RESEARCH METHODS IN KINESIOLOGY

Fall 2017

This course is an introduction to the procedures utilized to design and conduct research in the discipline of Kinesiology. Topics covered include research design, ethics in research, information retrieval, data collection methods, subject selection, sources of error, types of research, and presenting results. In addition, students will gain "hands-on" experience using computers as a tool to assist in research.

Prerequisites: N/A

Course Credit: PSYC 2030 3.0

Exclusions: PSYC 2030 3.0

Course Director: Merv Mosher
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mmosher@yorku.ca
moodle.yorku.ca
www.yorku.ca/mmosher

Office Hours: Drop-In [or] By appointment

Laboratory Instructors: (to be announced)

Lectures:
Section A - M,W, 10:30, Location: ACW 109
Section B - M,W, 11:30, Location: ACW 109

Laboratories:
CB 125A [Section A] or CB 162 [Section B].

See the York University Lecture Schedule for a listing of lab times.

Students with access to a computer with a Web Browser, will be able to complete the lab assignments at home prior to attending the weekly lab.

*Labs commence the week of September 18, 2017.

Computer Accounts: All students require a Moodle account and a "FAS – File Access Service” account. It is expected that students will check their Moodle accounts daily. http://moodle.yorku.ca
Course texts:


Course Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Assignments</td>
<td>10%</td>
<td>Weekly assignments based on labs.</td>
</tr>
<tr>
<td></td>
<td>(Optional)</td>
<td></td>
</tr>
<tr>
<td>Mid-term exam 1</td>
<td>20%</td>
<td>Scheduled Oct. 25, during lecture time.</td>
</tr>
<tr>
<td></td>
<td>(Optional)</td>
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<tr>
<td>Mid-term exam 2</td>
<td>20%</td>
<td>Scheduled Nov. 22, during lecture time.</td>
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<tr>
<td></td>
<td>(Optional)</td>
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</tr>
<tr>
<td>Final exam</td>
<td>50%-100%</td>
<td>During December exam period.</td>
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<tr>
<td></td>
<td>(Required)</td>
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<tr>
<td>Bonus marks</td>
<td></td>
<td>Students who volunteer, register and participate as subjects in research conducted by KINE faculty members are eligible to earn bonus marks. See Moodle for further details about KURE.</td>
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</tbody>
</table>

Students who do not write Mid-term 1 waive the right to receive “a specific percentage of graded feedback” prior to the drop date for the Fall term.

Students must complete all of the lab assignments to be eligible for end of term grade adjustments.

N.B. An appeal against a grade assigned to an item of course work must be made in writing to the course director within 7 days of the graded work being made available to the class. The result of an appeal may cause the grade to increase, decrease or remain the same.

Although numerical marks are assigned to each piece of work in this course there should be no assumption that a total number of marks translates directly to a letter grade. Letter grades will be determined by the descriptions in the York University Undergraduate Calendar.

The percentage allocated for any course work not attempted/completed will be added to the final exam.

* All exams cover material from the lectures, readings and labs. *

In the event a mid-term exam is missed the percentage allocated to the exam will be added to the final. There are no make-up exams in the course.
**Students who miss the final exam** will only be allowed to write a deferred final exam if the student provides a completed Registrar’s Office Attending Physician’s Statement showing a physical incapability of writing the final exam, dated the day of the final exam.

**Drop Dates:**

The last day to drop a Fall term course without receiving a grade is: **Nov. 10, 2017**.

The Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript is **Nov. 11 - Dec. 4, 2017**)

**Lecture Topics:**

- Introduction to Research
- The Scientific Process
- Sampling and Measurement
- Research: Questions and Types
- Literature Review
- Ethics: Principles and Practice
- Experimental Research
- Experimental Designs
- Complex Experimental Designs
- Qualitative Research
- Survey Research
- Other Types of Research
- Disseminating Knowledge

**Lecture Capture:**

Lectures will be digitally recorded and posted online. Please note the York University policy regarding this technology.

The York University Student Code of Conduct specifically prohibits theft of intellectual property, which includes recording a course director's lecture without his/her permission or taking lecture material provided on line, modifying it, and/or using it for your own personal use or gain. The material provided is only to be used for your personal study when you take the course for which it was created. Use in any other way will result, at the minimum, in sanctions in accordance with the York Code and, at the maximum, will be breaking federal, provincial or municipal laws and will be acted on accordingly.
IMPORTANT COURSE INFORMATION FOR STUDENTS

• All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Reports, Initiatives, Documents)

• York’s Academic Honesty Policy and Procedures/Academic Integrity Website

• Ethics Review Process for research involving human participants

• Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities

• Student Conduct Standards

• Religious Observance Accommodation

Learning Expectations:

After completion of KINE 2049 3.0 [Research Methods in Kinesiology] students will be able to:

a) describe the “scientific method/process”.

b) compare and contrast a variety of research designs appropriate for the field of Kinesiology and Health Science.

c) evaluate a research study conducted in the area of Kinesiology and Health Science.

d) analyze a research article in an academic journal.

e) apply Excel formulas and functions to solve research questions.

f) critically reflect upon health science literature in popular media.

g) define terminology commonly utilized in research.

h) plan and implement effective Internet search strategies.

i) design and create a poster presentation on an academic topic related to Kinesiology and Health Science.
<table>
<thead>
<tr>
<th>Week Beginning:</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Laboratory</th>
<th>Readings</th>
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</thead>
<tbody>
<tr>
<td>September 11</td>
<td>Introductory Class – Admin. Details</td>
<td>How To Add 10 Years To Your Life - Introduction to Research Methods</td>
<td>No labs this week</td>
<td>- Chapter 1 &amp; 2</td>
</tr>
<tr>
<td>September 18</td>
<td>“How do we know what we know?”</td>
<td>Heroes &amp; Villains in the Scientific Process</td>
<td>Lab 1</td>
<td>- Chapter 3 &amp; 4 - Intro’ to Excel video</td>
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<tr>
<td>September 25</td>
<td>Spin Doctors &amp; the Scientific Process</td>
<td>“Facts” and other Terms in Research</td>
<td>Lab 2</td>
<td>- Chapter 5 &amp; 6 - Video: Creating Excel charts</td>
</tr>
<tr>
<td>October 2</td>
<td>Nature and Purpose of Research</td>
<td>Types of Research</td>
<td>Lab 3</td>
<td>- Chapter 7 - Video: Multiple worksheets</td>
</tr>
<tr>
<td>October 9</td>
<td>Thanksgiving [University closed No lecture]</td>
<td>Getting started: Sampling Procedures; Literature Review</td>
<td>Lab 4</td>
<td>- Chapter 8 - Video: Excel Functions 1</td>
</tr>
<tr>
<td>October 16</td>
<td>What could possibly go wrong?</td>
<td>“Big Bang” - Theories and other terms</td>
<td>Lab 5</td>
<td>- Chapter 9 - Video: Excel Functions 2</td>
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<tr>
<td>October 23</td>
<td>Is It Real? Measurement in Research - Validity &amp; Reliability</td>
<td></td>
<td>Lab 5 - only for Monday sections</td>
<td>- Chapter 10 - Video: Excel Functions 3</td>
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<tr>
<td>October 30</td>
<td>Experimental Research – Design</td>
<td>Experimental Research</td>
<td>Lab 6</td>
<td>- Chapter 11 - Video: Excel Database</td>
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<tr>
<td>November 6</td>
<td>Experimental Research</td>
<td>Complex experiments</td>
<td>Lab 7</td>
<td>- Chapter 12</td>
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<tr>
<td>November 13</td>
<td>Complex experiments</td>
<td>How can we study that? Other types of research</td>
<td>Lab 8</td>
<td>- Chapter 13</td>
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<tr>
<td>November 20</td>
<td>How can we study that? Other types of research</td>
<td></td>
<td>Lab 9</td>
<td>- Chapter 14</td>
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<tr>
<td>November 27</td>
<td>How can we study that? Other types of research</td>
<td>Presenting Your Research</td>
<td>Lab 10</td>
<td>- Chapter 15</td>
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<tr>
<td>December 4</td>
<td>Presenting Your Research [Last lecture]</td>
<td>Final Exam period begins</td>
<td>No Labs</td>
<td>Review all chapters</td>
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<tr>
<td>December</td>
<td>Exam period - Dec. 6 – Dec. 21</td>
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