THE UNIVERSITY OF NEW SOUTH WALES

Health and Exercise Science
School of Medical Sciences
Faculty of Medicine

Course Title: Research Topics in Health and Exercise Science

Course Number: HESC3561 Session 1 2009

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Office hours: By appointment

RATIONALE

This course gives an opportunity for the students to participate during data collection in lab based research. The student will learn a range of research skills and techniques in their chosen area. The student will both observe and practice data collection in the laboratory of their choice. A report is to be written in the form of a research review as well as a summary of the skills and techniques acquired.

OBJECTIVES

The major aims are to provide the student with:
(i) an experience of lab based research in the physical activity area.
(ii) hands on experience in data collection and exposure to lab skills.

ORGANISATION

Student will be involved in lab based research under staff supervision. Prior to the research process, the student will consult with the chosen supervisor in regard to the topic and skills acquired. Students are required to participate during data collection a minimum of 72 hours throughout the session. At the completion of the course, students are required to write a report in the form of a research review as well as a description of the skills and techniques they have learned.

ASSESSMENT	WEIGHTING	DATE
Research report	100%	5th June by 4.00 pm

UNIT ATTENDANCE

There are no face-to-face lectures. However, students are expected to spend their time (collecting and/or analyzing the data) for a minimum of 72 hours. ***Students are required to provide the experiment/data collection dates to the course coordinator for monitoring purposes.***

PROGRESS REPORT

The progress report will be used to monitor the students' activity and to identify problems that may arise during the research process. ***The progress report and a copy of ethics approval have to be attached to the research report***. During the experiment/data collection, student's activity will be monitored by two HESC staff (course coordinator and another staff member) to ensure that the experiment/data collection is done in accordance with ethics and lab policies.

PENALTIES FOR LATE SUBMISSION OF RESEARCH REPORT /ASSIGNMENT

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

- For assignments submitted after **4.00pm** 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 days late.
- Assignment received two or more days after the due date **will not be allocated a mark,** however, the assignment **must** still be submitted to pass the unit.

PLAGIARISM

Plagiarism either from another student's work or other written material (for example, a textbook, journal or web article) will not be tolerated at this university. Students who submit the work of others as their own run the risk of failing the unit and possible expulsion from the university. Please refer to your university handbook for further information and the UNSW web site: http://www.lc.unsw.edu.au/plagiarism.

COURSE TIME-TABLE

Week	Day/time	Activity	Content
1		- Choosing the topic	- The topic has to be within the Health and Exercise Science area (within HESC staff areas) - Consult with staff regarding the research question and the expectation of being involved in his/her research
		- Arrangement of study time-table	- Student needs to communicate with the supervisor / research student in regard to the research time-table
		- Lab induction (supervisor's responsibility)	- Student needs to know the Lab's rule regarding disposing sharp/biohazard waste - Student needs to be immunized (hepatitis B) if involved in blood handling
2-12		- Involvement in research activity for a minimum of 72 hours	- Learn skills, collecting the data and/or analyzing the data - Fill in the report progress weekly
		- Simultaneously writing the research report	- Consult with staff regarding the content of research report (general guideline is provided)

Progress Report HESC 3561
Student's name:
Project title: Supervisor:

Week 1- Date: Hrs:
Activity:

Week 2- Date: Hrs:
Activity:

Week 3- Date: Hrs:
Activity:

Week 4- Date: Hrs:
Activity:

Signature
Student: date: Supervisor: date:

Week 5- Date: Hrs:
Activity:

Week 6- Date: Hrs:
Activity:

Week 7- Date: Hrs:
Activity:

Week 8- Date: Hrs:
Activity:

Signature
Student: date: Supervisor: date:

Week 9- Date: Hrs:
Activity:

Week 10- Date: Hrs:
Activity:

Week 11- Date: Hrs:
Activity:

Week 12- Date: Hrs:
Activity:

Signature
Student: date: Supervisor: date:

Week 13- Date: Hrs:
Activity:

Week 14- Date: Hrs:
Activity:

Signature
Student: date: Supervisor: date:

Comments

Student:

Signature: date:

Supervisor:

Signature: date:

Research Report Guidelines
Research Topics in Health and Physical Activity course HESC 3561

The structure of the research report is as follow:

1. Title page
2. Abstract (with key words)
3. Introduction
4. Methods
5. Results
6. Discussion
7. References
8. Figures/tables
9. Figures caption

1. The manuscript formatted as follow:

- typewritten on one side
- times Roman font and 12-point type size
- top/bottom margins: 1" (2.5 cm); left/right margin: 1.25" (3 cm)
- doubled-spaced throughout
- page numbering (in the bottom centre)
- maximum 20 pages excluding the tables, figures, and references.

2. Title page:

- title should be no more than 85 characters and spaces
- full names of the authors; institution
- running title should be no longer than 45 characters and spaces.

3. Abstract:

- limit of 250 words
- structure to state: purpose; methods; results; conclusion
- the abstract should be informative
- it should be self explanatory without reference to the text of the manuscript
- it should include essential significant results that support the conclusion of the work.

4. Key words:

- four (4) to six (6) words following the abstract
- should not repeat terms from the title.

5. Introduction:

- state clearly the purpose and hypothesis of the study
- provide relevant references
- do not exhaustively review the area.

6. Methods:

- present subject information
- clearly describe the experimental subjects and their controls
- "written informed consent" as well as statement regarding ethics committee approval required

- identify the methods, apparatus, and procedures employed with sufficient details to allow others to reproduce the results
- provide references for established methods and statistical procedures
- if methods utilized are not well known, provide rationale for use and include a description of possible limitations
- denote statistical significance when appropriate and include detailed statistical analyses, mathematical derivation, or computer programs with an appendix. When used in the text, numbers below 10 are spelled out while number 10 and above are expressed numerically.

7. Results:

- findings of the study should be presented logically in the text, tables, or figures; do not include the same data in tables and figures
- all figures and tables must be cited in the text
- tables and figures to be on separate pages
- figures caption on a separate page
- each table should have a brief title
- statistical measures of variation : SD, SE, etc., should be identified
- "Insert Figure 1" or "Insert Table 2" following the text where you want to insert the figure or table.

8. Discussion:

- should emphasize the original and important features of the study and should avoid repeating all the data presented within the results section
- incorporate within the discussion the significance of the findings and the relationship (s) and relevance to published observations
- provide only those conclusions that are supported by the study.

9. References:

- *For a book*

The details required, in order, are:
1. **name(s)** of author(s), editor(s), compiler(s) or the institution responsible
2. **year of publication**
3. **title** of publication and subtitle if any (all titles must be underlined or italicised)
4. **edition**, (if other than first)
5. **place of publication**
6. **publisher**

Rowell, L.B. (1993). *Human Cardiovascular Control.* New York: Oxford University Press.

- *For a journal article*

The details required, in order, are:
1. **name(s)** of **author(s)** of the article
2. **year** of publication
3. **title** of article
4. **title of journal** and **volume number** (underlined or italicised)
5. **issue (or part) number** for journals without continuous pagination
6. **page number(s)**

Ludbrook, J. (1966). The musculovenous pumps of the human lower limb. *American Heart Journal*. 71, 635-64.

Lindinger, M.I., & Sjogaard, G. (1991). Potassium regulation during exercise and recovery. *Sports Medicine*. 11(6), 382-401.

- *References in the text*

Kenney and Armstrong (1987) have suggested that…..

Regular endurance aerobic exercise typically results in PV expansion (Brotherhood et al., 1975; Dill et al., 1974).

Up to five authors:
State all authors in first citation and cite the first author followed by et al. in subsequent citation.
First entry: Astrand, Cuddy, Saltin, & Stenberg (1964)
Subsequent entry: Astrand et al. (1964)

More than six authors: in first citation and subsequent citation cite the first author followed by et al.
Saltin et al. (1987) proposed that….

- For further information refer to UNSW learning centre (APA style): http://www.lc.unsw.edu.au/onlib/ref_apa1.html

10. Symbol and units of measurement:

Maximal oxygen uptake: $\dot{V}O_2max$ ($ml \cdot kg^{-1} \cdot min^{-1}$)
Heart rate: HR ($b \cdot min^{-1}$)
Blood pressure: SBP/DBP (mm Hg)
All measurements should be given in metric units.