

THE UNIVERSITY OF LETHBRIDGE  
Department of Kinesiology and Physical Education

KINESIOLOGY 2200 SECTION A  
Research Methodologies in Physical Activity Involvement  
FALL 2005

Professors: Dr. Jon Doan

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Wednesday 2 – 4 pm and by appointment

2005 Fall Term

September 7 – December 9, 2005

Class Website: WebCT

**Lecture:** Room: PE238; MWF 11:00 – 11:50 am

**Lab:** Room AH 148; 1. Tu 1:40 – 2:55 pm, 2. Th 1:40 – 2:55 pm,  
3. Tu 3:05 – 4:20 pm

**COURSE DESCRIPTION:**

Exploration of qualitative and quantitative methods used in the study of sport and physical activity involvement.

**COURSE PREREQUISITE:**

Kinesiology 1000

**COURSE OBJECTIVES:**

An understanding of concepts and techniques relevant to research writing, design, and analysis is an essential component of students' ability to evaluate, propose, and carry out research in the field of Kinesiology. The aim of the course is to introduce students to methodologies and statistics common to Kinesiology research and, more specifically, to develop a working knowledge of how to interpret published research, design research, analyze data, and present research in scientific format.

Upon completion of the course, students should be able to:

- Understand and apply essential concepts of research design and statistical analyses relevant to the study of human movement.
- Critically read and evaluate scientific journal articles
- Understand and apply the process of scientific inquiry
- Conduct statistical analyses and graphically present data using current spreadsheet applications
- Prepare and present a research proposal (including an application to human subjects research, University of Lethbridge) using a standard format, APA (American Psychological Association) format.

**COURSE READINGS:**

The complete listing of readings for the course is listed below. **All readings will be held on reserve in the library under the course name.** Required readings are considered to be **testable** material. Supplementary readings are provided to enhance learning of material for the student and will NOT be considered as testable material. For optimal learning the student is informed that course readings should be completed *prior* to the associated lecture material for maximum learning.

*Required Text.*

Berg, K. E., & Latin, R. W. (2004). Essentials of research methods in health, physical education, exercise science, and recreation (2<sup>nd</sup> ed.). Baltimore, MD: Lippincott Williams & Wilkins.

*Required Readings.*

Byra, M., & Goc Karp, G. (2000). Data collection techniques employed in qualitative research in physical education teacher education. *Journal of Teaching in Physical Education*, 19, 246-266.

Denison, J. (1996). Sport narratives. *Qualitative Inquiry*, 2, 351-362.

Dunn, J. G. H., & Holt, N. L. (2004). A qualitative investigation of personal-disclosure mutual-sharing team building activity. *The Sport Psychologist*, 18, 363-380.

*Optional Readings.* The following is a list of additional reading that a student is likely to find useful in facilitating learning on the various course topic areas.

Baumgartner, T. A., Strong, C. H., & Hensley, L. D. (2002). Conducting and reading research in health and human performance (3<sup>rd</sup> ed.). New York: McGraw-Hill.

Côté, J., Salmela, J. H., Baria, A., & Russell, S. J. (1993). Organizing and interpreting unstructured qualitative data. *The Sport Psychologist*, 7, 127-137.

Dreher, M. (1994). Qualitative research methods from the reviewer's perspective. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 281 – 297). Thousand Oaks, CA: Sage.

Estes, S. (1994). Knowledge and kinesiology. *Quest*, 46, 392-409.

Fontana, A., & Frey, J. H. (1994). Interviewing. The Art of Science. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 361-375). Thousand Oaks, CA: Sage.

Hebb, D. O. (1966). Education for research. *Canadian Federation News*, 8, 1-5.

Locke, L F. (1989). Qualitative research as a form of scientific inquiry in sport and physical education. *Research Quarterly for Exercise and Sport*, 60, 1-20.

Morse, J. M. (1994). 'Emerging from the data': The cognitive processes of analysis in qualitative inquiry. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 23 - 43). Thousand Oaks, CA: Sage.

Mullineaux, D. R., Bartlett, R. M., & Bennett, S. (2001). Research design and statistics in biomechanics and motor control. *Journal of Sports Sciences*, 19, 739-760.

*Publication manual of the American Psychological Association* (2001, 5<sup>th</sup> ed.). Washington, DC: APA.

- Ryan, G. W., & Bernard, H. R. (2000). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2<sup>nd</sup> ed., pp. 769-802). Thousand Oaks, CA: Sage.
- Schutz, R. W. (1989). Qualitative research: Comments and controversies. *Research Quarterly for Exercise and Sport*, 60, 30-35.
- Thomas, J. R., & Nelson, J. K. (2001). *Research methods in physical activity*. 4<sup>th</sup> edition. Champaign, IL: Human Kinetics.
- Vincent, W. J. (1994). *Statistics in kinesiology*. Champaign, IL: Human Kinetics.
- Winter, E. M., Eston, R. G., & Lamb, K. L. (2001). Statistical analysis in the physiology of exercise and kinanthropometry. *Journal of Sports Sciences*, 19, 761-775.

### EVALUATION:

Course evaluation will be based on 3 examinations (two midterms and a final exam), 2 written/verbal assignments completed in pairs, and 4 laboratory reports. Grading for the course will be based on guidelines presented in the University of Lethbridge calendar (2005-2006; p. 62). We will attempt to provide feedback on assignments and exams within one week, if possible. The weighting of the course work is as follows:

Course Work	Date Due	Course Weighting
<b>Exams:</b>		
Midterm Exams	Mon. & Tue. Oct. 3/4, 2005	15%
	Mon. Oct. 31 & Tue. Nov. 1, 2005	15%
Final Exam	Dec. 12 - 19, 2005	15%
<b>Assignments:</b>		
Article Review (Pairs)		
Part 1: Written	Lab Sept. 27/29, 2005	5%
Part 2: Verbal Presentation	Lab Sept. 27/29, 2005	5%
Research Proposal (Pairs)		
Partner & Topic	Friday Sept. 23 <sup>rd</sup> , 2005	15%
Part 1: Written	Monday Dec. 5 <sup>th</sup> , 2005	10%
Part 2: Poster Presentation	Mon/Wed Dec. 5 <sup>th</sup> /7 <sup>th</sup> , 2005	
<b>Laboratory Reports:</b>		
Lab Report 1	As per assigned during Lab	5%
Lab Report 2		5%
Lab Report 3		5%
Lab Report 4		5%
<b>Total</b>		<b>100%</b>

**Notes to Evaluation:**

*Examinations:* Examinations will cover materials from lecture notes, laboratory material, and required readings. Questions will include multiple guess, true/false, matching, short answer, and long answer questions. Examples of typical questions will be presented during lecture material. **All examinations will be held at the CRDC Test Centre (E630). Please refer to [http://www.uleth.ca/crdc/webct/Testing\\_center\\_howto.cfm](http://www.uleth.ca/crdc/webct/Testing_center_howto.cfm) for instruction on taking exams.** Examinations are not cumulative; therefore, **attendance at all exams is mandatory**. A missed exam will result in a grade of *zero* for that exam. Students expecting to miss an exam must contact the courses instructor as soon as possible, provide documentation to support the reason for absence, and be given permission to miss the exam. Acceptability for reasons for missing an exam may be limited to medical and personal emergencies, but will be evaluated on a case-by-case basis. A student may be allowed to write a supplemental exam. Any supplemental exam will not be the same in form or content as the original.

*Assignment procedures:* All written assignments are to be completed in A.P.A. format, and submitted according to procedures outlined in the details of the assignment. **No on-line submissions will be accepted.** All written assignments are to be handed in at the **beginning** of the designated class. Assignments that are not submitted at the specific time will be considered LATE. **LATE** assignments will be **downgraded 20%** (of the course weighting) per day (24hr), and **will not be accepted two days** (48 hours) following the due date and time (and will receive a grade of zero). If a student expects to be absent on the day an assignment or paper is due, arrangements must be made to hand the assignment or paper early or to have it submitted in class on the date it is due. Students are expected to complete presentations at the scheduled times. Students expecting to miss a presentation must contact me as early as possible and provide documentation to support the reason for absence, and arrange for an alternative time.

*Laboratory reports:* There will be four written laboratory reports. Laboratory report assignments (including marking scheme of the laboratory report) will be distributed in laboratory. Laboratory reports will be due at the beginning of the laboratory **one week following** the distribution of the assignment. **LATE** reports will be **downgraded 20%** (of the course weighting) per day (24hr), and **will not be accepted two days** (48 hours) following the due date and time (and will receive a grade of zero).

*Special needs arrangements:* Please let me know within the first week of class if you have any special needs that interfere with your ability to participate in lab, assignments, or written exams.

**PLAGARISM AND ACADEMIC DISHONESTY**

At all times academic honesty in this course is considered to be of utmost importance. Students should be aware of their role in academic honesty and integrity, which is described in the University of Lethbridge Academic Calendar (2005-2006, p. 69 – 77). Violations to this policy of academic honesty and integrity will be taken seriously and be dealt with according to University policy.

“The integrity of the University and of the degrees the University confers is dependent upon the honesty and soundness of the teacher-student relationship, as well as the integrity of the evaluation process. Conduct by any student that adversely affects this relationship or process represents an academic offense. The following describes the principal academic offenses and procedures for their investigation and penalization....

**1. Plagiarism**

- a. No student shall represent the words or ideas of another person as his or her own. This regulation will affect any academic assignment or other component of any course or program of study, whether the plagiarized material constitutes a part or the entirety of the work submitted. ....

**2. Cheating**

- a. In the course of an examination, no student shall obtain or attempt to obtain information from another student or other unauthorized source, or give or attempt to give information to another student, or knowingly possess, use or attempt to use any unauthorized material.
- b. No student shall represent or attempt to represent oneself as another or attempt to have oneself represented by another in taking of an examination, preparation of a paper or other evaluated activity.

**3. Duplication**

No student shall submit in any course or program of study, without both the knowledge and approval of the person or persons to whom it is submitted, all or a substantial portion of any academic assignment for which credit has previously been obtained or which has been or is being submitted in other course or program of study in the University or elsewhere. ....

**4. Confidential Materials**

It is an offense knowingly to procure, distribute or receive any confidential academic material such as pending examinations or laboratory notebooks.

**5. Misrepresentation**

It is an offense knowingly to misrepresent material facts to another for the purpose of obtaining academic advantage or credit. This offense is committed whenever a student submits in any course or program of study any academic assignment containing a statement of fact known by the student to be false or a fabricated reference to non-existent sources or documents. ....”

### **ATTENDANCE**

Students are expected to attend all lectures, laboratory sessions, examinations, and presentations. If a student is absent from lecture or laboratory sessions, the *student* is responsible for any information he or she missed regarding the material presented during lecture and/or laboratory, group discussions, examination format and content, and important dates.

### **CHANGES TO COURSE OUTLINE**

Changes to the course outline may be made after the first class providing this is done in consultation with the students and reviewed by the Dean of Arts and Science for completeness and consistency with university policies.

### **NOTES**

Last day for making changes in Fall registration: **September 13, 2005**

Last day for withdrawal from individual courses for Fall 2005 semester: **November 10, 2005**

Fall examination period: **December 12 – 20, 2005.**

## OUTLINE OF COURSE TOPICS AND COURSE OVERVIEW

Week	Lecture Topic	Laboratory Topic	Required Reading	Optional Reading(s)	Additional Info
Week 01 (Sept. 7-9)	Introduction to research in kinesiology	No Laboratory	Text: Chapter 1	Estes, 1994 Hebb, 1966	Research proposal assigned during lecture.
Week 02 (Sept. 12-16)	Introduction to scientific method, research report writing, and research ethics	Standards for writing research	Text: Chapters 2 & 6	Baumgartner et al., 2002 – Chapter 6 Publication manual of the American Psychological Association, 2001	Article review assigned during lecture.
Week 03 (Sept. 19-23)	Developing the problem and using the literature; Reliability & validity	Literature searches and search engines (Librarian: Andrea Glover)	Text: Chapters 3 & 13	Baumgartner et al., 2002 – Chapter 2 Mullineaux et al., 2001 Thomas & Nelson, 2001 - Chapters 2 & 3	Research Proposal groups and topic must be submitted by Sept. 23rd.
Week 04 (Sept. 26 –30)	Quantitative research: Experimental Validity & Control; Experimental Research & Designs	Article review presentations	Text: Chapters 14 & 15	Thomas & Nelson, 2001 – Chapters 10 & 17	Article Review Written and verbal presentations due.
Week 05 (Oct. 3-7)	<b>Midterm</b> Quantitative research: Statistics (Introduction, Central tendency, variability, & normal curve)	Introduction to SPSSx. Data Input	Text: Chapters 7 & 8	Thomas & Nelson, 2001 – Chapter 6 Vincent, 1994 - Chapters 1, 4, 5, 6,	Midterm will consist of required reading, lab and lecture material from weeks 1 – 4.
Week 06 (Oct. 10–14)	Quantitative research: Probability testing Statistics (Correlation, Regression)	Descriptive analysis, Correlation, and Regression statistical analyses	Text: Chapter 9 & 10	Thomas & Nelson, 2001 – Chapter 7 Vincent, 1994 - Chapter 7 Winter et al., 2001	<b>No lecture Oct. 11 (Holiday)</b>
Week 07 (Oct. 17-21)	Quantitative research: Statistics (Group comparison)	Group comparison statistical analyses	Text: Chapter 11	Thomas & Nelson, 2001 – Chapter 8 Vincent, 1994 – Chapter 8	
Week 08 (Oct. 24–28)	Quantitative research (Group comparison; non-parametric tests )	Non-parametric data analyses	Text: Chapter 12	Thomas & Nelson, 2001 – Chapter 9 Vincent (1994) Chapter 9	
Week 09 (Oct. 31–Nov. 4)	<b>Midterm</b> Alternative research methods	Research Proposal Meetings with Dr. Hoar & Dr. Doan – To be scheduled during lab time.	Text: Chapter 16 & 17	Locke, 1989 Schutz, 1989	Midterm will consist of required reading, lab and lecture material from weeks 5 – 8.

<b>Week</b>	<b>Lecture Topic</b>	<b>Laboratory Topic</b>	<b>Required Reading</b>	<b>Optional Reading(s)</b>	<b>Additional Info</b>
Week 10 (Nov. 7–11)	Qualitative research: Methods of collecting research	<b>No Formal Lab meeting.</b>	Denison, 1996 Dunn & Holt, 2004	Baumgartner et al., 2002 - Chapter 9 Thomas & Nelson, 2001 - Chapter 18	<b>No lecture Nov. 11 (Remembrance Day)</b>
Week 11 (Nov. 14–18)	Qualitative research: Methods of collecting research and data analysis.	Interviewing	Byra & Goc Karp, 2000	Fontana & Frey (2000)	
Week 12 (Nov. 21–25)	Qualitative research: Writing of qualitative research & establishing trustworthiness	Qualitative Data analysis & Writing a Qualitative Report		Côté et al., 1993 Morse, 1994 Ryan & Bernard, 2000	
Week 13 (Nov. 28–Dec. 2)	Mixed Methods Components of successful qualitative research proposals	Developing a Poster Presentation		Dreher, 1994	Random draw of poster presentations revealed Nov. 28 <sup>th</sup> .
Week 14 (Dec. 5–7)	<b>Poster Presentations UHALL Atrium</b>	<b>No Formal Lab meeting</b>			Written Proposals are due Mon. Dec. 5 <sup>th</sup> . Posters to be displayed 15 min prior to class lecture time.
Week 15 -16	<b>Final exam Monday Dec. 12 – Monday Dec. 19</b>				Final exam will consist of required readings, lab and lecture material from weeks 9 – 13.