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) in Clinical Exercise Physiology.

a) This course is designed to equip students with the skills to design and plan an experiment. It will not require the recruitment of participants or the collection of data to test a chosen hypothesis.

b) Although the student may plan a dissertation project for EXERSCI 715, it may not be possible for a chosen topic to be translated into a master’s level project due to resources.

1. Students should attend the first class meeting with a supervisor approved research question or topic.
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. 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 the ethical issues related to research.
- Choose a research question and develop a testable hypothesis.
- Provide a rationale for the research question and hypothesis 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.
- 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

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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Assessments*

- Literature review 25%
- Proposed experimental design and methods 25%
- Ethics assignment 10%
- Final report 40%

* subject to change

Learning resources

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