to be used during your Oral presentation is to be posted via Moodle).
4			
5	Fri 11 th Jan 2019	Abstract	Assessment task 2 is to be submitted no later than midnight Friday of WEEK 5 (i.e., the final written report is to be posted via Turnitin on Moodle).
6			
7			
8	Wed 30 th Jan 2019	Oral Poster Presentation	Assessment task 3 is to be submitted no later than 9 AM Monday of WEEK 8 (i.e., the PowerPoint presentation used during your poster presentation is to be posted via Moodle).
8	Fri 1 st Feb 2019	Written Report	Assessment task 4 is to be submitted no later than midnight Friday of WEEK 8 (i.e., the final written report is to be posted via Moodle).
<i>For internships - supervisor reports are due by the end of week 8</i>			

Literature Review

A primarily self-directed project that involves deciding on a research question/topic and addressing this question by a narrative or systematic review of the literature.

In some instances the literature review may be completed under the guidance of an internship supervisor as part of a larger research project.

Your literature review topic should be determined by the end of week 1.

Literature review - Assessment Task 1 – ORAL PRESENTATION

Of the format 6 minutes presentation, 2 minutes questions/discussion followed by 2 minutes of Feedback/ direction from the markers

Learning Outcomes

- To be able to organise, present and discuss a research topic
- To generate original scientific illustrations

See *Course Schedule* for submission instructions

Assessment Criteria

Use this to guide your preparation of the presentation. Note that the marking scheme on next page will be used to grade your presentation. Each category will be marked on a sliding scale from 0 to full marks for that division.

Presentation	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
<p>Overview – rationale for review & selection of appropriate scientific journal articles relevant to the project</p>	<p>Selection of articles inappropriate for the assignment (e.g. textbook chapters). No attempt to identify clinical relevance.</p>	<p>Selection of some appropriate articles (original research articles or reviews). Unclear at times, with minimal description of the clinical relevance.</p>	<p>Selection of appropriate articles (original research articles or reviews). Clear and accurate description of the clinical relevance.</p>	<p>Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Possibly critical thought</p>	<p>Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Some critical thought.</p>
<p>Body of the Presentation</p> <ul style="list-style-type: none"> ▪ <i>Background, If appropriate</i> ▪ <i>Hypothesis</i> ▪ <i>Aims</i> ▪ <i>Methods to be used</i> ▪ <i>Discussion</i> 	<p>Incomplete and inaccurate overview of articles. Lacking, or inaccurate, details for all or some of the purpose and methods. Some attempt to identify the clinical relevance.</p>	<p>Below average overview of the articles. Minimal detail for purpose and methods of review.</p>	<p>Good overview of the articles. Report purpose and methods of own study.</p>	<p>Good overview of the topic area, articles, Reports purpose and methods of own study. Some attention to the key details.</p>	<p>Very clear description of topic area, research plan and methodology to be used. Very good critical analysis of topic including strengths and limitations of study design</p>
<p>Quality of the presentation</p> <ul style="list-style-type: none"> ▪ <i>Presentation style</i> ▪ <i>Clarity of slides</i> ▪ <i>Allocation of time</i> ▪ <i>Ability to correctly interpret & answer questions</i> 	<p>Presentation style poor read most of presentation with little eye contact. Slides not clear. Slides overcrowded. Little use of figures and diagrams. Presentation goes over/significantly under time. Unable to interpret and answer most questions.</p>	<p>Below average presentation style with some eye contact. Read some. Some unclear slides. Some use of figures and diagrams. Over time. Answered some questions with reasonable accuracy</p>	<p>Good presentation style with some eye contact. Mostly clear slides. Uses figures and diagrams. Keeps to time. Answers most questions with reasonable accuracy</p>	<p>Good presentation style with eye contact. Clear slides. Good use of figures and diagrams. Adheres to the prescribed format. Keeps to time. Understands questions and answers them with reasonable accuracy</p>	<p>Clear, fluent and concise presentation with good eye contact. Clear slides without overcrowding. Clear figures and diagrams. Adheres to the prescribed format. Keeps to time & appropriate allocation of time. Accurate answers to questions</p>

Oral Presentation Marking Scheme - Review HESC 4551

Student Date

Examiner

Total Mark
/20

Background (Context)	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Review topic justified and relevant to Ex Phys.	2						
Aims/ Scope of Review adequately explained	2						
Content	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Enough information given to understand topic	2						
Information is focussed on topic	2						
Slides appearance & Presentation Style	Max. Marks = 8	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Used pictures, diagrams & tables: Effectively explained	2						
Confident voice, audience engagement & timing (not too short/long, not read)	2						
Able to be understood by audience	2						
Slides attractive Font size & colour easy to read	2						
Conclusions	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Summary of strengths & weaknesses	2						
Ability to interpret & answer questions	2						

Comments:

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Literature review - Assessment Task 2 – ABSTRACT

Learning Outcomes

- To clearly define the research question, provide a brief background and rationale for the review
- Provide an overview of the methods and the hypothesis
- To synthesize and present data from a critical review of the literature

See Course Schedule for submission instructions

The Abstract is to be a concise overview of the research topic, any hypotheses and any protocols or procedures being used, with a discussion on potential outcomes

General Assessment Guidelines :

Word Count – 300 word limit

	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
BACKGROUND	Introduction lacking detail	Minimal Detail given. Some relevant background.	Clear account of the scientific background	Concise and clear account of the scientific background	Very concise and clear account of the scientific background
RATIONALE	Poor rationale for the review and poor logic	Attempted to give a logical rationale but lacks detail	Good rationale provided and sound logic demonstrated	Clear and logical rationale for the review/research area	Very concise, clear and logical rationale for the review/research area
POSSIBLE CLINICAL SIGNIFICANCE	Poor association between the possible clinical significance and the background and discussion	Minimal association between the possible clinical significance and the background and discussion	Association between the possible clinical significance and the background and discussion	Links between the possible clinical significance and the background and discussion	Very clear links between the possible clinical significance and the background and discussion
DISCUSSION	Poor discussion and referencing to previous studies	Minimal discussion or relation to previous studies	Discussion sound with reference to previous studies	Discussion clear and logical with reference to some seminal studies	Discussion very clear and logical with reference to the seminal scientific studies
STYLE/ PRESENTATION	Disjointed flow of ideas. Sentences poorly constructed. Non-professional expression and lacking style. Delivery not entirely clear. Some grammatical or spelling errors	Poor flow of ideas some poor language. Style is colloquial a grammatical or spelling error noted	A good flow of ideas. Sentences well constructed but lacking professional expression and style. Delivery not entirely clear. Minor grammatical or spelling errors	Clear flow of ideas. Sentences well constructed and professional expression and style used. Delivery clear. Minor grammatical but no spelling errors	Very clear and logical flow of ideas. Sentences very well constructed and professional expression and style used. Delivery very clear and technical. No grammatical or spelling errors

Abstract Marking Scheme - Review HESC 4551

Student Date
 Examiner

Total Mark
/10

Background <i>Overview of field:</i>	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Clear description of field investigated	2						
Aims adequately explained	2						
Content	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 0.5)	Good (mark = 0.75)	Excellent (mark = 1.0)	Mark
How is this review adding to the field	1						
Scope of review explained	1						
Methods described briefly (i.e. search criterion, major methods used)	1						
Strengths, weaknesses and flaws	1						
Presentation <i>Readability:</i>	Max. Marks = 2	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 0.5)	Good (mark = 0.75)	Excellent (mark = 1.0)	Mark
Able to be understood by audience	1						
Grammar, spelling, and concise sentence structure	1						

Comments:

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Literature review - Assessment Task 3 – POSTER PRESENTATION

Of the format 4 minutes presentation, 3 minutes questions/discussion/feedback

Learning Outcomes

- To generate original scientific illustrations
- To be able to organize, present and discuss a chosen research area

See *Course Schedule* for submission instructions

This poster presentation is a defence of the research work

The poster should follow the following guidelines:

Use one PowerPoint slide and set to A0, Use landscape and custom size A0 118.9 x 84.1 cm (46.8 x 33.1 in)

Title – Up to 20 words

Student number and name, (Note: Systematic review need to add detail of supervisor)

The Literature review poster should have the following sections:

Background, Research Methods or Scope of Review, Overview of Literature, Discussion/Conclusions and Future Directions

Figures and/or Tables and References.

General Assessment Guidelines for the Review Poster Presentation

Presentation	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
Brief Overview – rationale for research topic & selection of appropriate scientific journal articles relevant to the project	Selection of articles inappropriate for the assignment (e.g. textbook chapters). No attempt to identify clinical relevance.	A poor selection of appropriate articles (original research articles or reviews). Some attempt to describe the clinical relevance.	Selection of appropriate articles (original research articles or reviews). Clear and accurate description of the clinical relevance.	Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Possibly critical thought	Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Some critical thought.
Body of the Presentation <ul style="list-style-type: none"> ▪ <i>Aims, and Hypothesis (if appropriate)</i> ▪ <i>Methods Results, Conclusion, and Discussion</i> 	Lacking, or inaccurate, details for all of the aims and methods.	Inaccurate or a lack of details for some of the aims and methods.	Reports purpose and methods of own study.	Reports aims and methods of own study with attention to some of the key details.	Very clear succinct description of design, aims and methodology of, and Conclusions of own study.
Quality of the presentation <ul style="list-style-type: none"> ▪ <i>Presentation style</i> ▪ <i>Clarity of Poster</i> ▪ <i>Allocation of time</i> ▪ <i>Ability to correctly interpret & answer questions</i> 	Presentation style poor. Reads presentation with no eye contact. Poster not clear, overcrowded. Presentation goes over/significantly under time. Little use of figures and diagrams. Unable to interpret and answer most questions.	Fair presentation style, minimal eye contact. Some of poster is overcrowded. Poor use of figures and diagrams. A bit over time. Answers a few questions with reasonable accuracy	Good presentation style with some eye contact. Mostly clear poster. Uses figures and diagrams. Keeps to time. Answers most questions with reasonable accuracy	Good presentation style with eye contact. Clear poster. Good use of figures and diagrams. Adheres to the prescribed format. Keeps to time. Understands questions and answers them with reasonable accuracy	Clear, fluent and concise presentation with good eye contact. Clear poster without overcrowding. Clear figures and diagrams. Adheres to the prescribed format. Keeps to time & appropriate allocation of time. Accurate answers to questions

Poster Presentation Marking Scheme HESC 4551

Student Date

Examiner

Total Mark
/20

Background –	Max Mark = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Title compelling and Background brief but succinct	2						
Aims and scope well defined	2						
Content	Max Mark = 6	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Structure is coherent, logical & easy to follow for an educated but non-expert audience	2						
Content is concise with critical analysis of results	2						
Appropriate conclusions drawn & scope for further research	2						
Poster appearance & Presentation Style	Max Mark = 10	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Layout & format attractive with correct dimensions	2						
Font size & colour easy to read. No overcrowding	2						
Use of pictures, diagrams & tables	2						
Confident voice, audience engagement & timing (not too short or long). Clear & concise	2						
Ability to interpret & answer questions	2						

Comments:

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Literature review - Assessment Task 4 – WRITTEN REVIEW

Learning Outcomes

- To read, assess, and synthesis the literature of a chosen area
- To be able to write a literature review

See *Course Schedule* for submission instructions

The review article should follow the following guidelines:

Title – Up to 20 words

Student number and name

Abstract – Up to 300 words (should be updated to include interpretation of literature reviewed)

Key words – Up to five key words defining the topic developed in the review

Introduction

Body of text

Conclusion



Up to 3,000 words

It is advisable to use appropriate sub headings to section off distinct areas of the literature being reviewed

Figures and Tables – if appropriate include no more that 3 to 5 figures or tables including legends

References – Up to 30 references of original research articles (> 15 references). No **review articles** should be cited in main sections.

Article should be formatted, 1.5 line-spacing, Margins 2.5 cm. Body text: 12 font. Illustration legend text 10 font. Total Word Count ~3500 +/- 10%. The file should be a word document (.doc or .docx format).

General Assessment Guidelines

Report	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
Literature Review – Basis of Review, Background, Aim(s) and if appropriate a Hypothesis. Identification of the relevance to Exercise Physiology	Background is unrelated to reviewed subject, does not give enough information for reader to understand field being reviewed. Aim(s) not explained, Ambiguous Hypothesis is presented. No link at all to exercise physiology. No attempt to identify clinical relevance.	Background is somewhat related to reviewed subject, gives minimal information for reader to understand topic. Aims poorly explained, A poor Hypothesis. Poor link to exercise physiology. Poor attempt to identify clinical relevance	Background is supportive of reviewed subject. Gives some information for reader to understand topic. Aims explained simply Hypothesis is presented. Some link to exercise physiology. An attempt to identify clinical relevance provided.	Background sheds light on the gap filled by reviewing the subject. Aims well explained, A plausible Hypothesis is presented. Clear link to exercise physiology identifying. Some evidence of clinical relevance provided.	Background is so clear it demonstrates why subject needs to be reviewed. Aims precise and concise, A scientifically plausible Hypothesis is presented. Excellent link to exercise physiology identifying a strong clinical relevance.
Body of the Report Background /Aim(s) Methods Overview of subject matter being reviewed and Conclusions Depth of critical analysis	Incomplete and inaccurate overview of the literature. Lacking, or inaccurate, details for all or some of the overviewed literature, methods, results and conclusions. No critical analysis of the field. Inappropriate conclusions that are unsupported by the literature presented	Poor overview of the literature. Lacking, or inaccurate, details for some of the purpose, methods, results and conclusions. Some critical analysis. Poor conclusions that are loosely supported by the results	Simple overview of the literature. Aims and methods described. Review reasonably presented some minor detail lacking for purpose, methods, results and conclusions. Attempt at critical analysis. Appropriate conclusions that are supported by literature	Good overview of the literature. Aims and methods described well. Review presented in a concise manner. No detail lacking for purpose, methods, results and conclusions. Good critical analysis of literature. Appropriate conclusions that are clearly supported by results and the literature.	Comprehensive and concise overview of the literature, reporting the purpose, key measures, key results and the most pertinent conclusions. Aims and methods easily understood and fully well. Review presented in a professional manner. Excellent critical analysis of literature. Conclusions and discussion expertly related to findings in the literature.
Quality of the writing and presentation • Adherence to prescribed format • Fluency and style • Spelling • Grammar • Appropriate referencing	Unprofessional language style used e.g.: background information in results section, conclusions and discussion in results section. A large number of careless spelling and grammatical mistakes. Overuse of the first person. Excessive colloquial tone. Inaccurate referencing. Illogical structure of the report.	Unprofessional language style used at times. A number of careless spelling and grammatical mistakes. Some use of the first person and Colloquial tone used. Inaccurate referencing. Poor structure of the report.	Professional language style used e.g.: no background information in results section, conclusions and discussion in results section. Minimal number of spelling and grammatical mistakes. Good use of 3 rd person. Appropriate referencing.	Scientific style used Ideas easy to follow. Fluent logical flow of ideas. All information in the appropriate sections. One or two grammar and spelling mistakes. Good referencing	Clear, fluent and concise scientific writing. No errors in written expression. Adheres to the prescribed format. Accurate referencing.

Written Report Marking Scheme - Review HESC4551Student Date
Examiner**Total Mark**

/50

Background	Max Marks = 10	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Abstract concise & relevant	2						
Clinical relevance of the review adequately explained	2						
Scope of the 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 (mark = 2.0)	Good (mark = 3.0)	Excellent (mark = 4.0)	Mark
Accurate & detailed description of study methods/procedures	4						
Results well presented	4						
Conclusions are valid	4						
Depth of critical analysis of literature	4						
Accurate summary of strengths, weaknesses & future directions	4						
Quality of the writing	Max Marks = 20	Unsatisfactory (mark = 0)	Below average (1.0)	Satisfactory (mark = 2.0)	Good (mark = 3.0)	Excellent (mark = 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						

Comments:

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Internship

A supervised project that includes hours of involvement in research or related development activities.

On the basis of these internship hours you must receive a satisfactory performance evaluation from your supervisor.

You also need to deliver presentations and submit an abstract and written report arising from your internship hours.

Your internship supervisor should be arranged prior to week 1.

Internship - Assessment Task 1 – ORAL PRESENTATION

Of the format 6 minutes presentation, 2 minutes questions/discussion followed by 2 minutes of Feedback/ direction from the markers.

Learning Outcomes

- To be able to organise, present and discuss a research topic
- To generate original scientific illustrations

See *Course Schedule* for submission instructions

Assessment Criteria

Use this to guide your preparation of the presentation. Note that the marking scheme on next page will be used to grade your presentation

Presentation	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
Overview – rationale for research project & selection of appropriate scientific journal articles relevant to the project	Selection of articles inappropriate for the assignment (e.g. textbook chapters). No attempt to identify clinical relevance.	Selection of some appropriate articles (original research articles or reviews). Unclear at times, with minimal description of the clinical relevance.	Selection of appropriate articles (original research articles or reviews). Clear and accurate description of the clinical relevance.	Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Possibly critical thought	Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Some critical thought.
Body of the Presentation <ul style="list-style-type: none"> ▪ <i>Background, If appropriate Hypothesis</i> ▪ <i>Aims</i> ▪ <i>Methods to be used</i> ▪ <i>Discussion</i> 	Incomplete and inaccurate overview of articles. Lacking, or inaccurate, details for all or some of the purpose and methods. Some attempt to identify the clinical relevance.	Below average overview of the articles. Minimal detail for purpose and methods of own study.	Good overview of the articles. Report purpose and methods of own study.	Good overview of the topic area, articles, Reports purpose and methods of own study. Some attention to the key details.	Very clear description of topic area, research plan and methodology to be used. Very good critical analysis of topic including strengths and limitations of study design
Quality of the presentation <ul style="list-style-type: none"> ▪ <i>Presentation style</i> ▪ <i>Clarity of slides</i> ▪ <i>Allocation of time</i> ▪ <i>Ability to correctly interpret & answer questions</i> 	Presentation style poor read most of presentation with little eye contact. Slides not clear. Slides overcrowded. Little use of figures and diagrams. Presentation goes over/significantly under time. Unable to interpret and answer most questions.	Below average presentation style with some eye contact. Read some. Some unclear slides. Some use of figures and diagrams. Over time. Answers some questions with reasonable accuracy	Good presentation style with some eye contact. Mostly clear slides. Uses figures and diagrams. Keeps to time. Answers most questions with reasonable accuracy	Good presentation style with eye contact. Clear slides. Good use of figures and diagrams. Adheres to the prescribed format. Keeps to time. Understands questions and answers them with reasonable accuracy	Clear, fluent and concise presentation with good eye contact. Clear slides without overcrowding. Clear figures and diagrams. Adheres to the prescribed format. Keeps to time & appropriate allocation of time. Accurate answers to questions

Internship - Assessment Task 2 – ABSTRACT

Learning Outcomes

- To clearly define the research question, provide a brief background and rationale for the study
- Provide an overview of the methods and the hypothesis
- To synthesize and present data

See *Course Schedule* for submission instructions

The Abstract is to be a concise overview of the research topic, any hypotheses and any protocols or procedures being used, with a discussion on potential outcomes

General Assessment Guidelines

Word Count – 300 word limit

	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
BACKGROUND	Introduction lacking detail	Minimal Detail given. Some relevant background.	Clear account of the scientific background	Concise and clear account of the scientific background	Very concise and clear account of the scientific background
RATIONALE	Poor rationale for the review and poor logic	Attempted to give a logical rationale but lacks detail	Good rationale provided and sound logic demonstrated	Clear and logical rationale for the review/research area	Very concise, clear and logical rationale for the review/research area
POSSIBLE CLINICAL SIGNIFICANCE	Poor association between the possible clinical significance and the background and discussion	Minimal association between the possible clinical significance and the background and discussion	Association between the possible clinical significance and the background and discussion	Links between the possible clinical significance and the background and discussion	Very clear links between the possible clinical significance and the background and discussion
DISCUSSION	Poor discussion and referencing to previous studies	Minimal discussion or relation to previous studies	Discussion sound with reference to previous studies	Discussion clear and logical with reference to some seminal studies	Discussion very clear and logical with reference to the seminal scientific studies
STYLE/ PRESENTATION	Disjointed flow of ideas. Sentences poorly constructed. Non-professional expression and lacking style. Delivery not entirely clear. Some grammatical or spelling errors	Poor flow of ideas some poor language. Style is colloquial a grammatical or spelling error noted	A good flow of ideas. Sentences well constructed but lacking professional expression and style. Delivery not entirely clear. Minor grammatical or spelling errors	Clear flow of ideas. Sentences well constructed and professional expression and style used. Delivery clear. Minor grammatical but no spelling errors	Very clear and logical flow of ideas. Sentences very well constructed and professional expression and style used. Delivery very clear and technical. No grammatical or spelling errors

Internship - Abstract Marking Scheme HESC 4551

StudentDate
 Examiner

Total Mark
/10

Background <i>Overview of field:</i>	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Clear description of field investigated	2						
Aims adequately explained	2						
Content	Max. Marks = 4	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 0.5)	Good (mark = 0.75)	Excellent (mark = 1.0)	Mark
How is this study adding to the field	1						
Scope of study explained	1						
Methods described briefly (i.e. search criterion, major methods used)	1						
Strengths, weaknesses and flaws	1						
Presentation <i>Readability:</i>	Max. Marks = 2	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 0.5)	Good (mark = 0.75)	Excellent (mark = 1.0)	Mark
Able to be understood by audience	1						
Grammar, spelling, and concise sentence structure	1						

Comments:

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Internship - Assessment Task 3 – POSTER PRESENTATION

Of the format 4 minutes presentation, 3 minutes questions/discussion/feedback

Learning Outcomes

- To generate original scientific illustrations
- To be able to organize, present and discuss a chosen research area

See *Course Schedule* for submission instructions

This poster presentation is a defence of the research work

The poster should follow the following guidelines:

Use one PowerPoint slide and set to A0, Use landscape and custom size A0 118.9 x 84.1 cm (46.8 x 33.1 in)

Title – Up to 20 words

Student number and name, (Research Internship: add address of department and contact detail of supervisor)

The poster should have the following sections

Research Internship:

Background, Material and Methods, Results, Discussion/Conclusions and Future Directions

Figures and/or Tables and References.

In some instances results will not be available from the research internship and more words can be dedicated to introduction or methods.

General Assessment Guidelines for the internship Poster Presentation

Presentation	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
<p>Brief Overview – rationale for research project & selection of appropriate scientific journal articles relevant to the project</p>	<p>Selection of articles inappropriate for the assignment (e.g. textbook chapters). No attempt to identify clinical relevance.</p>	<p>A poor selection of appropriate articles (original research articles or reviews). Some attempt to describe the clinical relevance.</p>	<p>Selection of appropriate articles (original research articles or reviews). Clear and accurate description of the clinical relevance.</p>	<p>Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Possibly critical thought</p>	<p>Selection of appropriate original research articles. Clear and accurate description of the clinical relevance. Some critical thought.</p>
<p>Body of the Presentation</p> <ul style="list-style-type: none"> ▪ <i>Aims, and Hypothesis (if appropriate)</i> ▪ <i>Methods Results, Conclusion, and Discussion</i> 	<p>Lacking, or inaccurate, details for all of the aims and methods.</p>	<p>Inaccurate or a lack of details for some of the aims and methods.</p>	<p>Reports purpose and methods of own study.</p>	<p>Reports aims and methods of own study with attention to some of the key details.</p>	<p>Very clear succinct description of design, aims and methodology of, and Conclusions of own study.</p>
<p>Quality of the presentation</p> <ul style="list-style-type: none"> ▪ <i>Presentation style</i> ▪ <i>Clarity of Poster</i> ▪ <i>Allocation of time</i> ▪ <i>Ability to correctly interpret & answer questions</i> 	<p>Presentation style poor. Reads presentation with no eye contact. Poster not clear, overcrowded. Presentation goes over/significantly under time. Little use of figures and diagrams. Unable to interpret and answer most questions.</p>	<p>Fair presentation style, minimal eye contact. Some of poster is overcrowded. Poor use of figures and diagrams. A bit over time. Answers a few questions with reasonable accuracy</p>	<p>Good presentation style with some eye contact. Mostly clear poster. Uses figures and diagrams. Keeps to time. Answers most questions with reasonable accuracy</p>	<p>Good presentation style with eye contact. Clear poster. Good use of figures and diagrams. Adheres to the prescribed format. Keeps to time. Understands questions and answers them with reasonable accuracy</p>	<p>Clear, fluent and concise presentation with good eye contact. Clear poster without overcrowding. Clear figures and diagrams. Adheres to the prescribed format. Keeps to time & appropriate allocation of time. Accurate answers to questions</p>

Poster Presentation Marking Scheme HESC 4551

Student Date
 Examiner

Total Mark
/20

Background –	Max Mark = 4	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Title compelling and Background brief but succinct	2						
Aims and scope well defined	2						
Content	Max Mark = 6	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Structure is coherent, logical & easy to follow for an educated but non-expert audience	2						
Content is concise with critical analysis of results	2						
Appropriate conclusions drawn & scope for further research	2						
Poster appearance & Presentation Style	Max Mark = 10	Unsatisfactory (mark = 0)	Below average (0.5)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Layout & format attractive with correct dimensions	2						
Font size & colour easy to read. No overcrowding	2						
Use of pictures, diagrams & tables	2						
Confident voice, audience engagement & timing (not too short or long). Clear & concise	2						
Ability to interpret & answer questions	2						

Comments:

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Internship - Assessment Task 4 – WRITTEN REPORT

Learning Outcomes for the WRITTEN REPORT To be able to write a report of a research study
See *Course Schedule* for submission instructions

The research report should follow the following guidelines:

Title – Up to 20 words

Student number and name, address of department and contact detail of supervisor

Abstract – Up to 300 words (should be updated to include data gathered)

Introduction

Material and Methods

Results and Discussion

} Up to 3,000 words

Figures and Tables – 3-5 figures or tables including legends

Conclusion – Up to 300 words, providing perspective and future directions

References – Up to 20 references of original research articles (>10 references).

Article should be formatted, 1.5 line-spacing, Margins 2.5cm. Body text: 12 font. Illustration legends text: 10 font. Total Word Count ~3500 +/- 10%. The file should be a word document (.doc or .docx format).

In some instances results will not be available from the research internship and more words can be dedicated to introduction or methods.

General Assessment Guidelines

Report	Unsatisfactory	Below Average	Satisfactory	Good	Excellent
Internship Report – Basis of project, Background, Aims and Hypothesis. Identification of the relevance to Exercise Physiology	Background is unrelated to project, does not give enough information for reader to understand project. Aims not explained, An ambiguous Hypothesis is presented. No link at all to exercise physiology. No attempt to identify clinical relevance.	Background is somewhat related to project, gives minimal information for reader to understand project. Aims poorly explained, A poor Hypothesis. Poor link to exercise physiology. Poor attempt to identify clinical relevance	Background is supportive of project. Gives some information for reader to understand project. Aims explained simply Hypothesis is presented. Some link to exercise physiology. An attempt to identify clinical relevance provided.	Background sheds light on the gap project will fill. Aims well explained, A plausible Hypothesis is presented. Clear link to exercise physiology identifying. Some evidence of clinical relevance provided.	Background is so clear it demonstrates why project should be completed. Aims precise and concise, A scientifically plausible Hypothesis is presented. Excellent link to exercise physiology identifying a strong clinical relevance.
Body of the Report <ul style="list-style-type: none"> Background /aims Methods Variables/measures Results and conclusions Depth of critical analysis 	Incomplete and inaccurate overview of the Project. Lacking, or inaccurate, details for all of the purpose, methods, results and conclusions. No critical analysis. Inappropriate conclusions that are unsupported by results	Poor overview of the Project. Lacking, or inaccurate, details for some of the purpose, methods, results and conclusions. Some critical analysis. Poor conclusions that are loosely supported by the results	Simple overview of the Project. Aims and methods described. Results reasonably presented some minor detail lacking for purpose, methods, results and conclusions. Attempt at critical analysis. Appropriate conclusions that are supported by results	Good overview of the Project. Aims and methods described well. Results presented in a concise manner. No detail lacking for purpose, methods, results and conclusions. Good critical analysis of results. Appropriate conclusions that are clearly supported by results and the literature.	Comprehensive and concise overview of the project, reporting the purpose, key measures, key results and the most pertinent conclusions. Aims and methods easily understood and fully well. Results presented in a professional manner. Excellent critical analysis of results. Conclusions and discussion expertly related to results and the literature.
Quality of the writing and presentation <ul style="list-style-type: none"> Adherence to prescribed format Fluency and style Spelling Grammar Appropriate referencing 	Unprofessional language style used e.g.: background information in results section, conclusions and discussion in results section. A large number of careless spelling and grammatical mistakes. Overuse of the first person. Excessive colloquial tone. Inaccurate referencing. Illogical structure of the report.	Unprofessional language style used at times. A number of careless spelling and grammatical mistakes. Some use of the first person and Colloquial tone used. Inaccurate referencing. Poor structure of the report.	Professional language style used e.g.: no background information in results section, conclusions and discussion in results section. Minimal number of spelling and grammatical mistakes. Good use of 3 rd person. Appropriate referencing.	Scientific style used Ideas easy to follow. Fluent logical flow of ideas. All information in the appropriate sections. One or two grammar and spelling mistakes. Good referencing	Clear, fluent and concise scientific writing. No errors in written expression. Adheres to the prescribed format. Accurate referencing.

Internship Written Report Marking Scheme HESC4551

Student

Date

Examiner

Total Mark

/50

Background	Max Marks = 10	Unsatisfactory (mark = 0)	Below average (0.25)	Satisfactory (mark = 1.0)	Good (mark = 1.5)	Excellent (mark = 2.0)	Mark
Clinical relevance of the study adequately explained	2						
Scope of the study adequately explained	2						
Coverage of appropriate research to date in this area	2						
Explanation of gaps in the literature	2						
Abstract concise & relevant	2						
Content	Max Marks = 20	Unsatisfactory (mark = 0)	Below average (1.0)	Satisfactory (mark = 2.0)	Good (mark = 3.0)	Excellent (mark = 4.0)	Mark
Accurate & detailed description of study methods/procedures	4						
Results well presented	4						
Conclusions are valid	4						
Depth of critical analysis of results	4						
Accurate summary of strengths, weaknesses & future directions	4						
Quality of the writing	Max Marks = 20	Unsatisfactory (mark = 0)	Below average (1.0)	Satisfactory (mark = 2.0)	Good (mark = 3.0)	Excellent (mark = 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						

Comments:

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Internship - Assessment Task 5 – SUPERVISOR REPORT

ASSESSMENT FORM FOR HESC4551 RESEARCH PROJECT

(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:

	Unsatisfactory	Satisfactory	Good	Excellent	Does not apply
<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:

Overall performance was: Satisfactory / Not Satisfactory

Signature of Supervisor and date of evaluation: _____

Electronic copies of completed evaluation are to be sent to the course convenor.