EXERSCI 715
Research Planning and Reporting
(15 points)
(Semester 2, Newmarket Campus)

Who should take this course?

Students planning to enrol in a Master of Science (MSc).

a) This course is designed to plan an experiment. It will not require the recruitment of subjects or the collection of data to test a chosen hypothesis.

b) Although the student may plan a subsequent dissertation project, it may not be possible for a chosen topic to be translated into a master’s level project due to limited resources.

1. Students should attend the first class meeting having already thought of one or two research questions.

2. Students may either choose to have the course coordinator guide them through the assignments, or to ask another member of the Department’s academic staff to guide them through the assignments.

3. Students are responsible for obtaining expert advice from an academic to guide the choice of the study’s components, including the research question, experimental design, measures that are appropriate to test the study’s hypothesis, and statistical analyses.

4. The academic guide will provide advice, not design the study.

5. Students will also prepare a draft ethics application. If the student and their academic guide plan to conduct the proposed study as a dissertation project in semester 1 the following year, the academic guide (as research supervisor) will endeavour to submit the ethics application to the UAHPEC in time for approval to be obtained prior to the start of semester 1. This may require the student to work with their dissertation supervisor over the summer prior to submission in late January.

6. Predicted data means and variance will be derived from the literature. The final written report will be in the format of a manuscript being offered for publication.

Learning Outcomes

The student will:

- Advance their understanding of experimental design, statistical analyses, and ethics issues.
- Choose a research question and develop a related testable hypothesis.
- Provide a rationale for the research question based on a literature review.
- Write a plan for an experiment to test the hypothesis. The plan will include methods for proposed subject recruitment, experimental protocols, preparation of a data collection sheet, and proposed statistical analyses.
- Prepare tables and charts using data reported in the literature to indicate how data might support or reject the hypothesis. Sources of data must be referenced.
- Draft an ethics application for potential submission to the University of Auckland Human Participants Ethics Committee.
- Submit a manuscript in the format required by ACSM’s *Medicine & Science in Sports & Exercise*. Authors’ instructions for preparing manuscripts can be found at the following: [http://edmgr.ovid.com/msse/accounts/ifauth.htm](http://edmgr.ovid.com/msse/accounts/ifauth.htm)

Learning and Teaching

- The goal of this course is to equip students with the theoretical and methodological skills to design and plan an experiment to answer a research question related to the exercise sciences.
Teaching Staff

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Assessment*

- Literature review 15%
- Proposed experiment 15%
- Ethics application 20%
- Data collection sheet 25%
- Final report 25%

* subject to change

Learning resources

- University library and online databases.
- Meetings with course coordinators and/or supervisor.

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